SAMPLING AND ANALYSIS REPORT
CALENDAR YEAR 2018

ATLANTIC RESEARCH CORPORATION
RCRA CORRECTIVE ACTION SITE
GAINESVILLE, VIRGINIA

Project No. 229931.0001.0002

March 19, 2019

Prepared For:

Atlantic Research Corporation
c/o 330 Blaisdell Road
Orangeburg, New York

Prepared By:

TRC Environmental Corporation
11231 Cornell Park Drive
Cincinnati, Ohio 45242

TRC
Results you can rely on

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 SUMMARY OF OBJECTIVES 1

3.0 SCREENING CRITERIA 2

4.0 GROUND WATER ELEVATION MONITORING AND FLOW 2

5.0 SURFACE AND GROUND WATER SAMPLING RESULTS 3
5.1 Spring 2018 Sampling Event 3
5.2 Fall 2018 Sampling Event 4

6.0 DATA EVALUATION 4
6.1 Sentinel Monitoring 4
6.2 Source Monitoring 5
6.2.1 Deep Ground Water Zone 5
6.2.2 Shallow Ground Water Zone 5
6.2.3 Surface Water 6
6.3 Performance Monitoring 6
6.3.1 Deep Ground Water Zone 6
6.3.2 Shallow Ground Water Zone 7
6.3.3 Surface Water 7
6.4 Concentration Trends 7
6.4.1 Deep Sentinel Wells 8
6.4.2 Deep Source Wells 8
6.4.3 Deep Performance Wells 9
6.4.4 Shallow Sentinel Wells 10
6.4.5 Shallow Source Wells 10
6.4.6 Shallow Performance Wells 11
6.4.6 Surface Water Performance Location 12
6.5 Effectiveness of Monitoring Program 12

7.0 NDTS OPERATIONAL SUMMARY 12

8.0 ABANDONMENT 13

9.0 SUMMARY 13

10.0 REFERENCES 14

List of Figures

1. Site Location and Features
2. Deep Ground Water Elevations – Spring 2018
3. Shallow Ground Water Elevations – Spring 2018
4. Sampling Locations – Spring 2018
5. Sampling Locations – Fall 2018
6. Distribution of COCs in Deep Aquifer
   A. Perchlorate
   B. Tetrachloroethene
   C. Trichloroethene
   D. Cis-1,2-Dichloroethene
   E. 1,1,1-Trichloroethane
   F. 1,1-Dichloroethene
   G. 1,1-Dichloroethane
   H. Vinyl Chloride
   I. 1,4-Dioxane
7. Distribution of COCs in Shallow Aquifer
   A. Perchlorate
   B. Tetrachloroethene
   C. Trichloroethene
   D. Cis-1,2-Dichloroethene
   E. 1,1,1-Trichloroethane
   F. 1,1-Dichloroethene
   G. 1,1-Dichloroethane
   H. Vinyl Chloride
   I. 1,4-Dioxane
8. Sampling Locations and Data Summary for Surface Water
9. NDTS Piping and Instrumentation Diagram
10. NDTS Operational Graphs
    A. Injection and Extraction Rates
    B. Extraction Pressures, Rate and DW-13 Water Level
    C. Average Daily and Cumulative Amendment Injection

List of Tables

1. Locations Sampled
2. Water Levels and Elevations
3. COC Exceedance Summary
4. Analytical Data for Surface Water Sampling Locations
5. Analytical Data for Sentinel Shallow and Deep Ground Water Sampling Locations
6. Analytical Data for Source and Performance Deep Ground Water Sampling Locations
7. Analytical Data for Source and Performance Shallow Ground Water Sampling Locations
8. Analytical Data for QA/QC Samples (Trip Blank, Field Blank & Rinseate)
9. Summary of Concentration Trends
10. Summary of NDTS Operations

List of Appendices

A. Summary Tables of Historical Data
B. Analytical Laboratory Reports (on CD)
C. Data Quality Validation Reports
D. Other Laboratory Information – VELAP Certificates (on CD)
E. Field Sampling Forms (on CD)
F. Data Evaluation Trends and Charts

ACRONYMS

µg/L	micrograms per liter
1,1,1-TCA	1,1,1-trichloroethane
1,1,2-TCA	1,1,2-trichloroethane
1,1-DCA	1,1-dichloroethane
1,2-DCA	1,2-dichloroethane
1,1-DCE	1,1-dichloroethene
ARC	Atlantic Research Corporation
AWQC	Ambient Water Quality Criteria
CA	chloroethane
cis-1,2-DCE	cis-1,2-dichloroethene
COCs	constituents of concern
DW	Deep Well
EVO	emulsified vegetable oil
ft	feet
GAC	granular activated carbon
Geosyntec	Geosyntec Consultants Inc.
gpd	gallons per day
gpm	gallons per minute
IM	Interim Measure
kg	kilograms
L	liter
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
NDTS	Northern Deep Ground Water Treatment System
PCE	tetrachloroethene
PMWs	Performance Monitoring Wells
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Level
SAP	Sampling and Analysis Plan
SVOCs	semi-volatile organic compounds
SW	Shallow Well
TCE	trichloroethene
TRC	TRC Environmental Corporation
TTU	thermal treatment unit
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOCs	volatile organic compounds

EXECUTIVE SUMMARY

This Sampling and Analysis Report for Calendar Year 2018 at the Atlantic Research Corporation (ARC) Site in Gainesville, Virginia (Site) summarizes ground water and surface water monitoring activities for the ongoing RCRA Corrective Action, in accordance with ARC's USEPA-approved Sampling and Analysis Plan (SAP).

- The SAP presents the locations, frequency, and analytes for ground water and surface water sampling; provides the rationale for wells that have been abandoned or retained for continued sampling and/or water level measurements; and identifies wells and procedures for abandonment.
- The objectives of the SAP for the Site were met for 2018. Sentinel, performance, and source locations have been monitored in the deep ground water zone, the shallow ground water zone, and surface water for perchlorate and volatile organic compounds (VOCs) at the required frequencies to evaluate ground water conditions.
- Ground water sampling results at the downgradient boundary of the property verify that that there were no detections above screening levels at the nine monitored locations, with the exception of 1,1-dichloroethene (1,1-DCE) at one of the locations (DW SB-02) in the deep ground water zone located near the center of the southern boundary monitoring area. The concentrations of 1,1-DCE (ranging from 11 to 14 ug/L) are consistent with previous data and indicate a stable trend since at least 2009. Consistent with the evaluations in prior reports, these concentrations are not indicative of a risk to human health or the environment.
- The continued operation of the Northern Deep Treatment System (ground water extraction, amendment, and re-injection) remains effective in capturing and treating perchlorate and VOCs in the deep ground water zone at the upgradient, north-central part of the Site, as demonstrated through ground water maps and trend evaluations at monitoring wells in the area.
- Downgradient of the Northern Deep Treatment System, deep ground water zone performance wells continue to show stable to decreasing concentration trends with the majority of results below screening levels. One potentially increasing trend for 1,1-DCE was observed at deep monitoring well DW-18 and will continue to be monitored.
- The shallow ground water zone includes low-yielding, poorly-fractured diabase bedrock with no locations above screening levels at the property boundary. Concentration trends at most locations are stable to decreasing. No increasing trends are noted in the shallow zone wells.
- In TRC's opinion, the approved SAP remains adequate for monitoring purposes.

1.0 INTRODUCTION

This Sampling and Analysis Report summarizes the results of the ground water and surface water monitoring events that were conducted in 2018 at the Atlantic Research Corporation (ARC) RCRA Corrective Action Site at 5945 Wellington Road in Gainesville, Virginia 20155 (Site) during 2018. The Site location is shown on **Figure 1**.

2.0 SUMMARY OF OBJECTIVES

Ground water and surface water sampling activities were completed following the Sampling and Analysis Plan (SAP). The SAP consists of two USEPA approved documents, the 2015 Sampling and Analysis Plan (TRC, 2015a) and the 2017 Groundwater Monitoring and Well Reduction Plan (TRC, 2017). The 2017 document provided for modifications to locations, frequency, and analytes for sampling. The portions of the SAP related to abandonment were completed in 2017, with no abandonments taking place in 2018 (TRC, 2018a).

The objectives of the SAP during the reporting period were met, which included the following primary elements:

- Conduct ground water monitoring at the downgradient property boundary to verify that conditions are stable and do not represent an unacceptable risk based on the Baseline Risk Assessment (BRA; Environ, 2012), the Risk Assessment Update – Analysis and Evaluation of Perchlorate Persistence in Soil and Recalculation of Homegrown Produce Risks (Integral, 2016), and applicable United States Environmental Protection Agency (USEPA) risk-based screening levels for the Site. To address this objective, monitoring wells along the southern boundary were sampled periodically. These monitoring wells are considered "sentinel" wells and are monitored semi-annually (i.e., Sentinel Monitoring).
- Conduct ground water monitoring at residual source areas in the northern portion of the Site to verify the ongoing effectiveness of the operating Northern Deep Treatment System (NDTS), and at other residual source areas to monitor natural attenuation following completed interim actions (including wells in the vicinity of Buildings 5, 15, 28, and 40 as well as the former thermal treatment facility [TTF] area). To address this objective, monitoring wells in these areas of the Site were sampled periodically. These monitoring wells are considered "source" wells and are monitored annually (i.e., Source Monitoring).
- Conduct ground water monitoring in areas between source and sentinel wells to evaluate potential migration of Constituents of Concern (COCs) towards the property boundary. To address this objective, ground water monitoring was conducted in intermediate areas to detect changing conditions, if any. These monitoring wells are termed "performance" wells and are monitored annually. This includes limited ground water monitoring of wells positioned downgradient of the vicinity of the former TTF (i.e., Performance Monitoring).
- Conduct surface water monitoring of perennial streams on the Site to verify that COC concentrations do not exceed risk-based screening levels at the Site boundary and conduct surface water monitoring

at source and performance locations. To address this objective, three surface water locations are monitored annually, and one location semi-annually.

3.0 SCREENING CRITERIA

In accordance with the SAP, the ground water concentration data are compared to the following screening levels:

- USEPA Maximum Contaminant Levels (MCLs) (http://water.epa.gov/drink/contaminants/index.cfm) where specified; and
- USEPA regional screening levels (RSLs) (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm, accessed February 2016) – Tap Water Ingestion for COCs that do not have a specified MCL; the RSL screening value is the lower of the tap water ingestion criteria calculated at either the target cancer risk of 10^{-5} or target hazard quotient of 1.

In addition, the surface water concentration data are compared to the following screening levels:

- Ambient Water Quality Criteria (AWQC) based upon the following hierarchy:
  - Chronic Virginia AWQC,
  - Acute Virginia AWQC,
  - USEPA Region 3 AWQC, and
  - USEPA Region 5 AWQC.
- Site-Specific Recreator Surface Water Contact Criteria

4.0 GROUND WATER ELEVATION MONITORING AND FLOW

In accordance with the SAP, water level measurements are collected during the annual sampling event in the Spring to prepare ground water potentiometric surface maps for the shallow and deep ground water zones at the Site. The ground water elevation map for the deep ground water zone is used to verify that the extraction system is meeting its objective to capture elevated concentrations of perchlorate and VOCs in the north central portion of the facility and mitigate the migration of these constituents towards the downgradient property boundary

- Measurements were collected from the monitoring wells prior to beginning sampling of the monitoring wells.
- The NDTS was active during the collection of measurements, with a drawdown of approximately 116 feet at DW-13.
- The depth to water in the monitoring wells was measured with Solinst electronic water level meters on April 2, 2018.
- The depth to water was subtracted from the respective reference elevation of the top of casing in order to calculate the elevation of the potentiometric head at each location (**Table 2**).
- The resulting heads were used to prepare potentiometric contour figures for the deep (**Figure 2**) and shallow (**Figure 3**) ground water zone.

The figures for the deep and shallow ground water zones are consistent with the flow direction observed in past reporting periods; there is no indication of a change in ground water flow conditions during the reporting year.

The ground water elevation map for the deep ground water system indicates that the extraction system is meeting its objectives to capture COCs in the north central portion of the facility to mitigate COC migration towards the downgradient property boundary. The shallow ground water elevation map affirms flow toward the existing sentinel wells near the boundary of the Site.

5.0 SURFACE AND GROUND WATER SAMPLING RESULTS

Surface and ground water sampling at the Site consists of site-wide annual monitoring in the Spring and a reduced semi-annual monitoring event in the Fall, which is focused on sentinel locations. Sampling is conducted in accordance with the SAP, which specifies procedures for:

- Ground water sampling
- Surface water sampling
- Field equipment calibration and decontamination
- Sample labeling, packaging, and shipping
- Requested laboratory analytical testing
- Field Quality Assurance / Quality Control (QA/QC)
- Field documentation
- Laboratory requirements
- Data validation

Procedural activities were conducted to verify that data collected during the monitoring period meet project quality control/quality assurance objectives for the Site. Sampling was performed according to the approved SAP. Data validation was conducted on all data collected by TRC. No significant issues with data quality were encountered in any of the aforementioned checks.

All surface water and ground water analytical results have been reviewed and validated. Laboratory reports are provided in Appendix B and data validation in Appendix C.

Exceedances of surface water and ground water screening levels are summarized in **Table 3**. Analytical results for surface water, sentinel well locations, deep ground water locations, and shallow ground water locations are provided in **Tables 4 through 7**, respectively. QA/QC results are summarized in **Table 8**.

Deviations for each sampling event, if any, are noted in the following sections.

5.1 Spring 2018 Sampling Event

The annual surface water and ground water sampling event was conducted at locations indicated in **Table 1** from April 2 to April 5, 2018. No deviations from the SAP were encountered.

5.2 Fall 2018 Sampling Event

The semi-annual surface water and ground water sampling event was conducted at locations indicated in **Table 1** on October 9 and December 18, 2018 following the SAP, except as indicated below.

- The sampling of Fall locations was initially completed on October 9, 2018; however, one cooler of shipped samples was lost by Fed-Ex and never received by the project laboratory. The respective missing sample locations were re-sampled on December 18, 2018.
- During the October 9, 2018 event, SW 222-02, was dry and had insufficient water to sample. This well was sampled on December 18, 2018.

6.0 DATA EVALUATION

Ground water flow information was presented in Section 4.0 and depicted on **Figures 2** and **3**. This information is consistent with data from the past few years of operation of the NDTS and is considered in the evaluation of the objectives of the sampling program.

Exceedances of screening levels are summarized on **Table 3**. Analytical results are summarized on **Tables 4 through 8** and **Figures 6A-I, 7A-I, and 8**, which plot COC distributions for deep ground water, shallow ground water, and surface water, respectively.

6.1 Sentinel Monitoring

Sentinel locations were sampled in April 2018 and October/December 2018 to verify that conditions continue to be stable and continue to not represent an unacceptable risk. Eight sentinel monitoring wells (4 deep ground water zone and 4 shallow ground water zone) and one (1) surface water location were sampled for VOCs, perchlorate, or 1,4-dioxane according to the SAP and as shown on **Table 1**.

- All sentinel locations had results below applicable USEPA screening levels for all sampled COCs except as noted below for 1,1-dichloroethene (1,1-DCE) at one deep well (DW) location as summarized on **Table 3** and shown on **Figure 6F**.
- DW SB-02 results for 1,1-DCE were 11 and 14 micrograms per Liter (ug/L) during the sampling events, which is slightly above the MCL of 7 ug/L for 1,1-DCE (although it is noted that the current tap water RSL for 1,1-DCE is 280 ug/L). The concentration of 1,1-DCE at this monitoring well has been stable since 2009 (see chart and Mann Kendall trend analysis in Appendix F).
- DW-12 has had results below the screening level for 1,1-DCE the past two years and the stability analysis has changed from stable to probably decreasing with the latest results.

Based on these results, the objective of the sentinel monitoring has been met and will continue to be monitored.

6.2 Source Monitoring

Source area well locations were sampled in April 2018 to verify the ongoing effectiveness of the operating NDTS, and to monitor natural attenuation following completed interim actions at other residual source areas (including wells in the vicinity of Buildings 5, 15, 28, and 40 as well as the former thermal treatment facility [TTF] area). Fifteen source area locations (including 9 deep ground water wells, 5 shallow ground water wells, and one surface water location) were sampled for VOCs, perchlorate, or 1,4-dioxane according to the SAP and as shown on **Table 1**.

Based on the results discussed in this section, the objective of the source monitoring has been met and will continue to be monitored.

6.2.1 Deep Ground Water Zone

The majority of COCs in the deep ground water monitoring program continue to be either non-detect or below screening levels. The higher concentrations of COCs in deep ground water are in the vicinity of the NDTS pump and treat system. There were no detections of COCs above screening levels in deep ground water at the downgradient property boundary during 2018, except as noted above for 1,1-DCE, which has been consistent and stable since at least 2009. The deep ground water results verify the effectiveness of the operating pump and treat system in ensuring that concentrations in and around, and immediately downgradient of the pumping well (DW-13) have not significantly changed since the 2012-2013 reporting period (TRC, 2014a).

Exceedances for source wells in the deep ground water zone are summarized in **Table 3** and results are plotted on **Figures 6A through 6I**.

- Perchlorate exceedances are present in source wells (BW 78-12D, DW-26I, DW-28I, DW-29S, DW 76-01, IW-6, and extraction well DW-13) within the capture zone of the NDTS (**Figure 6A**). The NDTS is addressing the area with the highest remaining concentrations. The wells with the highest remaining concentrations are BW 78-12D, DW-28I, and DW-29S. Historical data is available in Appendices A and F.
- VOC exceedances (PCE, 1,1,1-TCA, 1,1-DCE, and VC) are also present in source wells (DW-26I, DW-28I, DW-28D, DW-32I, DW-72B, DW 76-01, and extraction well DW-13) within the capture zone of the NDTS (**Figures 6B through 6H**). DW 76-01 has the highest remaining VOC concentrations and is present near the northern edge of the capture zone.
- 1,4-dioxane exceedances are present in source wells (DW-32I and DW 76-01) within the capture zone of the NDTS (**Figure 6I**). The concentrations at the extraction well (DW-13) are below screening levels.

6.2.2 Shallow Ground Water Zone

Similar to the deep ground water COC concentrations, the majority of COCs in the shallow ground water monitoring program continue to be either non-detect or below screening levels. The shallow ground water sampling results continue to verify the effectiveness of the attenuating conditions.

Exceedances for source wells in the shallow ground water zone are summarized in **Table 3** and results are plotted on **Figures 7A through 7I**.

- Perchlorate exceedances (**Figure 7A)** are present in residual perchlorate and/or VOC source area wells (BW CG-01D, BW CM-01S, SW 5-04, and SW 40-07A). The wells with the highest remaining concentrations are at the former TTF at the northern portion of the Site. Perchlorate is the primary COC at BW CG-01D and BW CM-01S; VOCs are the primary COCs at the other source area wells.
- VOC exceedances (PCE, TCE, cis-1,2-DCE, VC, 1,1,1-TCA, and 1,1-DCE; **Figures 7B through 7H**) are also present in source area wells (BW 79-02S, BW CM-01S, SW 5-04, and SW 40-07A). PCE is the primary VOC at SW 40-07A. 1,1,1-TCA is the primary VOC at BW 79-02S and SW 5-04. Related biodegradation VOCs are also present.

6.2.3 Surface Water

Surface water location West 01 near the former TTU was below screening levels for VOCs and perchlorate (**Table 3** and **Figure 8**). The former perchlorate exceedance has been decreasing since 2013 and trend analysis from this location since 2009 indicates it is stable (Appendix F). This is consistent with past monitoring results following soil remediation of the TTU in 2011.

6.3 Performance Monitoring

Performance well locations were sampled in April 2018 to evaluate potential migration of COCs towards the property boundary in areas between source and sentinel wells. Twenty-one performance monitoring locations (7 deep ground water zone wells, 12 shallow ground water zone wells, and one surface water location) were sampled for VOCs, perchlorate, or 1,4-dioxane according to **Table 1**.

Based on the results discussed in this section, the objective of the performance monitoring has been met and will continue to be monitored.

6.3.1 Deep Ground Water Zone

As with the source monitoring, the majority of COCs in the deep ground water performance monitoring program continue to be either non-detect or below screening levels. Two performance locations had no COCs above screening levels (DW-15 and DFW-16). The higher concentrations of COCs in deep ground water are in the vicinity of the NDTS pump and treat system. There were no detections of COCs above screening levels in deep ground water at the downgradient property boundary during 2018, except as noted above for 1,1-DCE, which has been consistent and stable since at least 2009.

Exceedances for performance wells in the deep ground water zone are summarized in **Table 3** and results are plotted on **Figures 6A through 6I**.

- Perchlorate exceeded its screening level in three performance wells (DW 213-01 DW-20, and DW-30S) in the southeastern quadrant, central, and northern parts of the Site, respectively (**Figure 6A**). As discussed in Section 6.4, the exceedance at DW 213-01 is within the range of concentrations

detected at this location since 2009 (see Appendix F) and appears to represent continuing stable conditions.

- VOC exceedances (PCE, TCE, and 1,1-DCE; **Figures 6B through 6H**) are present in performance wells (DW-18 and DW-20) downgradient of the NDTS extraction well, and at DW-23, upgradient of the NDTS remediation extraction well. DW-18 exceeds for PCE, TCE, and 1,1-DCE. DW-20 exceeds for only PCE. DW-23 exceeds for 1,1-DCE.
- 1,4-dioxane exceeds the screening level at DW-23 (**Figure 6I**).

6.3.2 Shallow Ground Water Zone

As with the source monitoring, the majority of COCs in the shallow ground water performance monitoring program continue to be either non-detect or below screening levels. There were no detections of COCs above screening levels in shallow ground water at the downgradient property boundary during 2018.

Exceedances for performance wells in the shallow ground water zone are summarized in **Table 3** and results are plotted on **Figures 7A through 7I**.

- Perchlorate exceedances are present in performance wells (BW 14-02S, BW 21-04D, BW 28-02S, BW 28-04D, BW TTU-03D, SW 28-41, SW 42-02, SW 47-02, SW 74-07, and SW TTU-03) in the central and western portions of the Site (**Table 3** and **Figure 7A**).
- VOC exceedances (PCE, TCE, cis-1,2-DCE, 1,1-DCE, and VC; **Figures 7B through 7H**) are present in performance wells (BW 14-02S, BW 28-02S, BW 28-04D, BW 45-03S, BW TTU-03D, SW 28-41, SW 40-57, SW 47-02, and SW 74-07) in the central and western portions of the Site.
- 1,4-dioxane exceeded its screening level at BW 28-02S (**Figure 7I**).

6.3.3 Surface Water

Surface water location STR 40-15 was below screening levels for perchlorate and VOCs (**Table 4** and **Figure 8**). This is generally consistent with past monitoring results.

6.4 Concentration Trends

Concentration trends were evaluated for all SAP locations at the Site where a COC was detected above a screening level, including source wells at the NDTS, which are being affected by the ongoing ground water extraction and treatment system. Forty-five sample locations were evaluated for trends consisting of the nine sentinel locations, fifteen source locations, twenty performance locations, and the NDTS extraction well.

Trends were evaluated using the GSI Mann-Kendall Toolkit to analyze time-series ground water or surface water monitoring data to quantitatively determine if the measured concentrations of a chemical are increasing, decreasing, stable over time, or no trend indicated (e.g., usually a function of fluctuating results over time and greater variability), based upon use of the Mann-Kendall statistical method. The output for each location analysis is provided in **Appendix F**. Each output includes the data used in the

analysis, graphical plots of the data for each COC, and a statistical determination of the concentration trend with an associated confidence factor. The resulting trends are summarized in **Table 9**.

A minimum of four data points are required to use the GSI Mann-Kendall Toolkit; all evaluated locations met this criterion, most with at least seven data points. In general, the analysis was conducted with data from April 2018 (i.e., the most-recent annual sampling event) back to at least 2009. The dataset consists of locations that have been sampled annually, less frequently, and more frequently. To simplify and make the analysis more uniform across locations, one sample event per year was utilized, except for sentinel wells, which are routinely sampled semi-annually. If more than one sample event per year was available, the event closest to May 15 was used. Other details pertinent to selection of data for trend analysis are included on the individual data forms in **Appendix F**.

6.4.1 Deep Sentinel Wells

Four sentinel wells were evaluated from the deep ground water zone. Two of the wells (DW SB-01 and DW 200-01) have consistently been below screening levels or non-detect for all COCs since at least 2009. Sentinel well DW-12 was at or below the screening level for all COCs and showed a stable trend for 1,1-DCE, which has fluctuated around the screening level, since at least 2009. Sentinel well DW SB-02 was below screening levels for all COCs except 1,1-DCE, which is slightly above the screening level and shows a stable trend since 2009.

- DW SB-02
  - stable trend for 1,1-DCE, since 2009
- DW-12
  - probably decreasing trend for 1,1-DCE (currently below screening level)

Prior evaluation of the 1,1-DCE concentrations at these locations was discussed in Section 6.1.

6.4.2 Deep Source Wells

Deep source wells have been affected to varying degrees by extraction, amendment, and re-injection associated with the NDTS. Extraction well DW-13 was evaluated to gauge the effectiveness of this ongoing remedy on perchlorate and VOCs.

- BW 78-12D
  - no trend for perchlorate, due to variability, however, the trend appears to be stable since 2009 based on the chart
- DW 76-01
  - stable trend for perchlorate
  - increasing trend for 1,1,1-TCA; please note that the 1,1,1-TCA concentrations at this well have consistently fluctuated and the well is within the capture zone of the extraction well (DW-13)
  - probably increasing trend for 1,1-DCE; similar to the trend for 1,1,1-TCA
  - stable trend for 1,4-Dioxane, appears to be decreasing since 2015

- DW-13 (extraction well)
    - decreasing trends for perchlorate, PCE, and 1,1-DCE
    - probably decreasing trend for VC (currently at screening level)
- DW-26I
    - decreasing trends for perchlorate, PCE, and 1,1-DCE
- DW-28I
    - no trend for perchlorate, due to variability
    - no trend for PCE, due to variability
    - decreasing trends for 1,1,1-TCA, 1,1-DCE, and VC (below screening level)
- DW-28D
    - no trend for perchlorate, due to variability
    - decreasing trends for PCE (currently below screening level) and 1,1-DCE
- DW-29S
    - probably decreasing trend for perchlorate
- DW-30S
    - stable trend for perchlorate
- DW-32I
    - probably decreasing trend for 1,1-DCE
    - decreasing trend for VC
    - decreasing trend for 1,4-Dioxane
- DW-72B
    - stable trends for 1,1-DCE and VC, since 2008
    - decreasing trend for 1,4-Dioxane (currently below screening level)
- IW-6
    - decreasing trend for perchlorate

In general, stable to decreasing or no trends are observed in these source area wells. The extraction well, DW-13, shows decreasing trends for the COCs detected above screening levels and appears to continue to be effective in reducing overall concentrations in the area.

The highest remaining perchlorate concentrations are present at BW 78-12D, DW-28I, DW-29S, DW 76-01, and IW-6. The highest remaining VOC concentrations are present at DW-28I, DW-32I, and DW 76-01.

6.4.3 Deep Performance Wells

Deep ground water performance wells form a triangle near the southern transitional edge of the DW-13 capture zone (DW-15, DW-16, and DW-20) and monitor the eastern (DW 213-01) and western (DW-18 and DW-30S) areas beyond capture.

- DW-15
    - stable trends for 1,1-DCE and VC (currently below screening levels)

- DW-16
    - decreasing trend for 1,1-DCE (currently below screening level)
- DW-18
    - no trend for PCE (most recent result above screening level)
    - stable trend for TCE
    - possibly increasing trend for 1,1-DCE (although appears generally stable on chart)
- DW-20
    - no trend for perchlorate, due to variability
    - stable trend for PCE
    - stable trend for 1,1-DCE (currently below screening levels)
- DW-23
    - decreasing for perchlorate (currently below screening levels)
    - no trend or stable trend for 1,1-DCE and PCE (currently below screening level)
    - stable or no trend for 1,4-dioxane
- DW 213-01
    - no trend for perchlorate, since 2008, although concentrations generally appear to be stable

In general, stable to decreasing or no trends are observed in these wells.

6.4.4 Shallow Sentinel Wells

Four sentinel wells were evaluated from the shallow ground water zone. Each well (SW 200-02, SW 212-01, SW222-02, and SW SB-03) has consistently been below screening levels or non-detect for all COCs since at least 2009. In general, stable to decreasing or no trends are observed in these wells, and none show increasing trends.

6.4.5 Shallow Source Wells

Shallow ground water source wells monitor residual conditions in the vicinity of Buildings 5 and 15 (SW 15-02), Building 28 (BW 28-02S), Building 40 (SW 40-07A), and post soil source removal conditions near the TTF (BW CG-01D).

- BW CG-01D
    - decreasing trends for perchlorate
- BW CM-01S
    - decreasing trends for perchlorate and PCE
- BW 79-02S
    - stable trends for 1,1,1-TCA and 1,1-DCE
- SW 5-04
    - decreasing trend for perchlorate
    - probably decreasing trend for 1,1,1-TCA
    - stable trend for PCE
    - no trends for TCE and 1,1-DCE, since at least 2010, due to variability

- SW 40-07A
    - stable trend for perchlorate
    - no trend for PCE, due to variability
    - decreasing trends for TCE and cis-1,2-DCE
    - no trend for VC, since 2005, with a wide range and variability but generally more consistency since 2012

In general, stable to decreasing or no trends are observed in these source area wells, and none show increasing trends.

6.4.6 Shallow Performance Wells

Twenty-three shallow ground water performance wells monitor residual post-remediation conditions from the former TTF through other VOC source areas to the sentinel wells on the southern boundary.

- BW TTU-03D
    - probably decreasing trend for perchlorate
    - stable trend for PCE
    - decreasing trends for TCE, cis-1,2-DCE, and VC, since 2009
- BW 14-02S
    - decreasing trend for perchlorate
    - probably decreasing trend for PCE
    - decreasing trends for TCE and 1,1-DCE (now below screening level)
- BW 21-04D
    - decreasing trend for perchlorate
- BW 28-02S
    - stable trend for perchlorate
    - decreasing trends for TCE, 1,1-DCE, and 1,4-Dioxane
    - no trend for PCE, due to variability, but appears to be decreasing since 2013 based on the chart
- BW 28-04D
    - no trend for perchlorate, due to variability
    - decreasing trends for PCE, and 1,1-DCE
- BW 45-03S
    - stable trends for PCE, TCE, cis-1,2-DCE, and VC (at screening level)
- SW TTU-03
    - no trend for perchlorate, due to variability, but appears to be decreasing since 2013 based on the chart
- SW 28-41
    - decreasing trend for perchlorate
    - stable trend for PCE
- SW 40-57
    - decreasing trends for PCE, TCE, cis-1,2-DCE, and VC

- SW 42-02
    - decreasing trend for perchlorate
- SW 47-02
    - decreasing trend for perchlorate
    - no trend for PCE, since 2009, due to variability
    - stable trend for TCE (currently below screening level)
- SW 74-07
    - decreasing trend for perchlorate
    - stable trend for TCE
    - no trend for PCE and cis-1,2-DCE (currently below screening level), due to variability

In general, stable to decreasing or no trends are observed in these wells, and none show increasing trends.

The locations with no trends include the areas of the TTF, the pond near the NDTS extraction well, residual source areas at Buildings 5 and 40, and the southern part of the performance area near a surface water confluence. The areas downgradient of each of these locations generally show stable to decreasing concentrations.

6.4.6 Surface Water Performance Location

Surface water performance location West-01 has been sampled since 2009. It is located near the TTF, which was remediated through soil source removal in 2011.

- West-01
    - stable trend for perchlorate (below screening level)

6.5 Effectiveness of Monitoring Program

The monitoring program was reviewed with respect to the following criteria:

- Achieving the objectives of the SAP
- Determining ground water flow
- Implementing the field sampling program
- Obtaining usable laboratory results
- Evaluating the data and sufficiency of the results
- Recommending changes to the monitoring program

The monitoring program provides sufficient data to achieve the objectives of the current SAP and enable evaluation of the site conditions for management purposes.

7.0 NDTS OPERATIONAL SUMMARY

The current configuration of the deep ground water zone extraction and treatment system, often referred to as the Northern Deep Treatment System (NDTS), is illustrated in **Figure 9**. Ground water is extracted

from well DW-13 and then passes through a bag filter and a granular activated carbon (GAC) unit prior to collecting in an equalization tank. From the equalization tank, the ground water is amended with emulsified vegetable oil (EVO; an electron donor that stimulates growth of microorganisms and biodegradation of the COCs), and then re-injected into well IW-8 under pressure. The primary treatment mechanism is through degradation of the COCs in the ground water in situ via EVO.

The NDTS midpoint, post GAC sample, DW-13 MID, is sampled semi-annually. Results in general are similar to the DW-13 influent sample for most COCs, with the exception of an increase in PCE. Based on these results, the GAC will be replaced during 2019.

The NDTS pump and treat system operated as summarized below and in **Table 9**. The NDTS was extracting and treating ground water approximately 61% of the year.

- Bag filter pressures caused a shutdown during January for four days before replacement.
- A fault rest occurred during March; the system was shutdown two days.
- During June, the EVO pump was replaced, without shutting down operations.
- The subsurface electrical line providing power to the NDTS was cut by digging activities associated with redevelopment preparations by the property owner on or about the last week of June. The system was first observed to have no power and the severed electrical line was discovered during the weekly inspection on July 5, 2018. Responsibility, repair plans, contractor quotes, contractual arrangements, scheduling delays, hurricane Florence, and coordination efforts including health and safety requirements resulted in power being restored on September 17, 2018. With the restoration of power, it was determined that the PLC unit controlling operations of the NDTS had been damaged as well. The PLC unit was removed, evaluated by the supplier, replaced, and eventually replaced with an upgraded unit by November 5, 2018, when the NDTS was returned to operational status. As part of the return to operations, as an upgrade, a telemetry unit was installed for remote monitoring and control of the NDTS. During the remainder of the year, a greater volume of EVO was added to the injected water.

8.0 ABANDONMENT

A program to abandon un-needed monitoring wells and other locations was undertaken and completed during 2017 as reported in the TRC, 2018a, Sampling and Analysis Report, Calendar Year 2017 (TRC, 2018a). No well abandonments or changes to the well network took place in 2018.

9.0 SUMMARY

This Sampling and Analysis Report for Calendar Year 2018 at the ARC Site in Gainesville, Virginia summarizes monitoring activities for the ongoing RCRA Corrective Action.

- The objectives of the Sampling and Analysis Plan for the Site have been met for 2018.
- Sentinel, performance, and source locations have been monitored in the deep ground water zone, the shallow ground water zone, and surface water for perchlorate and VOCs at the required frequencies to evaluate ongoing progress.

- Site conditions at the downgradient boundary of the property verify that COC concentrations were not detected above screening levels at nine monitored locations, with the exception of 1,1-DCE at one of the locations in the deep ground water zone. These results are consistent with previous data and indicate a stable trend since at least 2009 that is not believed to be a risk to human health or the environment, as reviewed and discussed in prior reports.
- The continued operation of the Northern Deep Treatment System (ground water extraction, amendment, and re-injection) remains effective in capturing and treating perchlorate and volatile organic source material in the deep ground water zone at the north-central part of the Site, as demonstrated through ground water maps and trend evaluations at monitoring wells in the area.
- Downgradient of the Northern Deep Treatment System, deep ground water zone performance wells generally continue to show stable to decreasing concentration trends with the majority of results below screening levels. One potentially increasing trend for 1,1-DCE was observed at deep monitoring well DW-18 and will continue to be monitored.
- The shallow ground water zone includes generally low-yielding, poorly-fractured diabase bedrock with the majority of results below screening levels and no locations above screening levels at the property boundary. Concentrations trends at most locations are stable to decreasing.
- The Sampling and Analysis Plan remains adequate for monitoring purposes.

10.0 REFERENCES

Environ, 2012, RCRA Facility Investigation, Baseline Risk Assessment, Atlantic Research Corporation Facility, Gainesville, Virginia, November 2, 2012.

Environ, 2013, RCRA Facility Investigation, Soil Interim Measures Project Completion Report, Atlantic Research Corporation Facility, Gainesville, Virginia, July 26, 2013.

Geosyntec, 2011, Evaluation of Potential for Off-Site Migration of Contaminants in Groundwater and Surface Water, Atlantic Research Corporation Facility, Gainesville, Virginia, December 23, 2011.

Geosyntec, 2012, 2011 Annual Interim Measures (IM) Update Report, Atlantic Research Corporation Facility, Gainesville, Virginia, July 2012.

Integral Consulting, Inc., 2016, Risk Assessment Update –Analysis and Evaluation of Perchlorate Persistence in Soil and Recalculation of Homegrown Produce Risks, Atlantic Research Corporation Facility, Gainesville, Virginia, May 31, 2016.

TRC, 2014a, Ground Water Monitoring Technical Memorandum No. 1, 2012-2013 Monitoring Results, Atlantic Research Corporation Facility, Gainesville, Virginia, March, 2014.

TRC, 2014b, Ground Water Monitoring Technical Memorandum No. 2, Spring 2014 Sampling Event, Atlantic Research Corporation Facility, Gainesville, Virginia, August 26, 2014.

TRC, 2015a, Ground Water Monitoring Technical Memorandum No. 3, Fall 2014 Sampling Event, Atlantic Research Corporation Facility, Gainesville, Virginia, March 6, 2015.

TRC, 2015b, Sampling and Analysis Plan, Atlantic Research Corporation Facility, Gainesville, Virginia, July 9, 2015.

TRC, 2016, Sampling and Analysis Report, Calendar Year 2015, Atlantic Research Corporation Facility, Gainesville, Virginia, March 8, 2016.

TRC, 2017a, Sampling and Analysis Report, Calendar Year 2016, Atlantic Research Corporation Facility, Gainesville, Virginia, March 29, 2017.

TRC, 2017, Groundwater Monitoring and Well Reduction Plan, Atlantic Research Corporation Facility, Gainesville, Virginia, July 18, 2017.

TRC, 2018a, Sampling and Analysis Report, Calendar Year 2017, Atlantic Research Corporation Facility, Gainesville, Virginia, March 29, 2018.

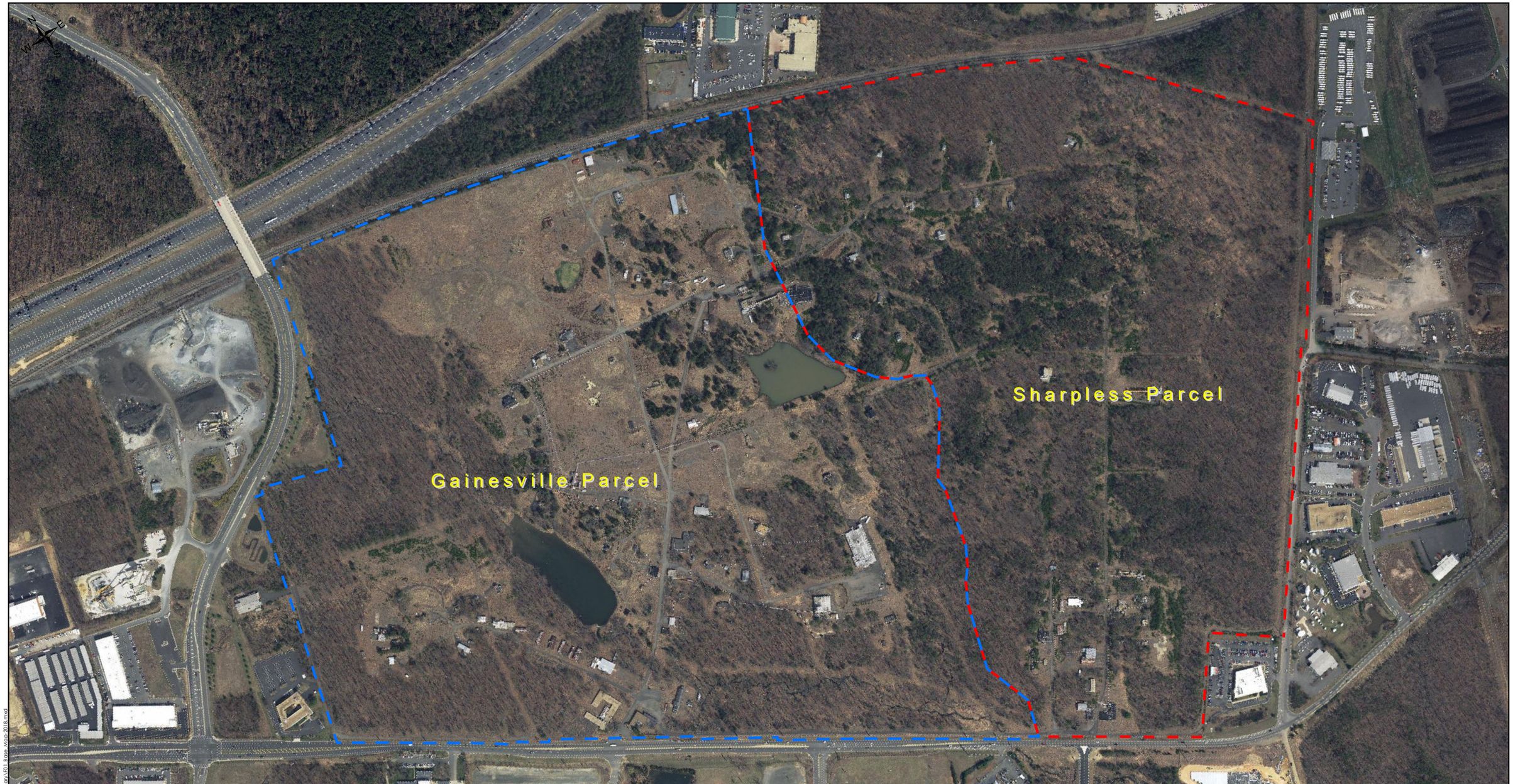
USEPA, 2012, Memorandum from Erich Weissbart, P.G. to Brain L. Buniva Esq. regarding Geosyntec's Evaluation of Potential for Off-Site Migration of Contaminants in Groundwater and Surface Water, Atlantic Research Corporation Facility, Gainesville, Virginia, March 13, 2012.

USEPA, 2015, Approval letter for TRC Sampling and Analysis Plan, Atlantic Research Corporation Facility, Gainesville, Virginia, July 22, 2015.

USEPA, 2016, Regional Screening Levels, February 2016, accessed on line at: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm.

USEPA, 2017, Approval email for 2017 Groundwater Monitoring and Well Reduction Plan, Atlantic Research Corporation Facility, Gainesville, Virginia, July 20, 2017.

FIGURES



Location Overview

Site Features

- Gainesville Parcel
- Sharpless Parcel

Aerial Photo Source: Virginia Geographic Information Network (VGIN) - 2017

500 250 0 500 Feet

Site Location and Features

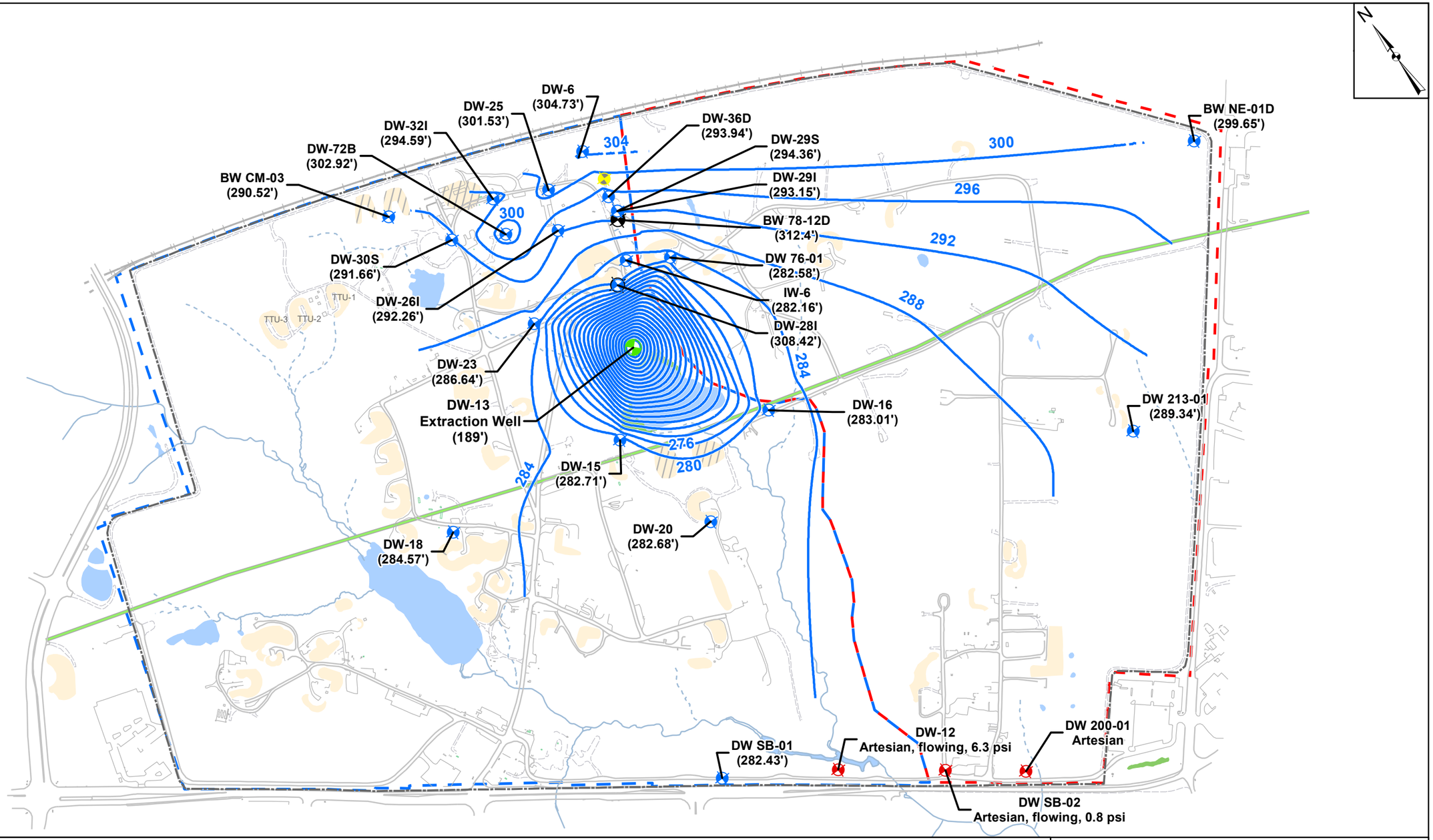
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001 | **2/18/2019**

Figure 1

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\F01_Base_Map-2018.mxd



Legend

- Extraction Well (DW-13) [Used in Contouring]
- Deep Wells Used for Contouring
- Artesian Wells
- Injection Well (IW-8)
- Deep Monitoring Wells Not Used for Contouring
- Water Level Contour (feet)

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Sharpless Parcel
- Gainesville Parcel

Notes:

Water levels gauged April 2, 2018.
BW 78-12D and DW-28I not included in water elevation calculation due to other nearby wells with lower elevations.
NDTS pump at DW-13 was currently active and pumping with estimated elevation of 189' during the measurement event.
Artesian Wells indicate that water level is greater than the top of casing.
Groundwater Elevations in Feet above mean sea level.

500 250 0 500 Feet

Deep Water Elevations Spring 2018

Atlantic Research Corporation, Gainesville, Virginia

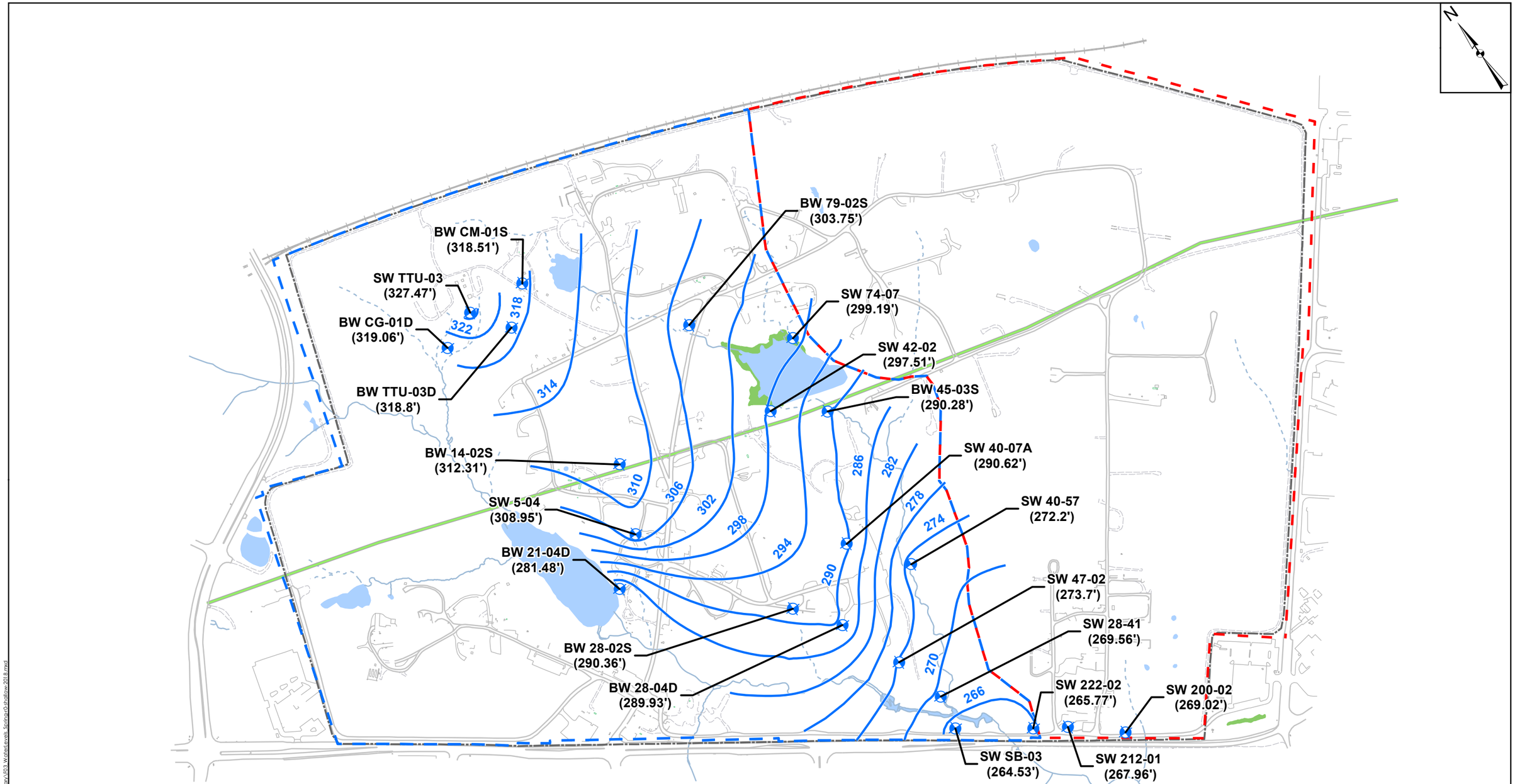
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001

2/15/2019

Figure 2

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\02_Waterlevels_Spring-0-deep-2018.mxd



Legend

- Shallow Monitoring Wells Used for Contouring
- Water Level Contour (feet)

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Water levels gauged April 2, 2018.
NDTS pump at DW-13 was currently active and pumping.
Groundwater Elevations in Feet above mean sea level

500 250 0 500 Feet

Shallow Water Elevations Spring 2018

Atlantic Research Corporation, Gainesville, Virginia

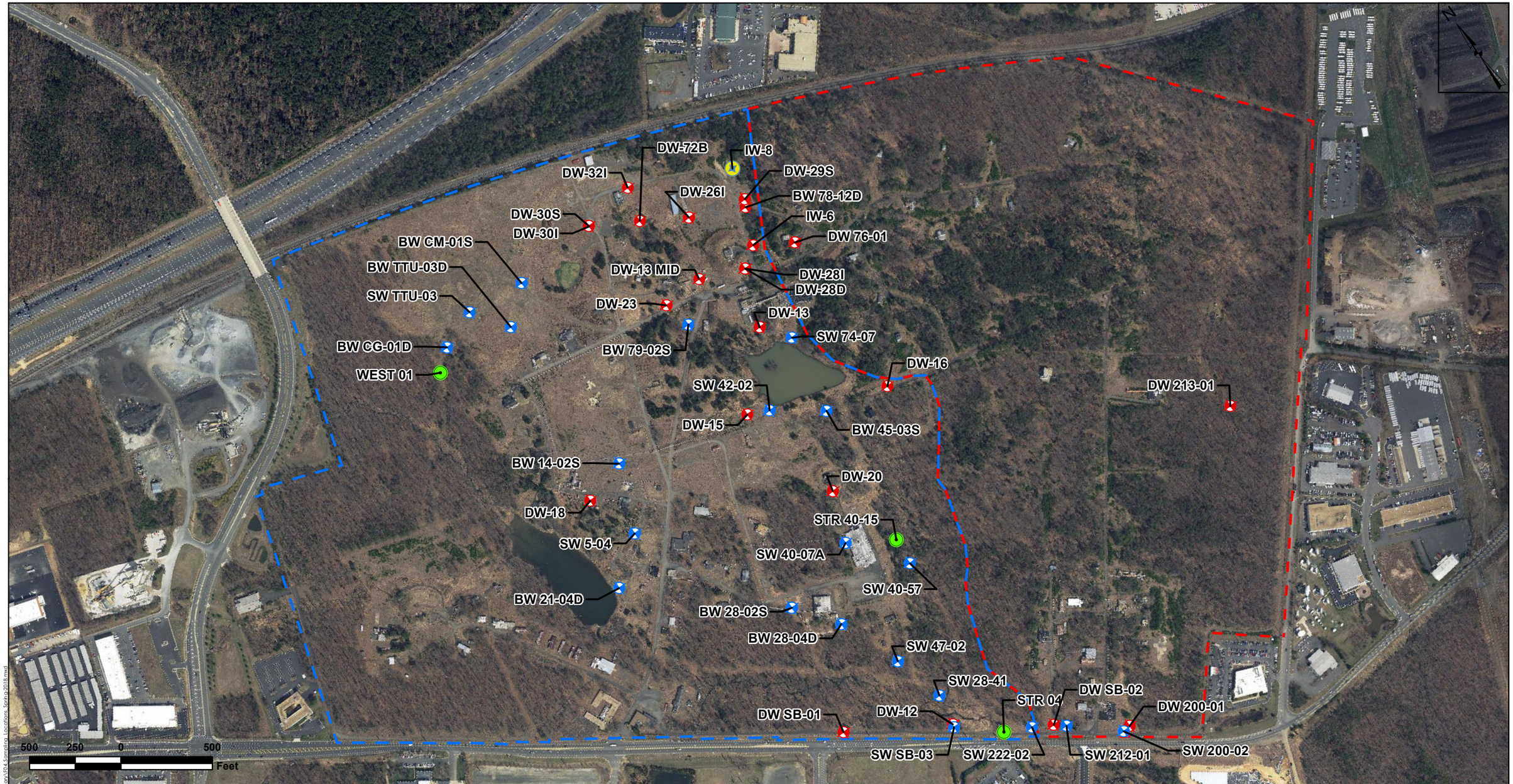
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001

2/15/2019

Figure 3

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\f03 WaterLevels_Spring0-shallow-2018.mxd



Legend

- Deep Ground Water Sampling Location
- Shallow Ground Water Sampling Location
- Surface Water Sampling Location
- Injection Well Location, Not Sampled
- Gainesville Parcel
- Sharpless Parcel

Note:
DW-13 shows the NDTS extraction well location; however, the influent sample is collected from a sample port in the treatment system building.
DW-13 MID shows the location of the above ground treatment system.
IW-8 is the NDTS injection well and is shown for reference.
Surface Water sampling location,
Aerial Photo Source: Virginia Geographic Information Network (VGIN) - 2017

500 250 0 500 Feet

Sampling Locations - Spring 2018

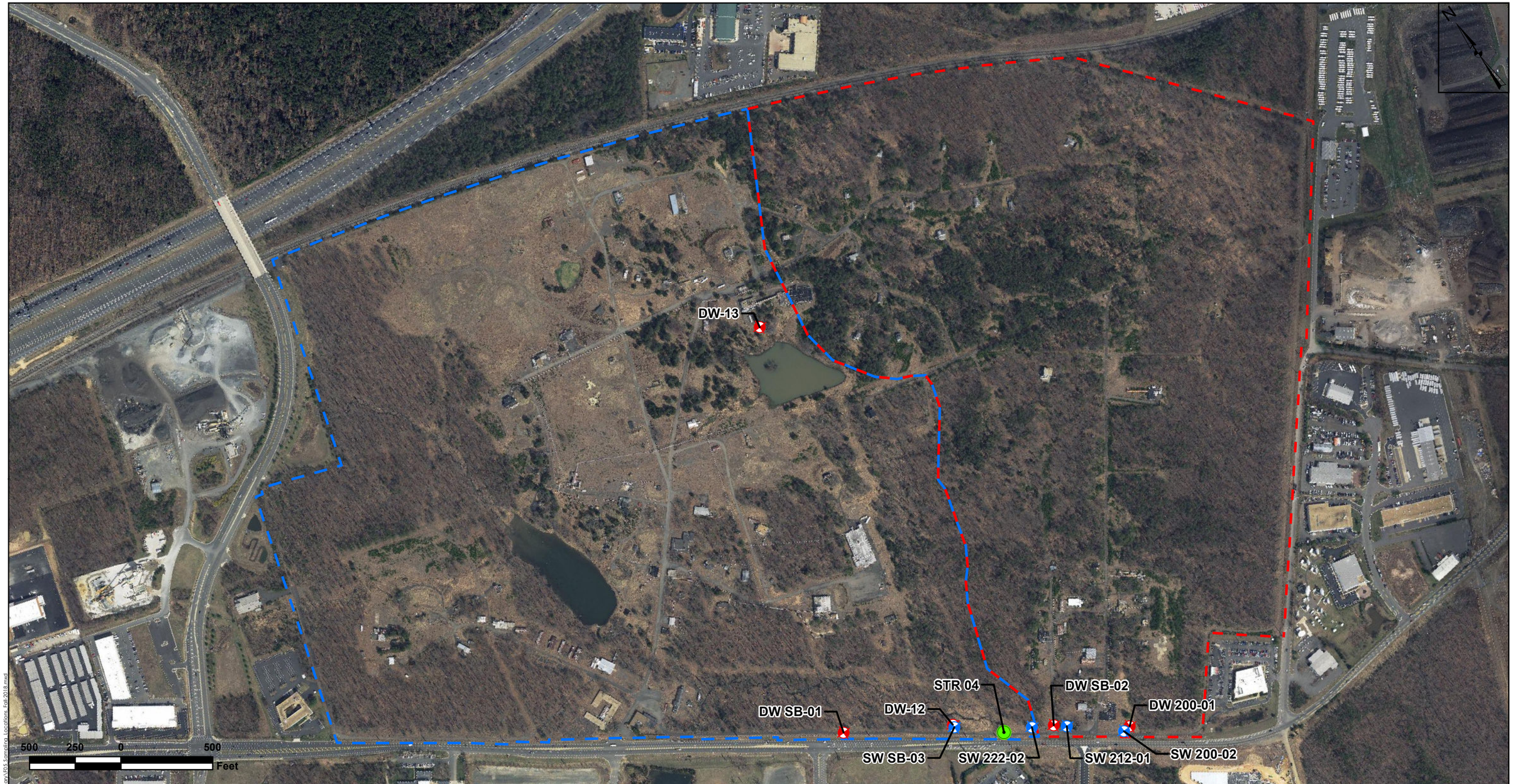
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001 | **2/18/2019**

Figure 4

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\F04_Sampling_Locations_Spring-2018.mxd



Legend

- Deep Ground Water Sampling Location
- Shallow Ground Water Sampling Location
- Surface Ground Water Sampling Location
- Gainesville Parcel
- Sharpless Parcel

Note:
DW-13 shows the NDTS extraction well location; however, the influent sample is collected from a sample port in the treatment system building.
Aerial Photo Source: Virginia Geographic Information Network (VGIN) - 2017

500 250 0 500
Feet

Sampling Locations - Fall 2018

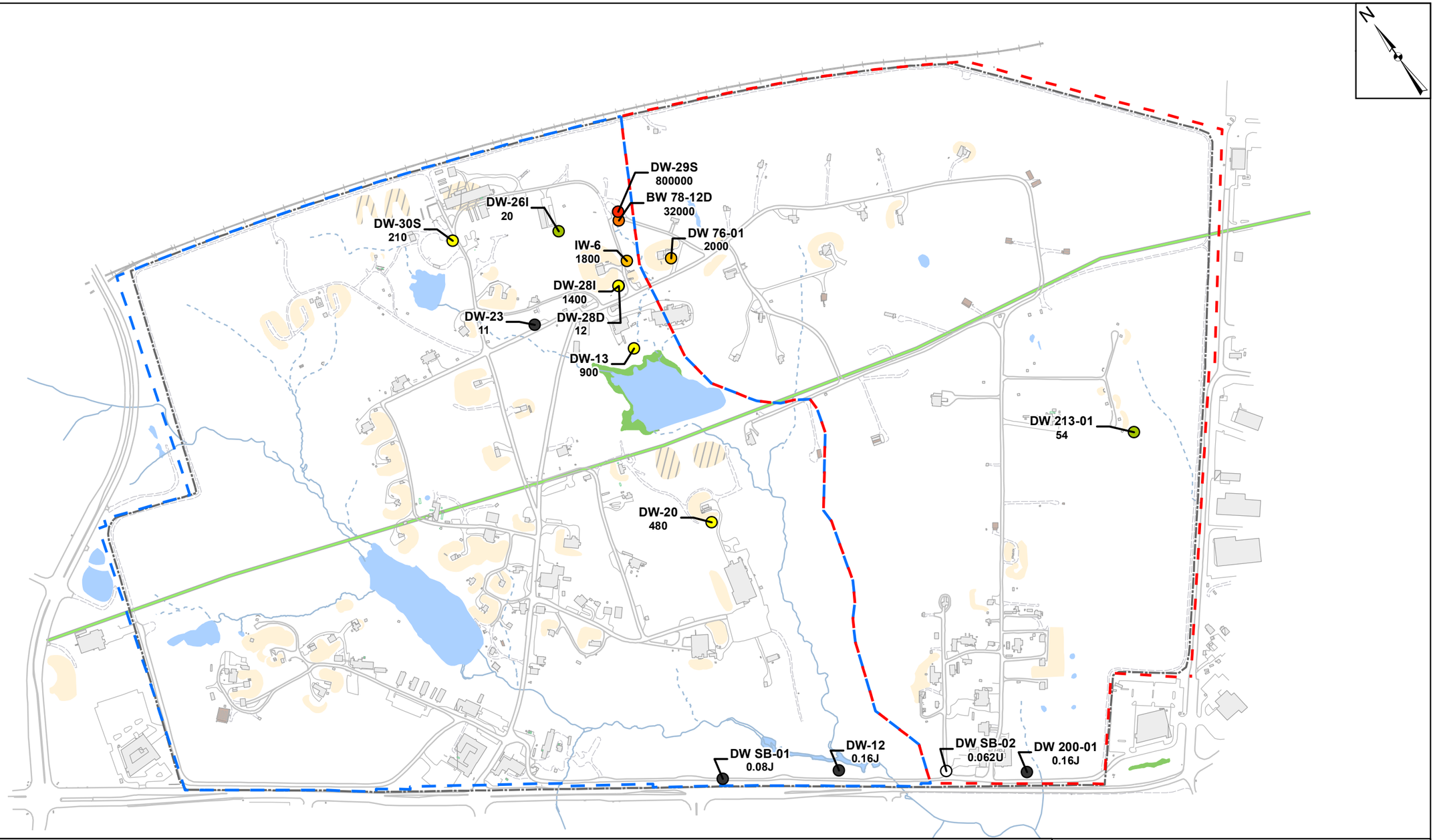
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001 | **2/18/2019**

Figure 5

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\03_Sampling_Locations_Fall-2018.mxd



Perchlorate

Concentration (ug/L)

- Non-Detect
- <=15
- >15 - 150
- >150 - 1,500
- >1,500 - 15,000
- >15.000 - 150,000
- >150,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the USEPA Interim Health Advisory Level (15 µg/L).
µg/L - micrograms per liter

DW-13 is the NDTS extraction well location
(sample collected from port inside treatment building).

Concentrations reported correspond to Spring 2018 data at each sampling location.
Deep aquifer includes all groundwater encountered in the metasedimentary
bedrock (deep and shallow).

500 250 0 500 Feet

Distribution of Perchlorate in Deep Aquifer

Atlantic Research Corporation, Gainesville, Virginia

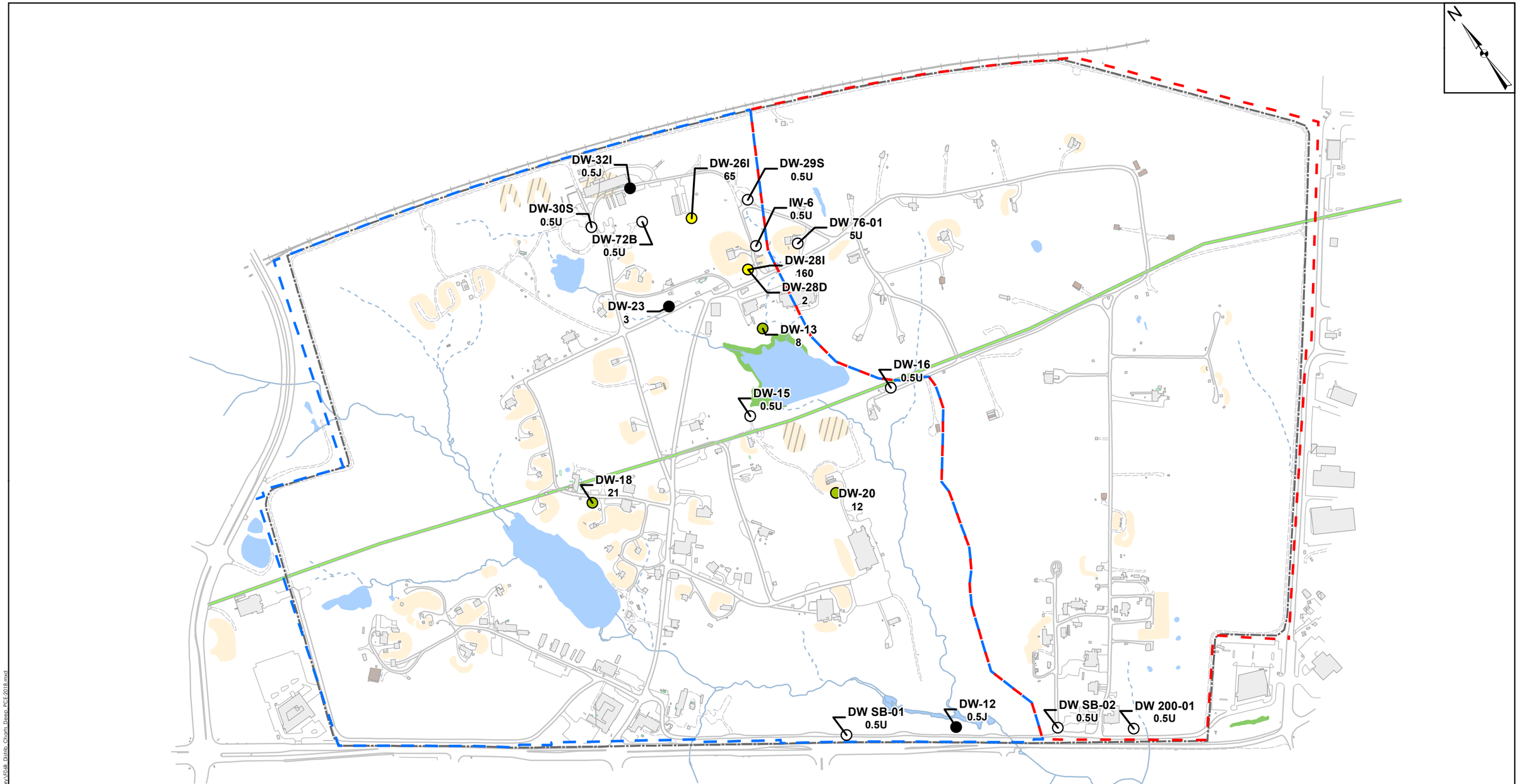
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/15/2019

Figure 6A

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\6A_Distrib_Charts_Deep_Perchlorate-2018b.mxd



Tetrachloroethene

Concentration (ug/L)

- Non-Detect
- ≤5
- >5 - 50
- >50 - 500
- >500 - 5,000
- >5,000 - 50,000
- >50,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (5 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).

Concentrations reported correspond to Spring 2018 data at each sampling location.

Deep aquifer includes all groundwater encountered in the metasedimentary bedrock (deep and shallow).

500 250 0 500 Feet

Distribution of Tetrachloroethene in Deep Aquifer

Atlantic Research Corporation, Gainesville, Virginia

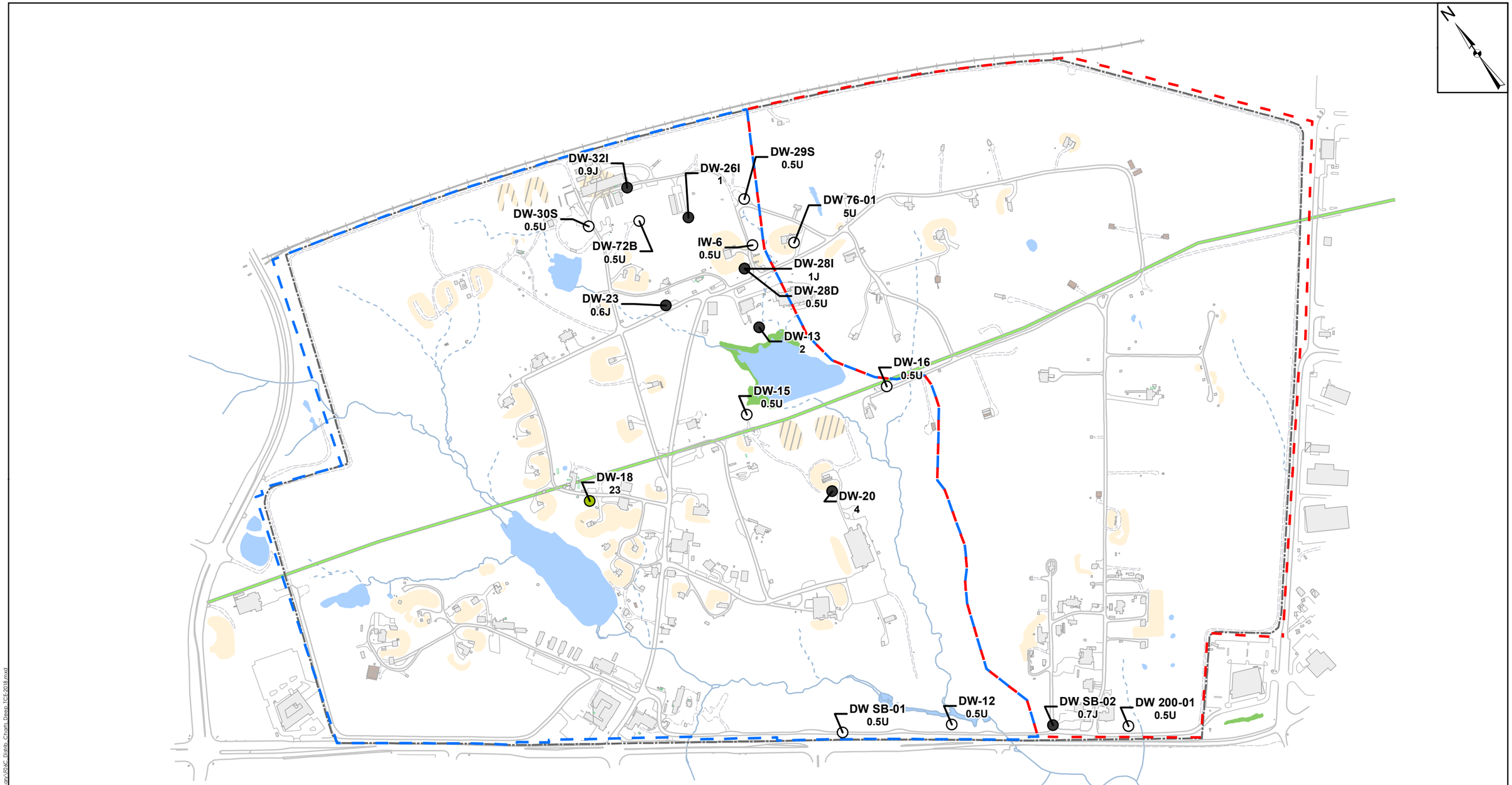
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/15/2019

Figure 6B

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\Fig6_Distrib_Charts_Deep_PCE-2018.mxd



Trichloroethene

Concentration (ug/L)

- Non-Detect
- ≤5
- >5 - 50
- >50 - 500
- >500 - 5,000
- >5,000 - 50,000
- >50,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (5 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).

Concentrations reported correspond to Spring 2018 data at each sampling location.

Deep aquifer includes all groundwater encountered in the metasedimentary bedrock (deep and shallow).

500 250 0 500 Feet

Distribution of Trichloroethene in Deep Aquifer

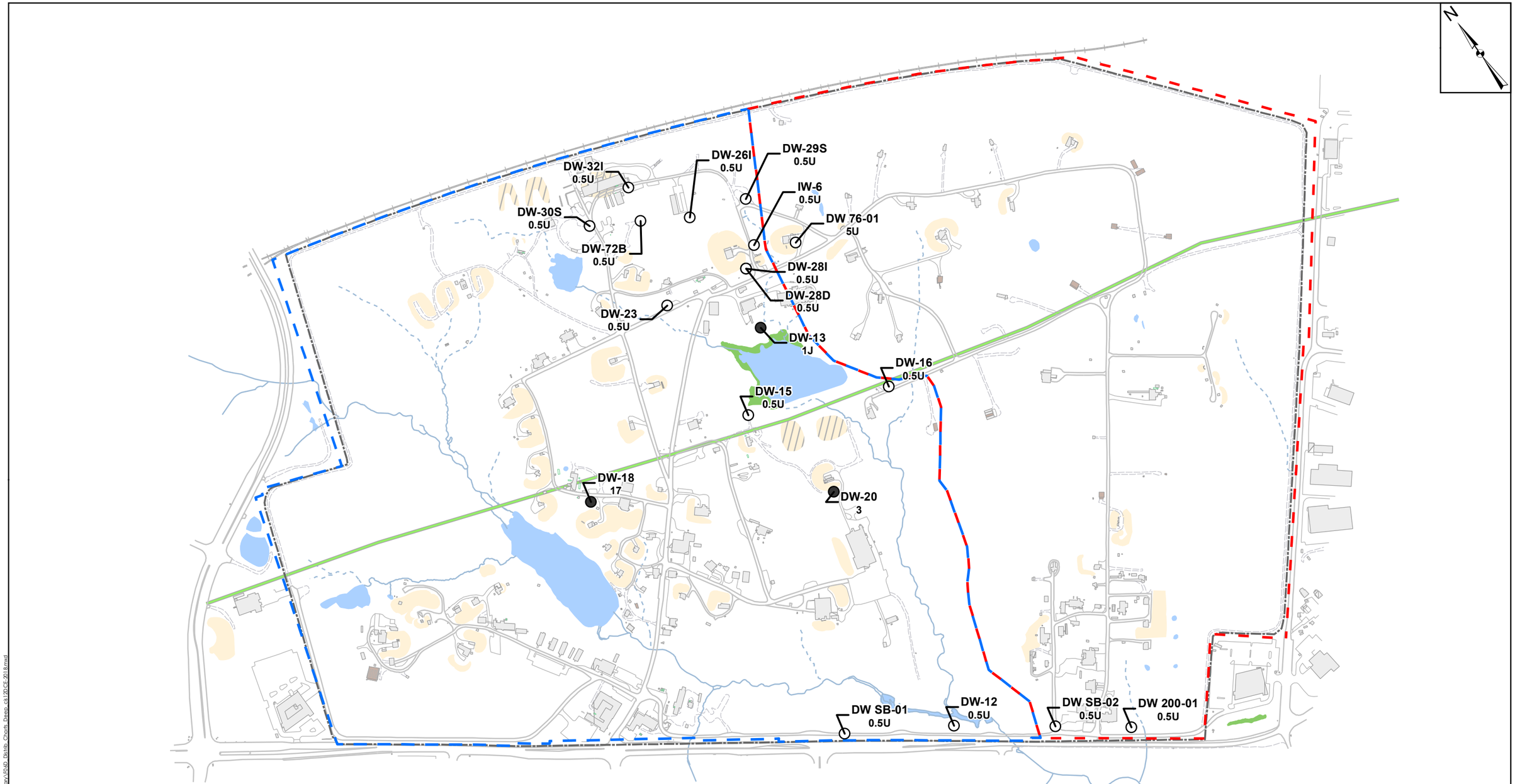
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Figure 6C

Project: 229931.0000 | **2/14/2019**

G:\GIS_Projects\GIS_SEQUIA\Gainesville\MXD\Report_2018_Summary\F06C_Distrib_Charts_Deep_TCE-2018.mxd



cis-1,2-Dichloroethene

Concentration (ug/L)

- Non-Detect
- ≤70
- >70 - 700
- >700 - 7,000
- >7,000 - 70,000
- >70,000 - 700,000
- >700,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (70 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).

Concentrations reported correspond to Spring 2018 data at each sampling location.

Deep aquifer includes all groundwater encountered in the metasedimentary bedrock (deep and shallow).

500 250 0 500 Feet

Distribution of cis-1,2-Dichloroethene in Deep Aquifer

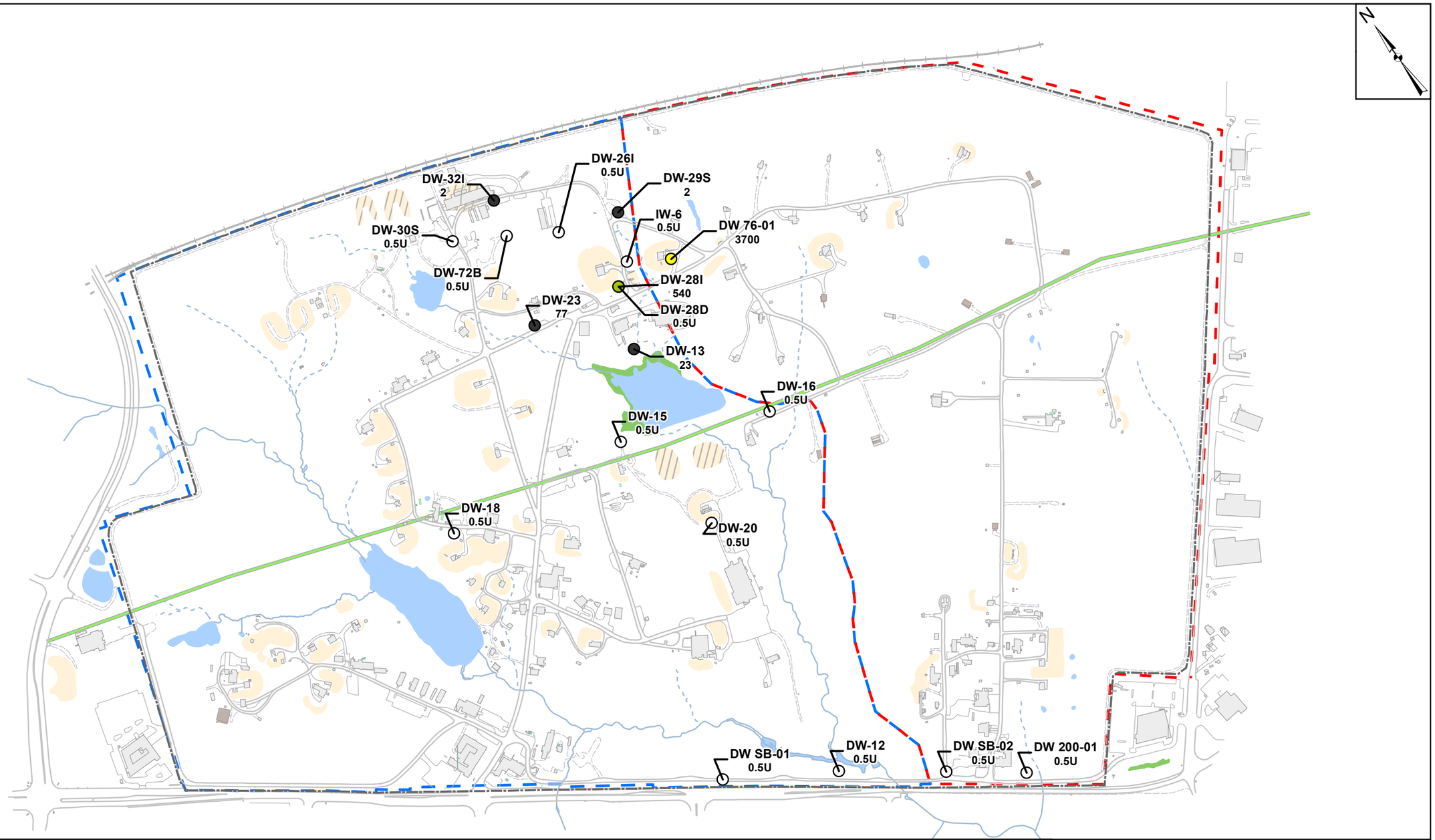
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Figure 6D

Project: 229931.0000 | **2/14/2019**

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\F06D_Distrib_Charts_Deep_cis12DCE-2018.mxd



1,1,1-Trichloroethane
Concentration (ug/L)

- Non-Detect
- <=200
- >200 - 2,000
- >2,000 - 20,000
- >20,000 - 200,000
- >200,000 - 2,000,000
- >2,000,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (200 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).
Concentrations reported correspond to Spring 2018 data at each sampling location.

Deep aquifer includes all groundwater encountered in the metasedimentary bedrock (deep and shallow).

500 250 0 500 Feet

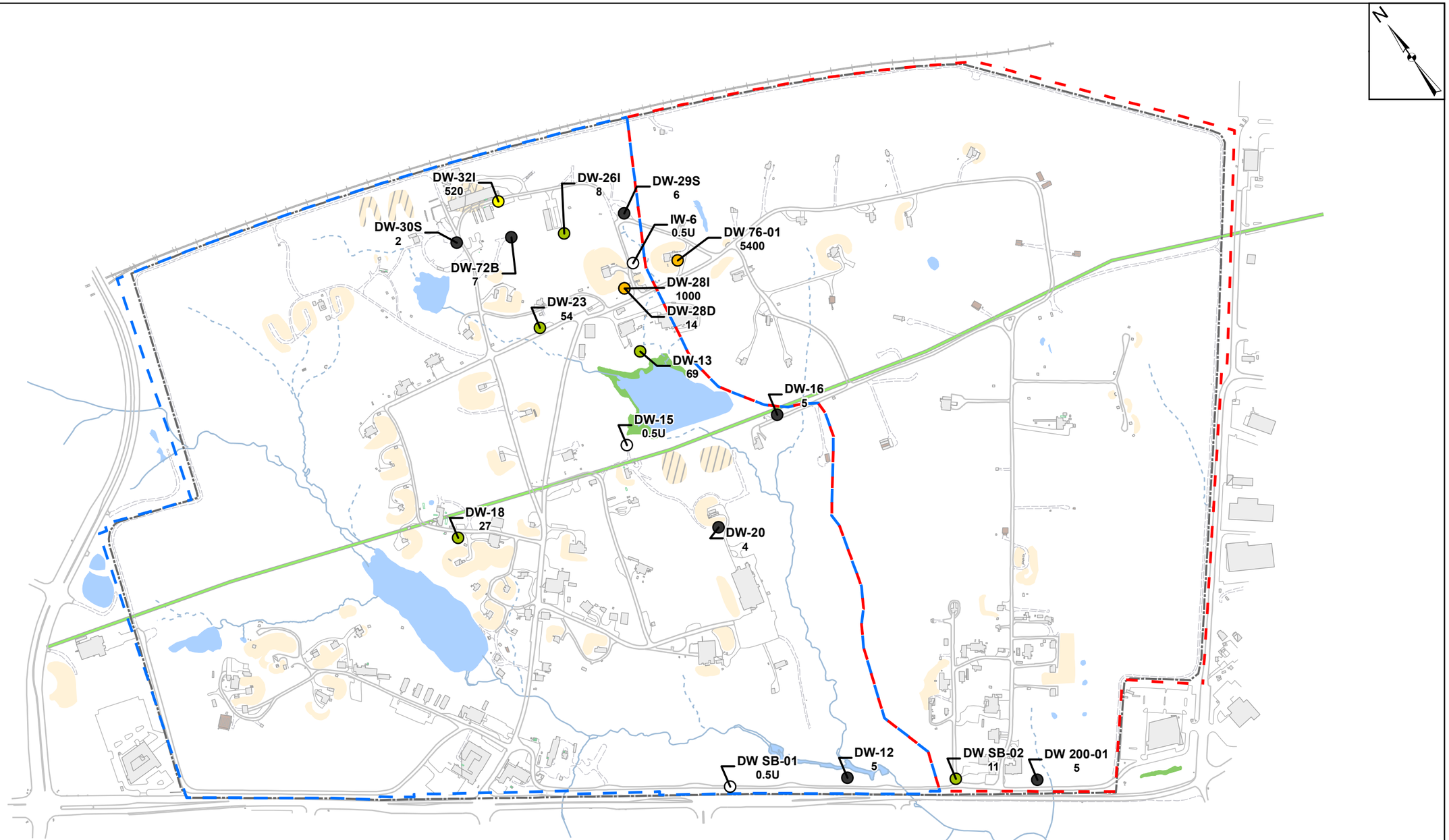
Distribution of 1,1,1-Trichloroethane in Deep Aquifer
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000 | 2/14/2019

Figure 6E

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\6E Distrib. Charts_Deep_1111TCA_2018.mxd



1,1-Dichloroethene

Concentration (ug/L)

- Non-Detect
- ≤7
- >7 - 70
- >70 - 700
- >700 - 7,000
- >7,000 - 70,000
- >70,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (7 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).
Concentrations reported correspond to Spring 2018 data at each sampling location.

500 250 0 500 Feet

Distribution of 1,1-Dichloroethene in Deep Aquifer

Atlantic Research Corporation, Gainesville, Virginia

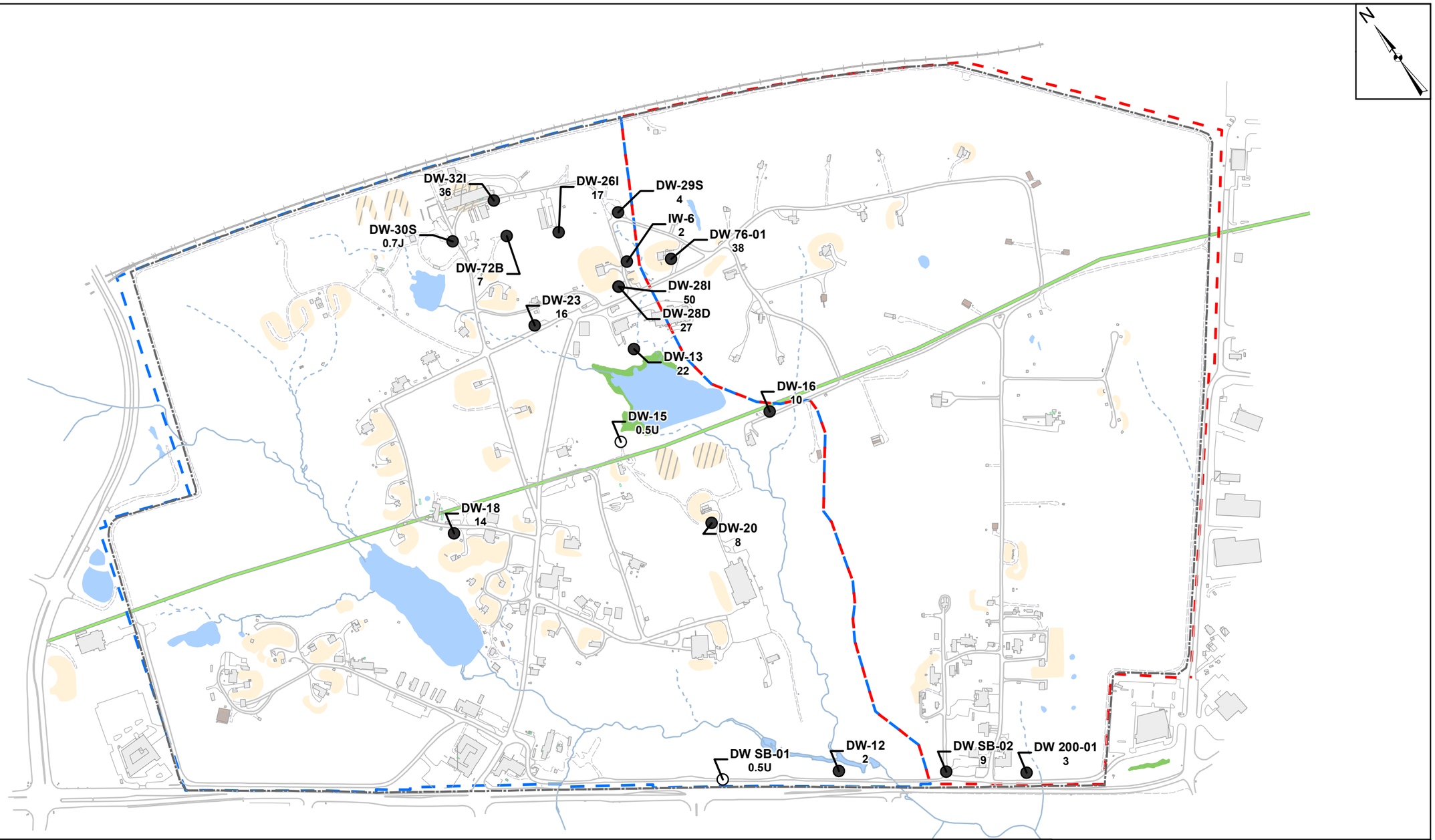
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/14/2019

Figure 6F

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\F6F_Distrib_Charts_Deep_11DCE-2018.mxd



1,1-Dichloroethane
Concentration (ug/L)

- Non-Detect
- ≤140
- >140 - 1,400
- >1,400 - 14,000
- >14,000 - 140,000
- >140,000 - 1,400,000
- >1,400,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Regional Screening Level for tap water based on cancer risk at a target cancer risk of 10^{-5} (140 ug/L)
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location
(sample collected from port inside treatment building).
Concentrations reported correspond to Spring 2018 data at each sampling location.

500 250 0 500 Feet

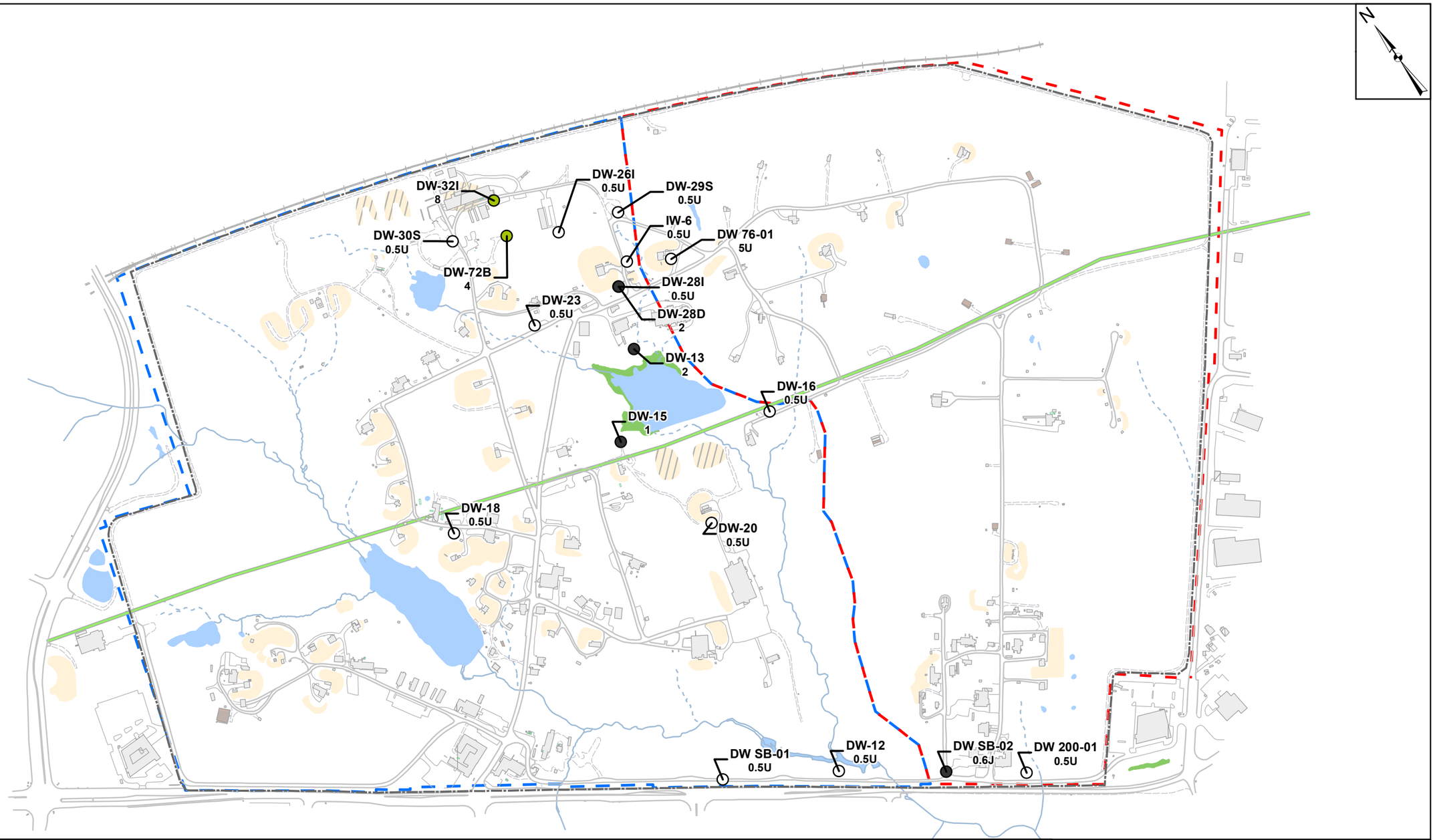
Distribution of 1,1-Dichloroethane in Deep Aquifer
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000 | 2/14/2019

Figure 6G

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\F6G_Distrib_Charts_Deep_11DCA-2018.mxd



Vinyl Chloride

Concentration (ug/L)

- Non-Detect
- ≤2
- >2 -20
- >20 - 200
- >200 - 2,000
- >2,000 - 20,000
- >20,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Leel (2 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).
Concentrations reported correspond to Spring 2018 data at each sampling location.
Deep aquifer includes all groundwater encountered in the metasedimentary bedrock (deep and shallow).

500 250 0 500 Feet

Distribution of Vinyl Chloride in Deep Aquifer

Atlantic Research Corporation, Gainesville, Virginia

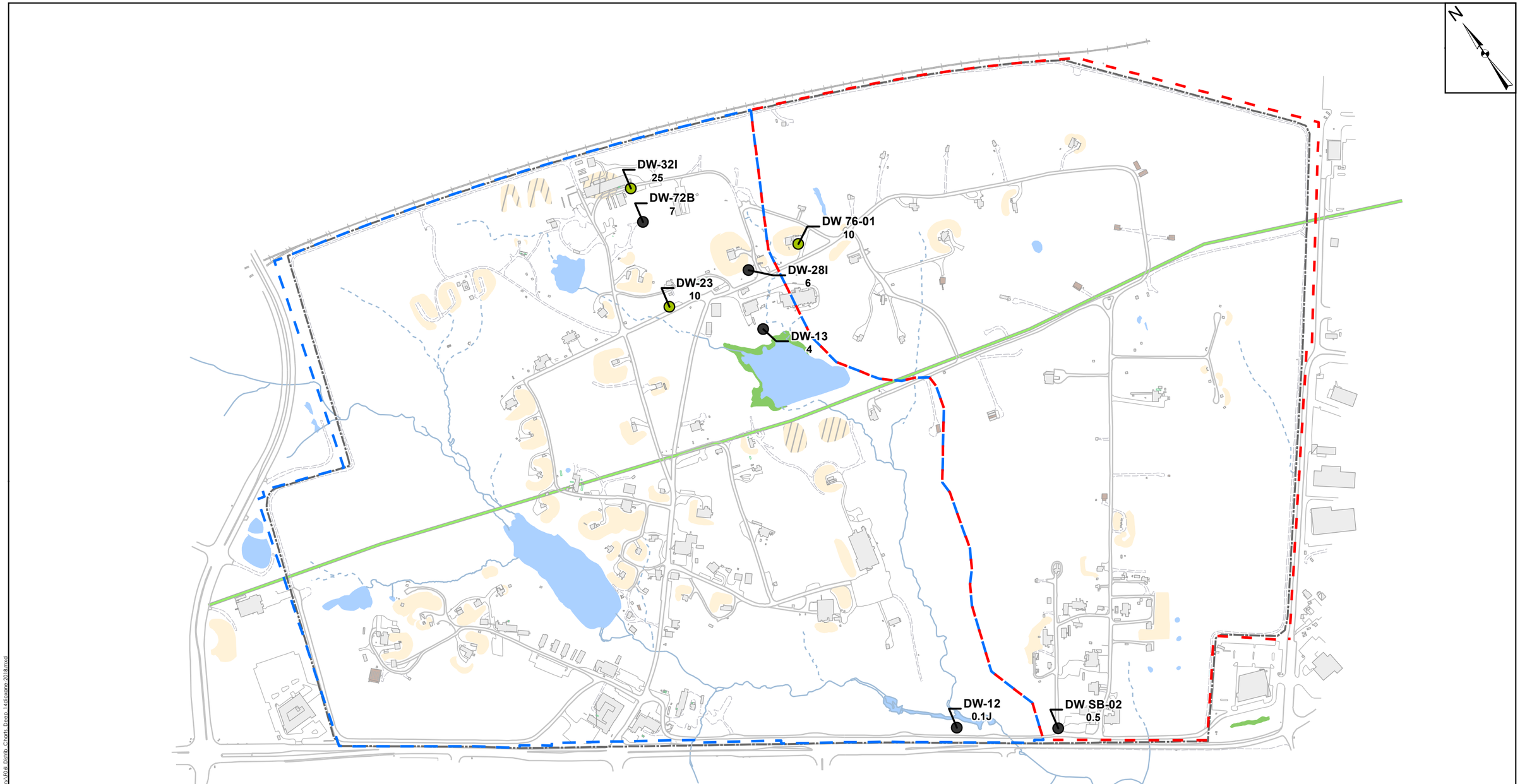
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/14/2019

Figure 6H

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\10-6H_Distrib_Charts_Deep_VC-2018.mxd



1,4-Dioxane

Concentration (ug/L)

- Non-Detect
- <=7.8
- >7.8 - 78
- >78 - 780
- >780 - 7,800
- >7,800 - 78,000
- >78,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Regional Screening Level tapwater ingestion value with a target cancer risk of 10^{-5} (7.8 ug/L).
µg/L - micrograms per liter
DW-13 is the NDTS extraction well location (sample collected from port inside treatment building).
Concentrations reported correspond to Spring 2018 data at each sampling location.

Deep aquifer includes all groundwater encountered in the metasedimentary bedrock (deep and shallow).

500 250 0 500 Feet

Distribution of 1,4-Dioxane in Deep Aquifer

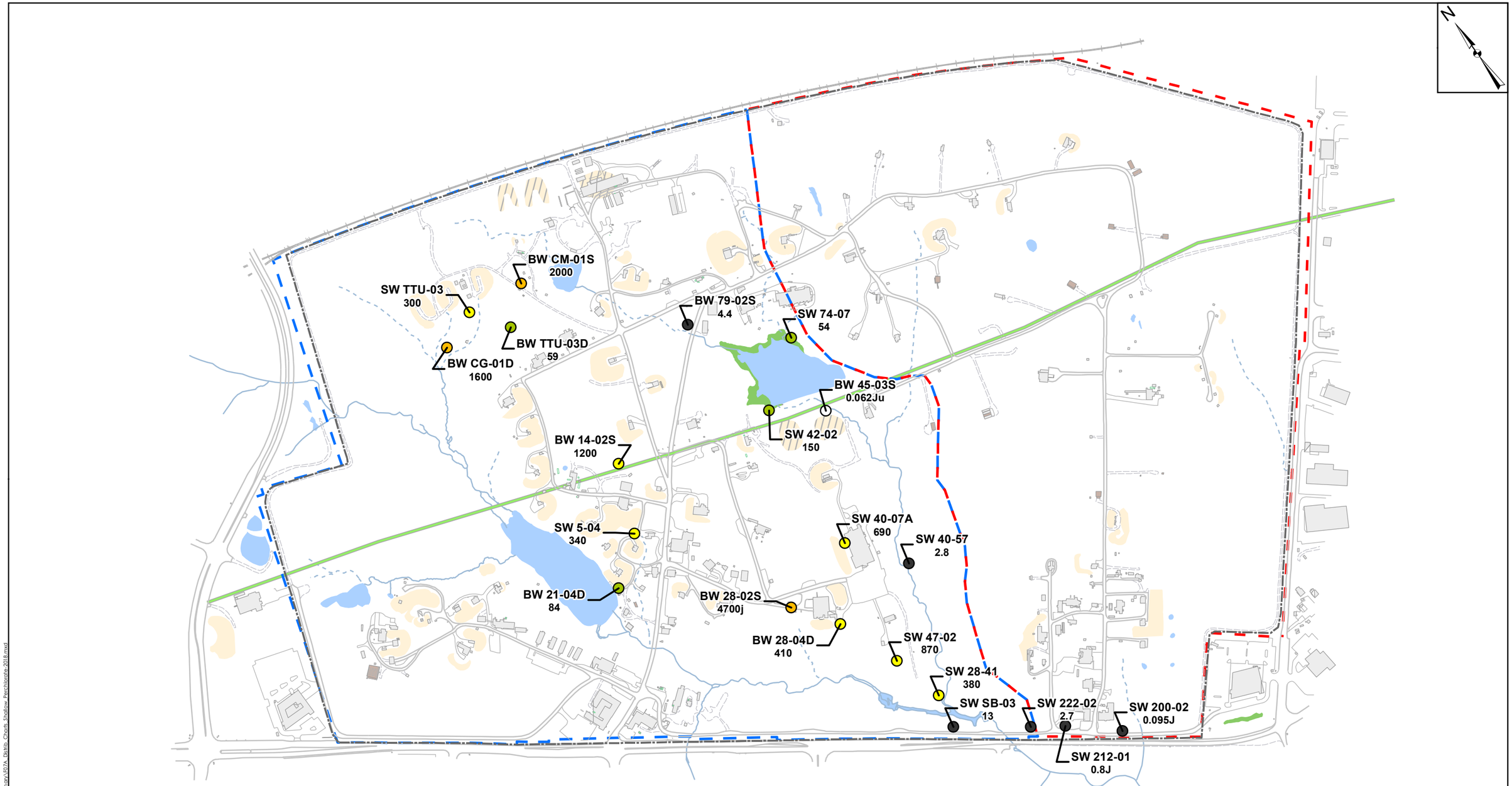
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000 | **2/20/2019**

Figure 6I

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\F06I_Distrib_Charts_Deep_14dioxane-2018.mxd



Perchlorate

Concentration (ug/L)

- Non-Detect
- <=15
- >15 - 150
- >150 - 1,500
- >1,500 - 15,000
- >15,000 - 150,000
- >150,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the USEPA Interim Health Advisory Level (15 µg/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

Distribution of Perchlorate in Shallow Aquifer

Atlantic Research Corporation, Gainesville, Virginia

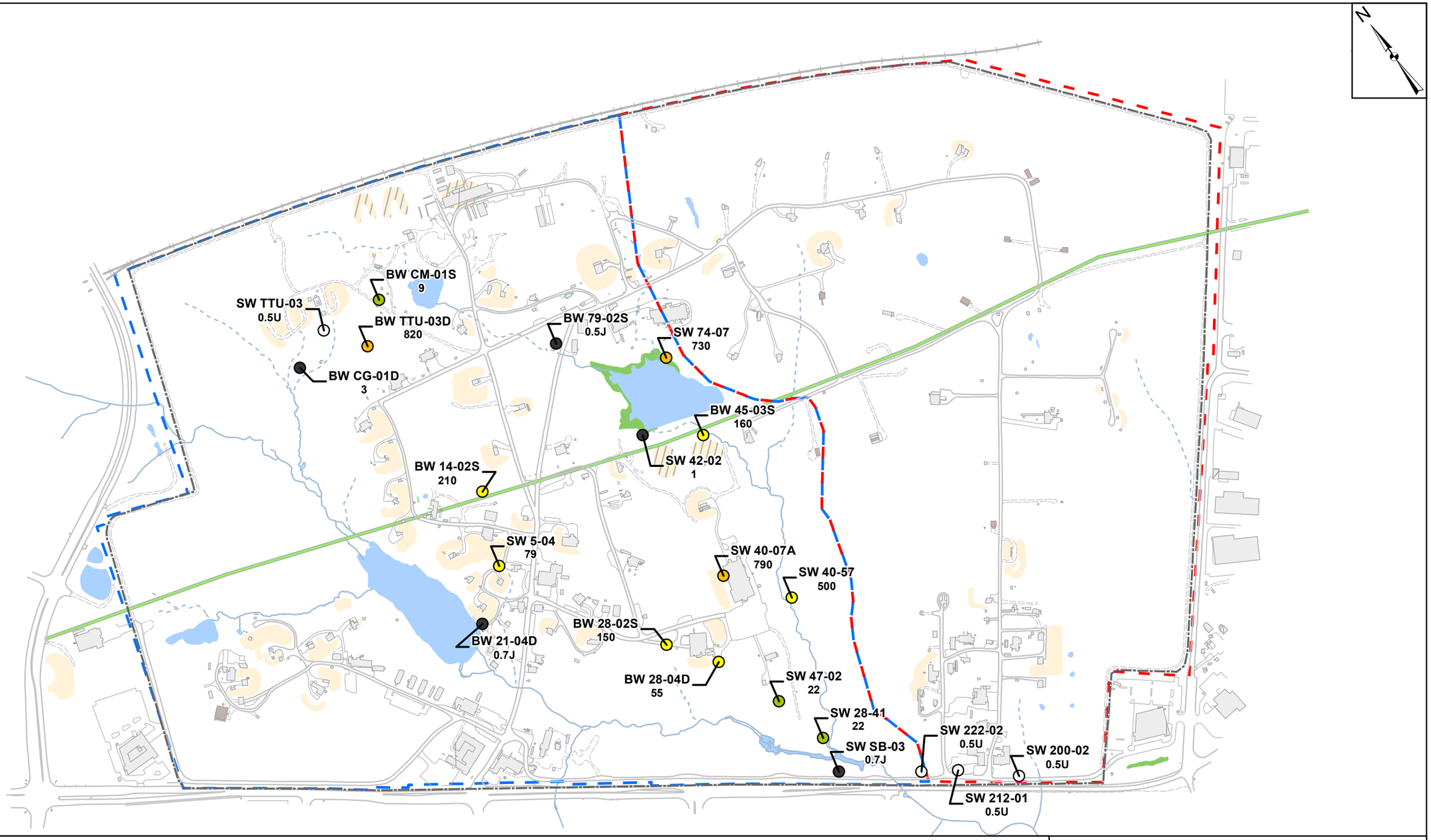
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/14/2019

Figure 7A

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\f07A_Distrib_Charts_Shallow_Perchlorate-2018.mxd



Tetrachloroethene

Concentration (ug/L)

- Non-Detect
- ≤5
- >5 - 50
- >50 - 500
- >500 - 5,000
- >5,000 - 50,000
- >50,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (5 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

Distribution of Tetrachloroethene in Shallow Aquifer

Atlantic Research Corporation, Gainesville, Virginia

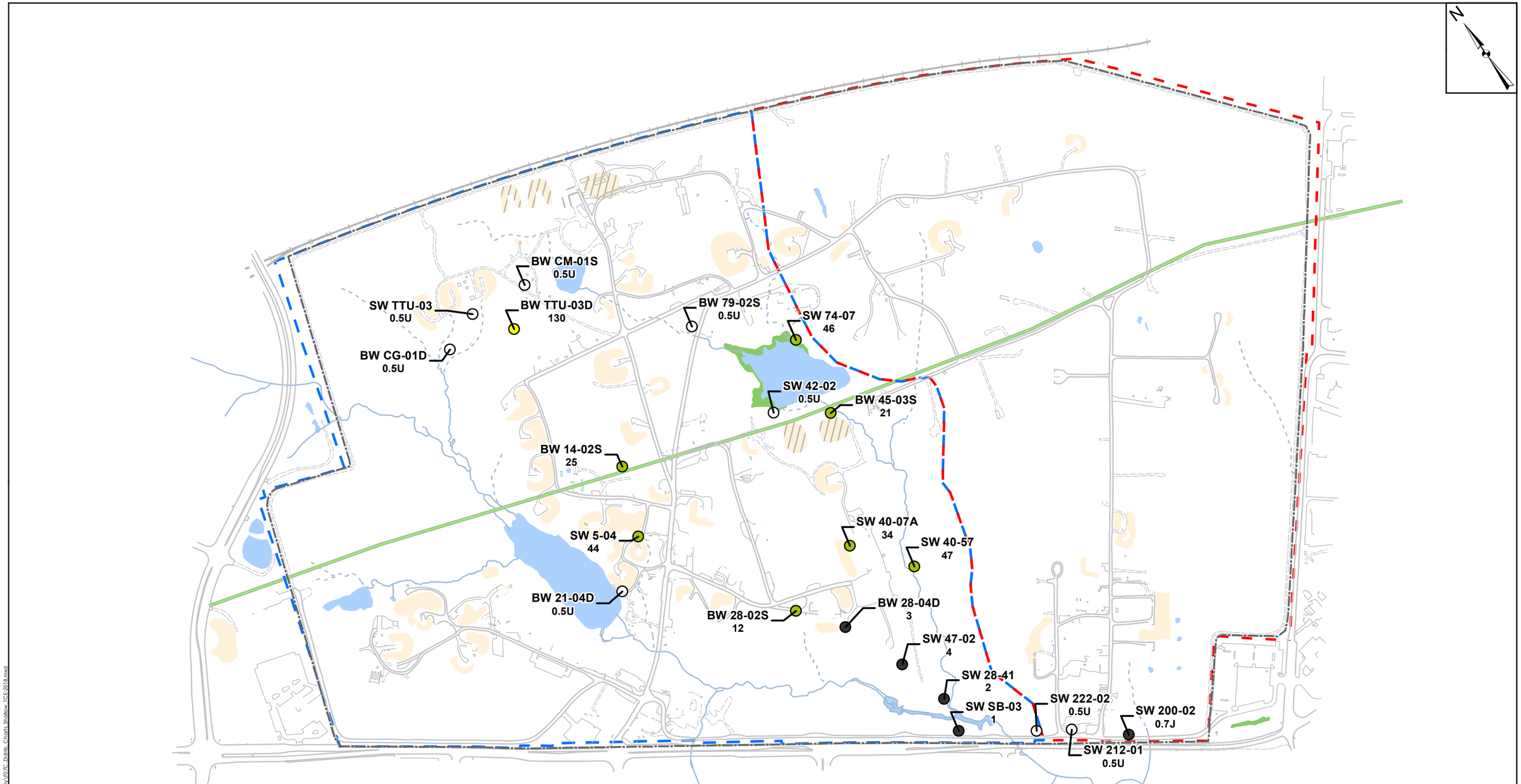
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/14/2019

Figure 7B

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\V078_Distrib_Charts_Shallow_PCE-2018.mxd



Trichloroethene

Concentration (ug/L)

- Non-Detect
- ≤5
- >5 - 50
- >50 - 500
- >500 - 5,000
- >5,000 - 50,000
- >50,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- Building
- Former Building
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (5 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

Distribution of Trichloroethene in Shallow Aquifer

Atlantic Research Corporation, Gainesville, Virginia

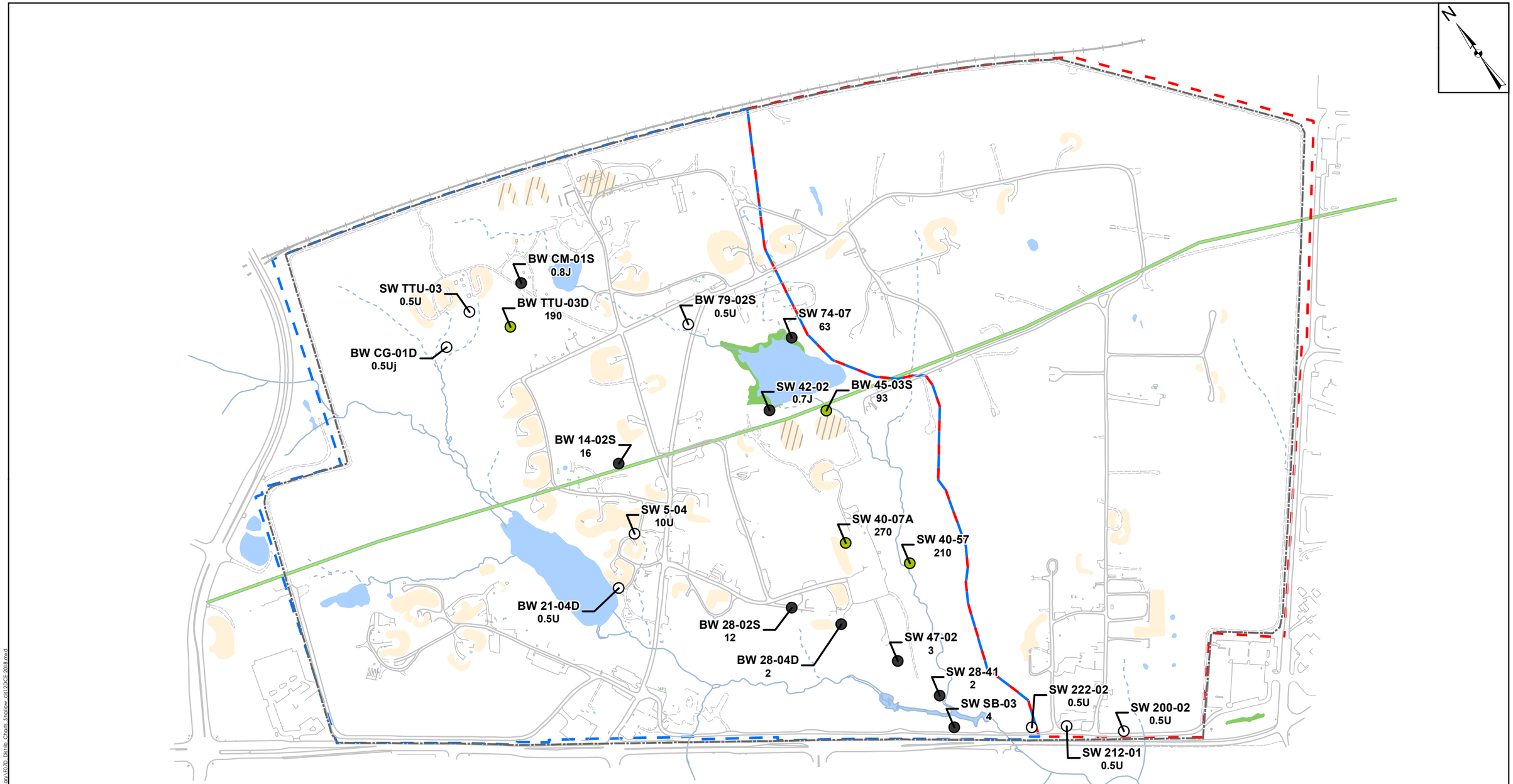
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000

2/14/2019

Figure 7C

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\f07C_Distrib_Charts_Shallow_TCE2018.mxd



cis-1,2-Dichloroethene
Concentration (ug/L)

- Non-Detect
- ≤70
- >70 - 700
- >700 - 7,000
- >7,000 - 70,000
- >70,000 - 700,000
- >700,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (70 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

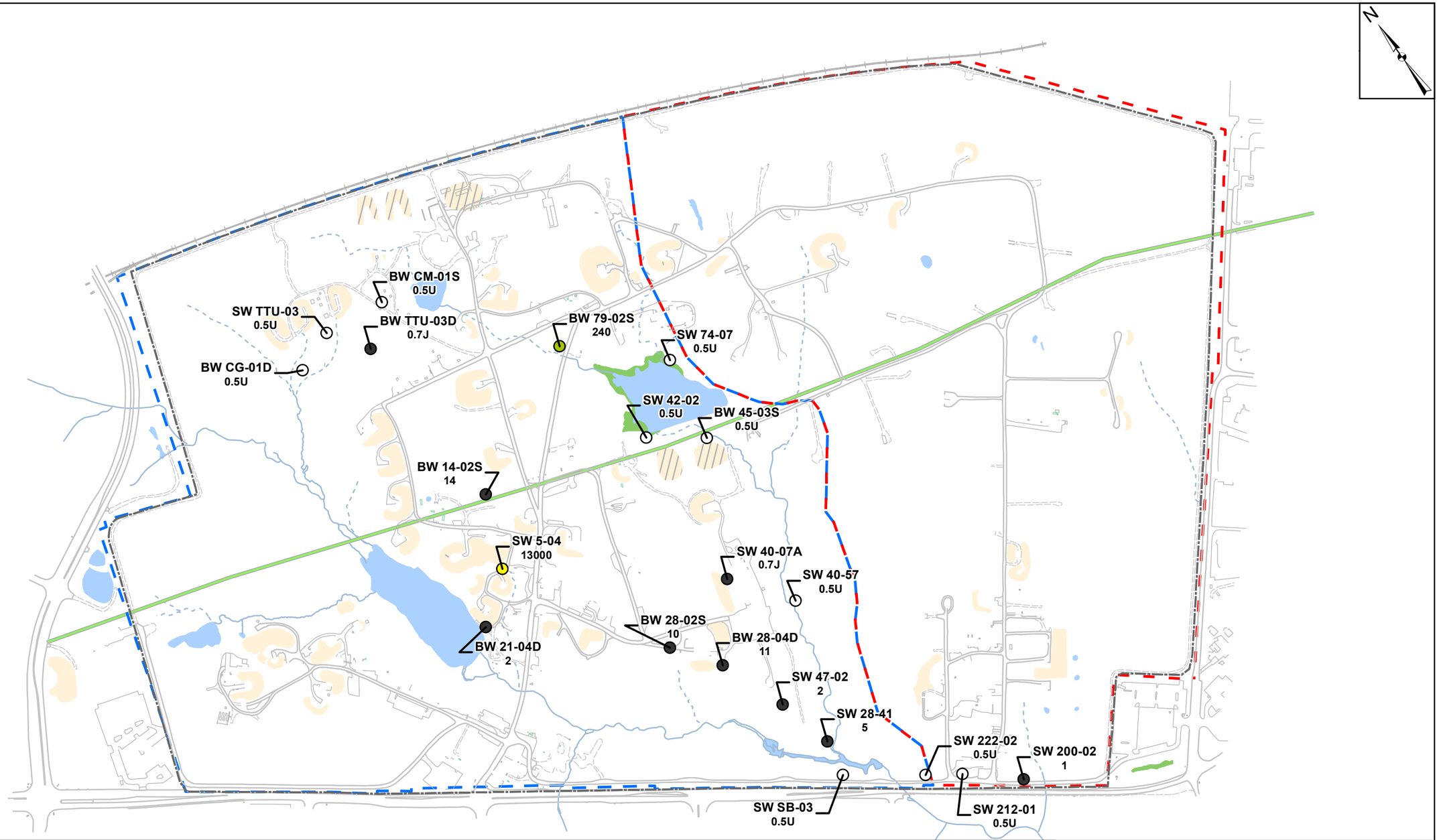
Distribution of cis-1,2-Dichloroethene in Shallow Aquifer
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000 | 2/14/2019

Figure 7D

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\f07D_Distrib_Charts_Shallow_cis12DCE-2018.mxd



1,1,1-Trichloroethane
Concentration (ug/L)

- Non-Detect
- <=200
- >200 - 2,000
- >2,000 - 20,000
- >20,000 - 200,000
- >200,000 - 2,000,000
- >2,000,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (200 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

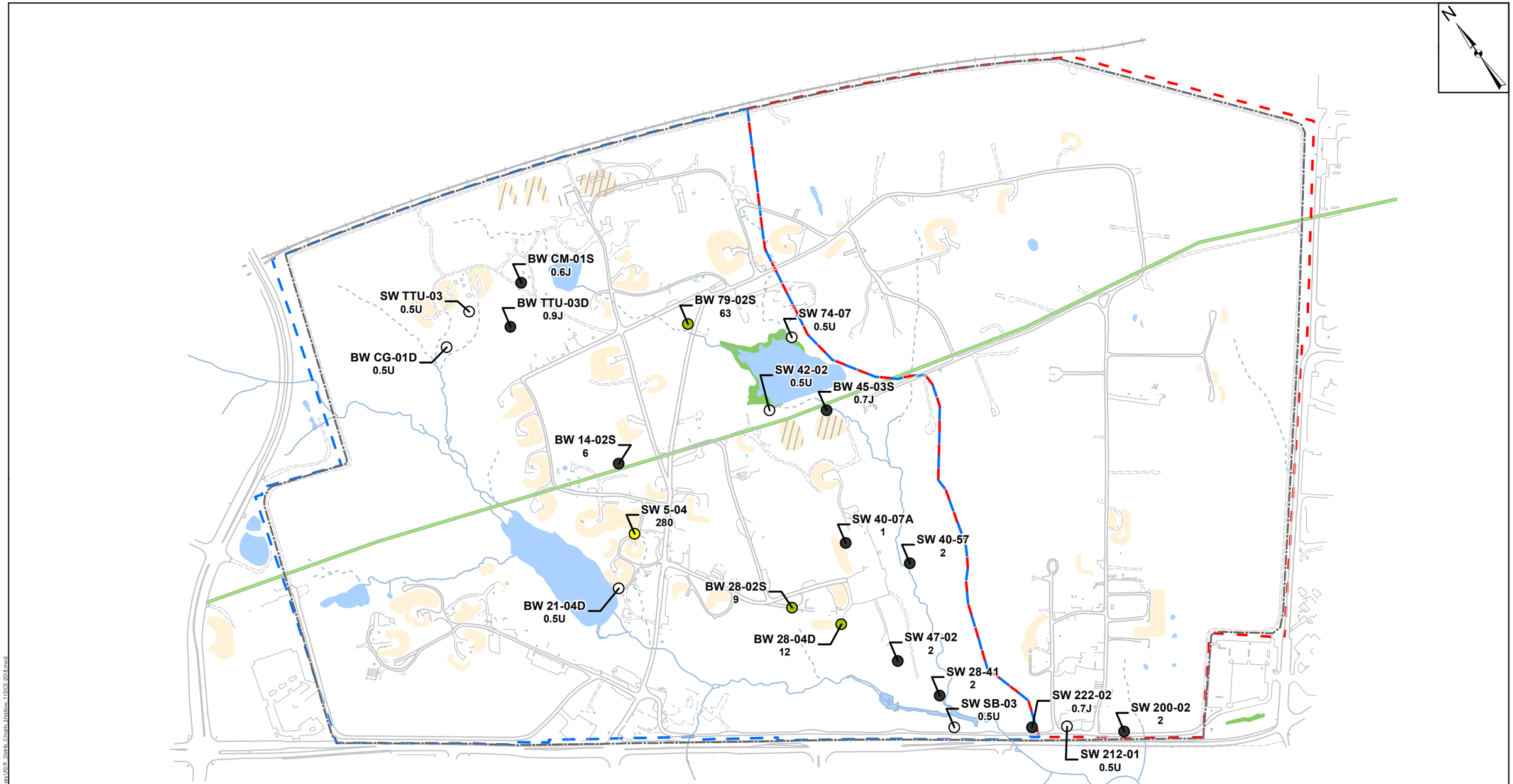
Distribution of 1,1,1-Trichloroethane in Shallow Aquifer
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000 | 2/14/2019

Figure 7E

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\f07E_Distrib_Charts_Shallow_1111CA-2018.mxd



1,1-Dichloroethene
Concentration (ug/L)

- Non-Detect
- ≤7
- >7 - 70
- >70 - 700
- >700 - 7,000
- >7,000 - 70,000
- >70,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (7 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

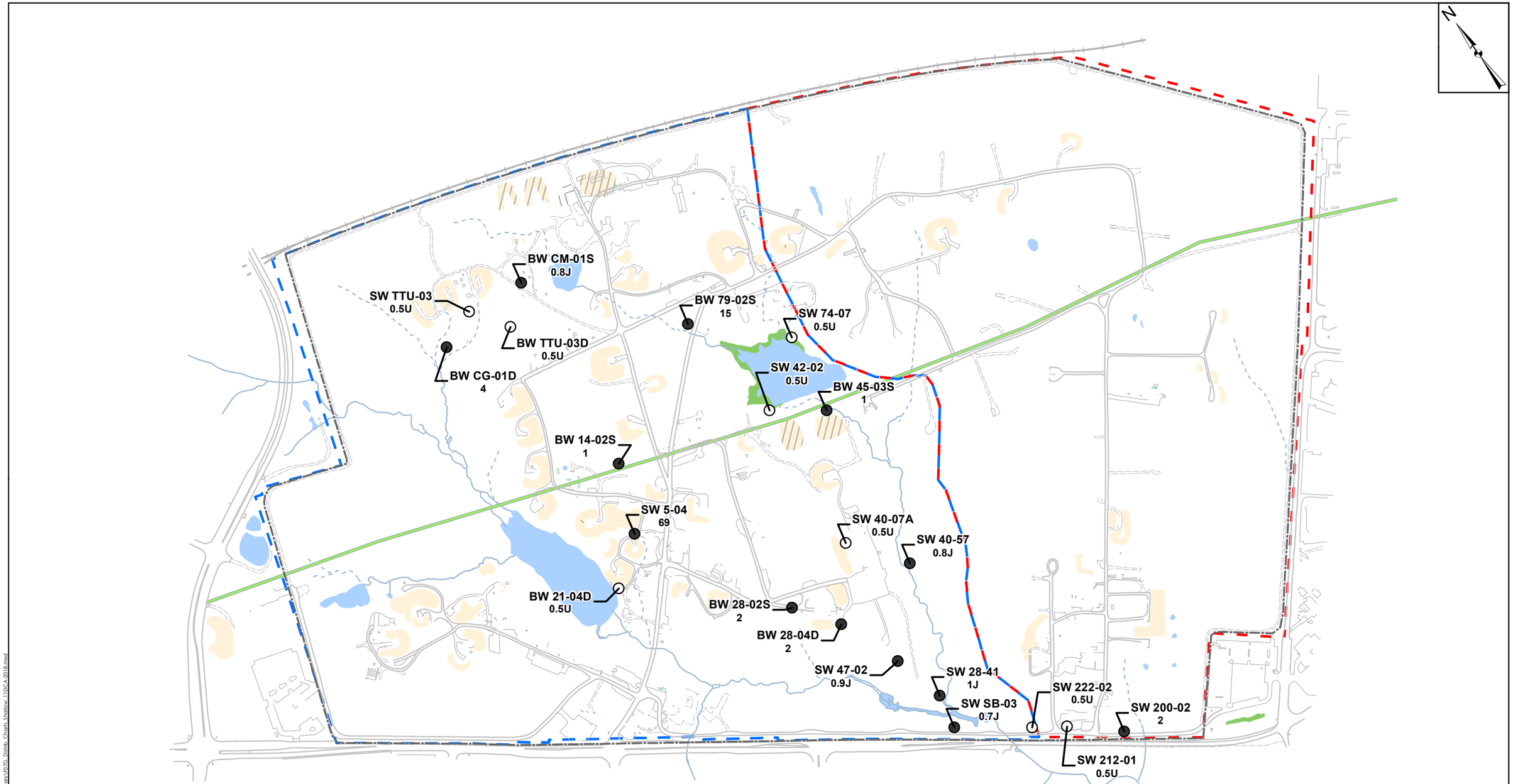
Distribution of 1-1-Dichloroethene in Shallow Aquifer
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0000 | 2/15/2019

Figure 7F

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\f07F_Distrib_Charts_Shallow_11DCE-2018.mxd



1,1-Dichloroethane
Concentration (ug/L)

- Non-Detect
- ≤140
- >140 - 1,400
- >1,400 - 14,000
- >14,000 - 140,000
- >140,000 - 1,400,000
- >1,400,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Regional Screening Level for tap water based on cancer risk at a target cancer risk of 10^{-6} (140 ug/L)

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

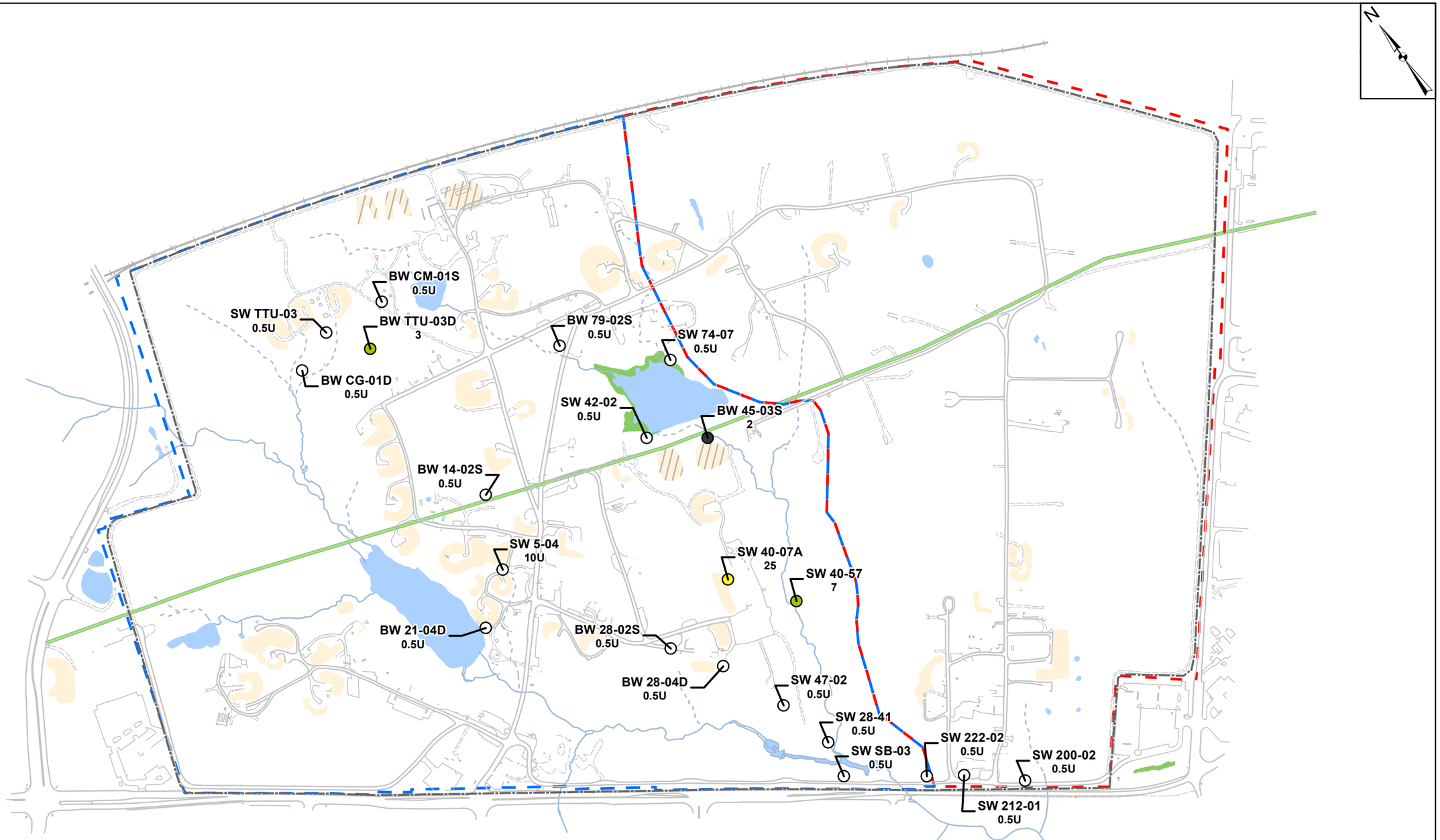
Distribution of 1,1-Dichloroethane in Shallow Aquifer
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001 | 2/15/2019

Figure 7G

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\f07G_Distrib_Charts_Shallow_11DCA_2018.mxd



Vinyl chloride

Concentration (ug/L)

- Non-Detect
- ≤2
- >2 -20
- >20 - 200
- >200 - 2,000
- >2,000 - 20,000
- >20,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Federal Maximum Contaminant Level (2 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

Distribution of Vinyl Chloride in Shallow Aquifer

Atlantic Research Corporation, Gainesville, Virginia

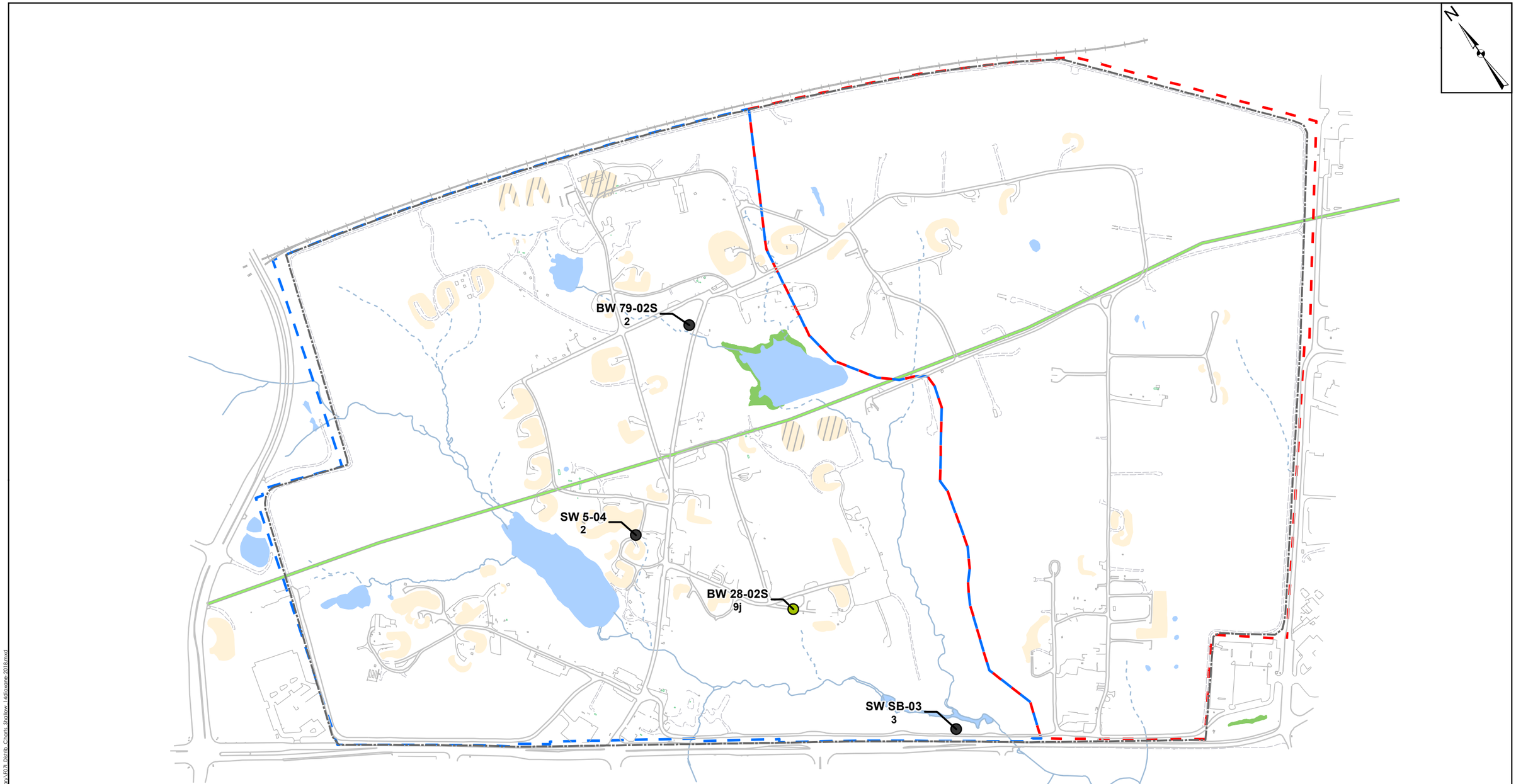
TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001

2/15/2019

Figure 7H

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report_2018_Summary\f07H_Distrib_Charts_Shallow_VC-2018.mxd



1,4-Dioxane

Concentration (ug/L)

- Non-Detect
- <=7.8
- >7.8 - 78
- >78 - 780
- >780 - 7,800
- >7,800 - 78,000
- >78,000

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

Notes:

Concentrations are referenced to the Regional Screening Level tapwater ingestion value with a target cancer risk of 10^{-5} (7.8 ug/L).

µg/L - micrograms per liter
Concentrations reported correspond to Spring 2018 data at each sampling location.
Shallow aquifer includes groundwater encountered in overburden, saprolite and the upper weathered diabase bedrock.

500 250 0 500 Feet

Distribution of 1,4-Dioxane in Shallow Aquifer

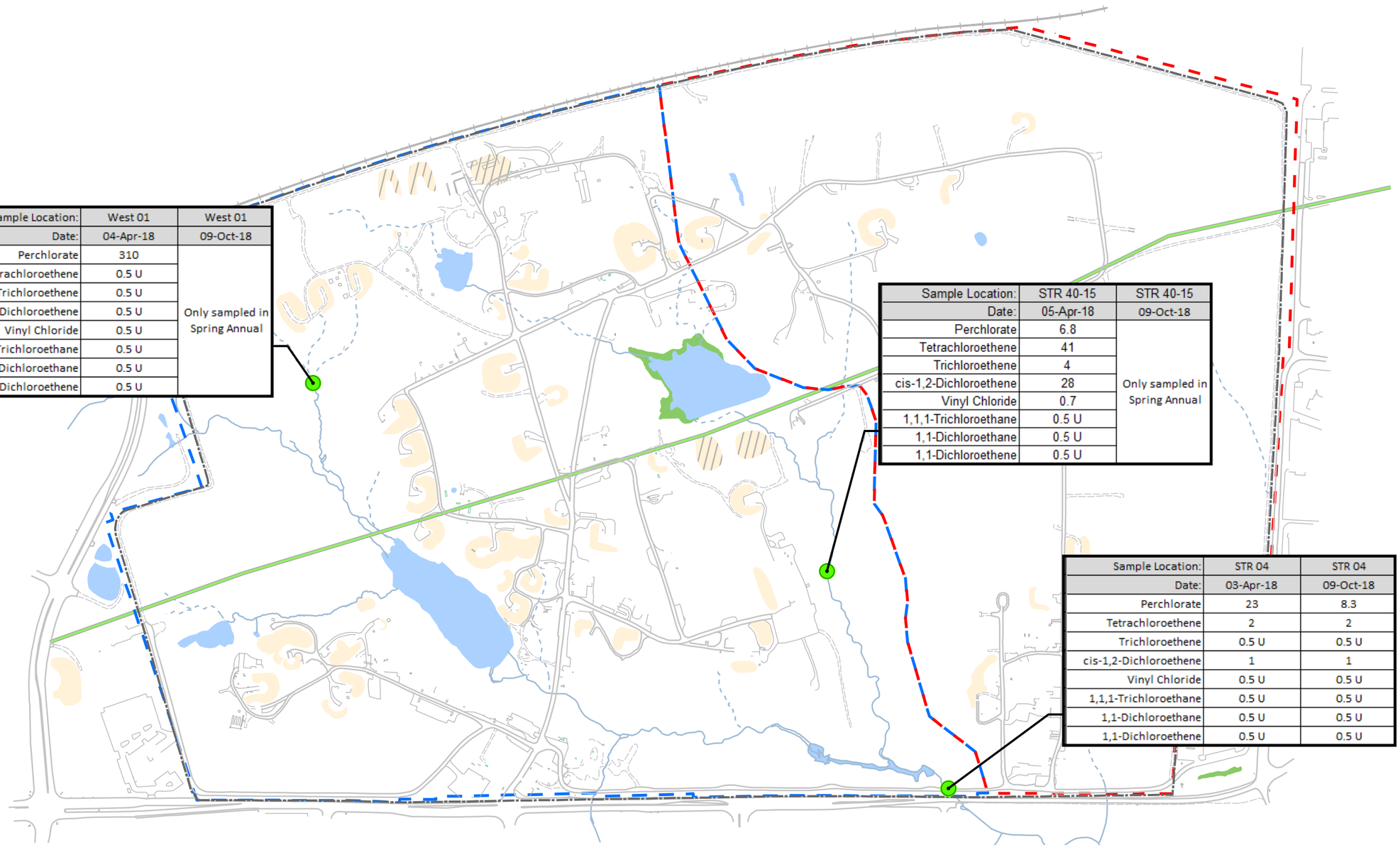
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Project: 229931.0001 | **2/20/2019**

Figure 7I

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\Fig7I_Distrib_Charts_Shallow_14dioxane-2018.mxd



Sample Location:	West 01	West 01
Date:	04-Apr-18	09-Oct-18
Perchlorate	310	Only sampled in Spring Annual
Tetrachloroethene	0.5 U	
Trichloroethene	0.5 U	
cis-1,2-Dichloroethene	0.5 U	
Vinyl Chloride	0.5 U	
1,1,1-Trichloroethane	0.5 U	
1,1-Dichloroethane	0.5 U	
1,1-Dichloroethene	0.5 U	

Sample Location:	STR 40-15	STR 40-15
Date:	05-Apr-18	09-Oct-18
Perchlorate	6.8	Only sampled in Spring Annual
Tetrachloroethene	41	
Trichloroethene	4	
cis-1,2-Dichloroethene	28	
Vinyl Chloride	0.7	
1,1,1-Trichloroethane	0.5 U	
1,1-Dichloroethane	0.5 U	
1,1-Dichloroethene	0.5 U	

Sample Location:	STR 04	STR 04
Date:	03-Apr-18	09-Oct-18
Perchlorate	23	8.3
Tetrachloroethene	2	2
Trichloroethene	0.5 U	0.5 U
cis-1,2-Dichloroethene	1	1
Vinyl Chloride	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U

Legend

- Surface Water Sampling Locations

Site Features

- Site Boundary
- Paved Road
- Unpaved Road
- Pavement
- Parking
- Railroad Track
- Tank
- High Pressure Gas line
- Berm
- Historic Burn Area /TTU
- Perennial Surface Water
- Ephemeral Surface Water
- Wetland
- Pond
- Gainesville Parcel
- Sharpless Parcel

0 250 500 Feet

Notes:

Screening Levels are described in the accompanying report.
They are based on either the Freshwater Screening Benchmark for individual COCs or are referenced to the Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization External Review Draft (NCEA-1-0503, January 2002),
per EPA correspondence (letter dated 30 June 2004) (600 µg /L).
Concentrations reported correspond to data collected during Spring or Fall 2017.
µg/L - micrograms per liter

Chemical Name	Screening Levels (ug/L)
Perchlorate	600
Tetrachloroethene	111
Trichloroethene	21
cis-1,2-Dichloroethene	--
Vinyl Chloride	930
1,1,1-Trichloroethane	11
1,1-Dichloroethane	47
1,1-Dichloroethene	25

Sampling Locations and Data Summary for Surface Water

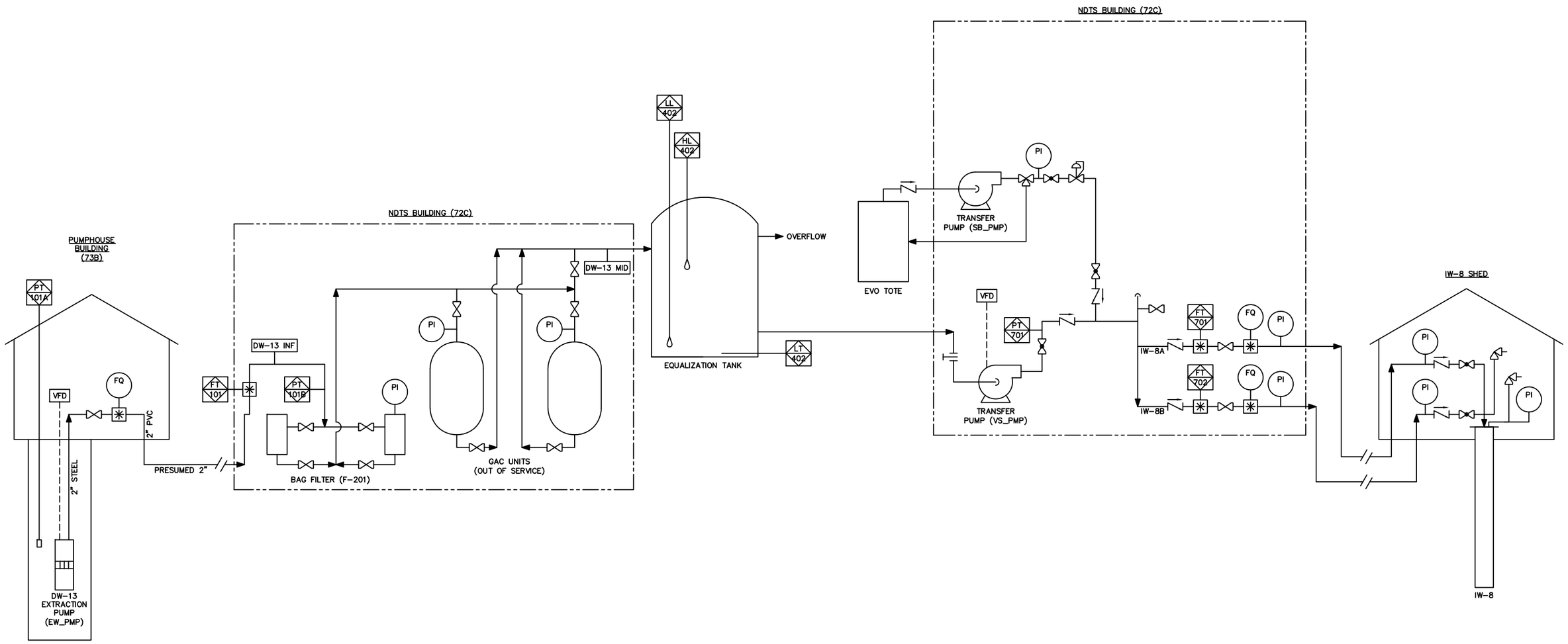
Atlantic Research Corporation, Gainesville, Virginia

TRC Environmental Inc.
11231 Cornell Park Drive
Cincinnati, Ohio 45242

Figure 8

Project: 229931.0001 | **2/15/2019**

G:\GIS_Projects\GIS_SEQUA\Gainesville\MXD\Report 2018_Summary\Y018_Surface_Water_Spring-2018.mxd



ACRONYMS:

FT	FLOW INDICATING TRANSMITTER
FQ	FLOW TOTALIZER
GAC	GRANULAR ACTIVATED CARBON
LSH	LEVEL SWITCH HIGH
LSL	LEVEL SWITCH LOW
LT	LEVEL TRANSMITTER
PI	PRESSURE INDICATOR
PT	PRESSURE INDICATING TRANSMITTER
VFD	VARIABLE FREQUENCY DRIVE (PUMP CONTROL)
VS	VARIABLE SPEED

LEGEND:

- BALL VALVE
- GATE VALVE
- CHECK VALVE
- KNIFE GATE VALVE
- PRESSURE REGULATING VALVE
- THREE-WAY VALVE
- FLOW METER

REV	DATE	DESCRIPTION	DRN	APP
	2/19/19	Revised for O&M plan 9/24/2018, Rev updated programming 2/19/2019		
	1/28/14	Drawing CAD files provided by GSA. Updated by TRC 1/28/2014		

TRC Results you can rely on
11231 CORNELL PARK DRIVE
CINCINNATI, OHIO 45242
PHONE: 513-489-2255

TITLE: NDTS PROCESS FLOW

PROJECT: ARC GAINESVILLE

SITE: ATLANTIC RESEARCH CORPORATION GAINESVILLE, VIRGINIA

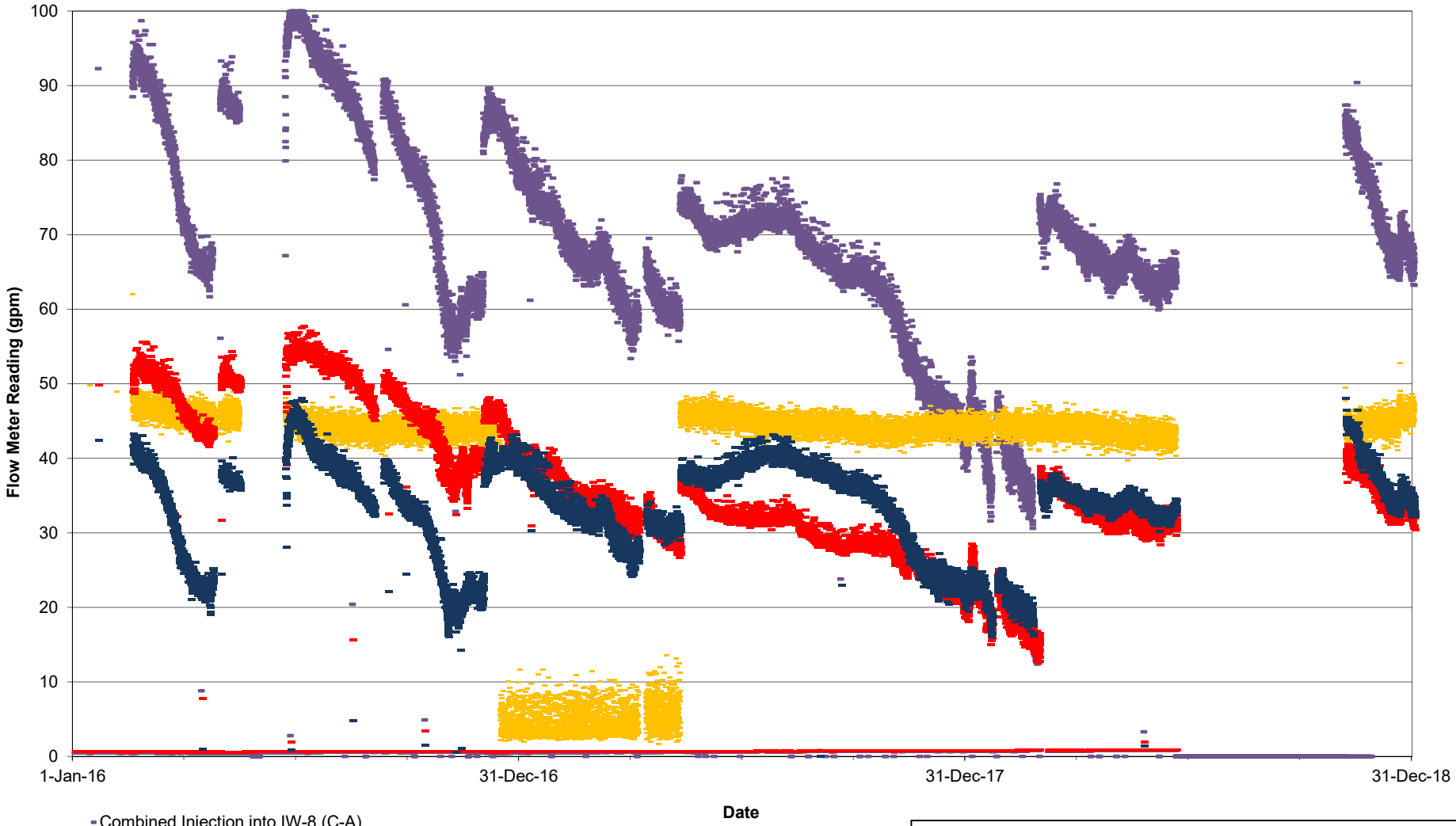
THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE

DATE

DESIGN BY:	TRC	DATE:	2/19/2019
DRAWN BY:	TRC	PROJECT NO.:	229931.0000
CHECKED BY:		FILE:	NDTS_A-20190219
REVIEWED BY:		DRAWING NO.:	2
APPROVED BY:			

G:\CADD\Gainesville\NDTS_A-20190219.dwg



Note:
gpm - gallons per minute
NDTS - Northern Deep Treatment System

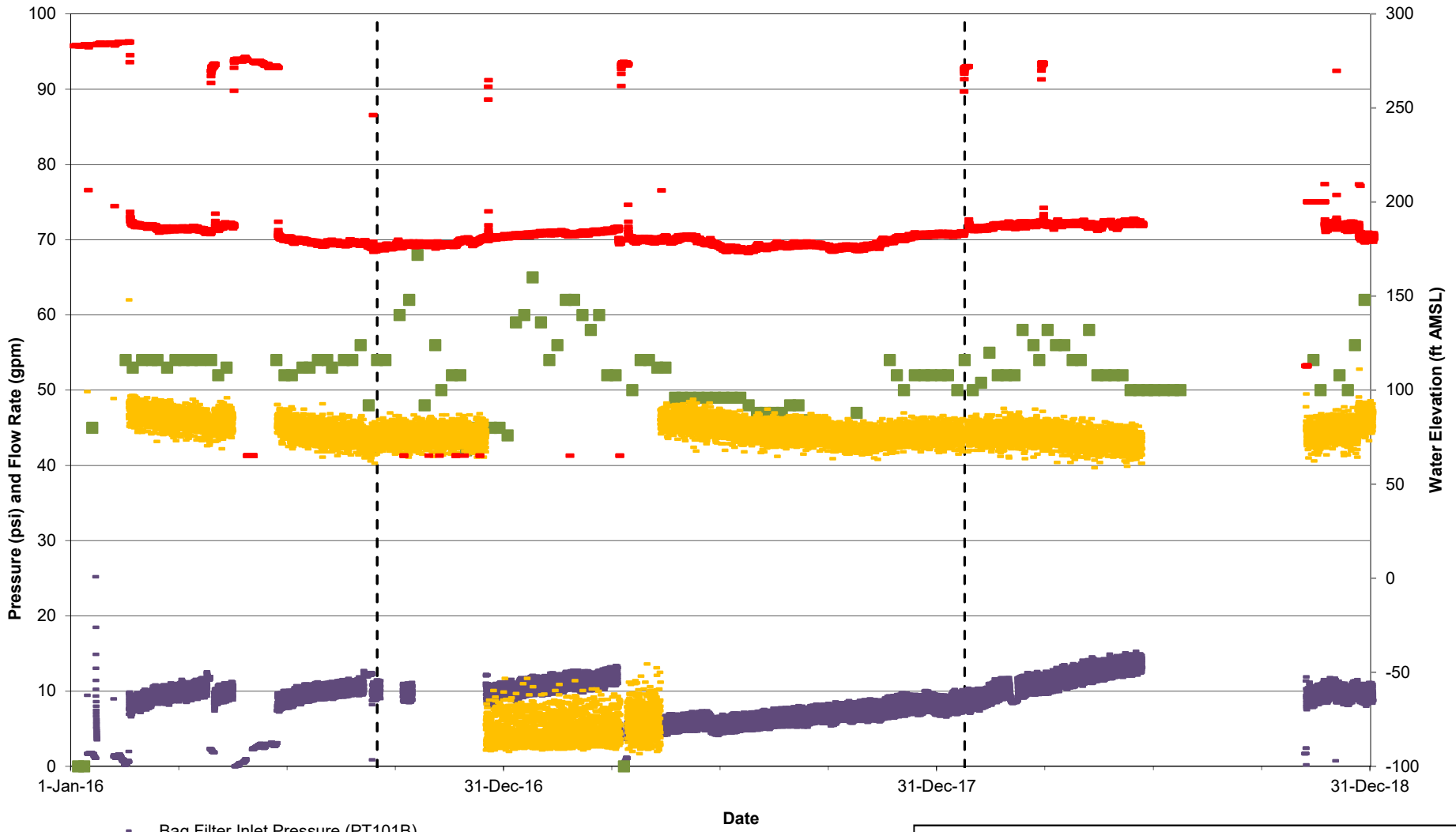
NDTS Injection and Extraction Rates
2016 through 2018
Atlantic Research Corporation, Gainesville, Virginia

TRC Results you can rely on

192457.0002.0000	February 2019

Figure
10A

F:\Data\PFI-MGT\Projects\Sequa Corporation\192457.0001-Gainesville\NDTS Perfomance Info\[2018.12.31 WIP - TRC - Gainesville NDTS Performance.xlsx]Combined for Flow



- Bag Filter Inlet Pressure (PT101B)
- DW-13 Well Head Pressure (FF-I)
- DW-13 Extraction Rate (FT_101)
- Bag Filter Change (M-C)
- DW-13 Water Level (PT101A)

Notes:
AMSL - above mean sea level
ft - feet
gpm - gallons per minute
psi - pounds per square inch
NDTS - Northern Deep Treatment System

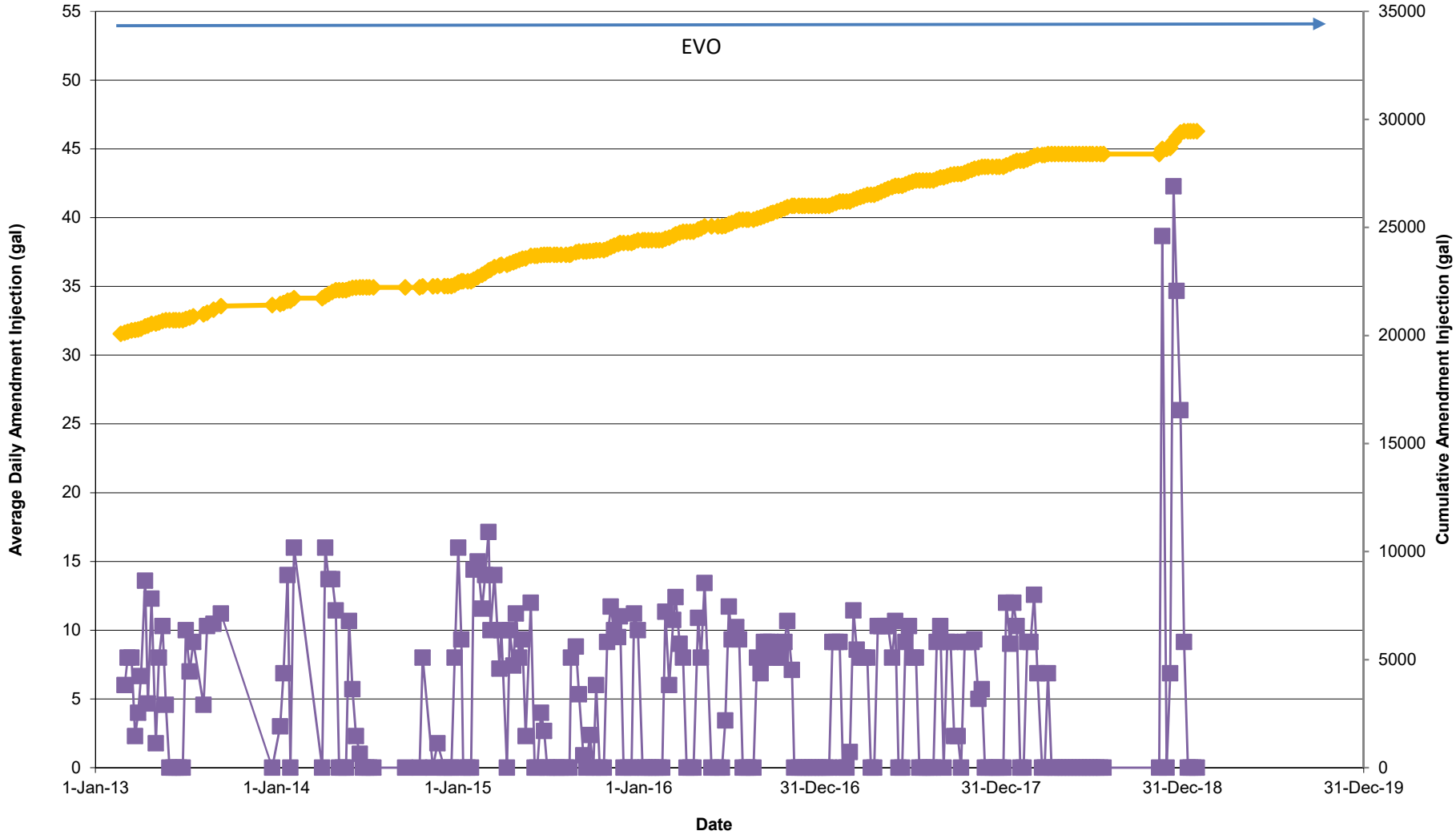
NDTS Extraction Pressures, Rate and DW-13 Water Level
Atlantic Research Corporation Facility, Gainesville, Virginia

TRC Results you can rely on

192457.0002.0000 | February 2019

Figure **10B**

F:\Data\PFI-MGT\Projects\Sequa Corporation\192457.0001-Gainesville\NDTS Performance Info\[2018.12.31 WIP - TRC - Gainesville NDTS Performance.xlsx]System Monitoring Data



Amendment - Daily EVO

All Amendments - Cumulative

Note:
gal - gallons

Lactate volumes represent equivalent 60% solution volumes.

Average Daily and Cumulative Amendment Injection
Atlantic Research Corporation Facility, Gainesville, Virginia

TRC Results you can rely on

192457.0002.0000 | February 2019

Figure **10C**

\\CINCINNATI-FP2\Company\Data\PFI-MGT\Projects\Sequa Corporation\192457.0001-Gainesville\NDTS Performance Info\[2018.06.13 WIP - TRC - Gainesville NDTS Performance.xlsx]Misc

TABLES

TABLE 1
LOCATIONS SAMPLED
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Well ID	Data Need (2017 Plan)	Spring 2018 (Annual)			Fall 2018 (Semi-Annual)		
			Per-chlorate	VOCs	1,4-Dioxane	Per-chlorate	VOCs	1,4-Dioxane
Deep	BW 78-12D	Source	Y					
Deep	DW 200-01	Sentinel	Y	Y		Y	Y	
Deep	DW 213-01	Performance	Y					
Deep	DW 76-01	Source	Y	Y	Y			
Deep	DW SB-01	Sentinel	Y	Y		Y	Y	
Deep	DW SB-02	Sentinel	Y	Y	Y	Y	Y	Y
Deep	DW-12	Sentinel	Y	Y	Y	Y	Y	Y
Deep	DW-13	NDTS Extraction	Y	Y	Y	Y	Y	Y
Deep	DW-13 MID	NDTS Midpoint		Y			Y	
Deep	DW-15	Performance		Y				
Deep	DW-16	Performance		Y				
Deep	DW-18	Performance		Y				
Deep	DW-20	Performance	Y	Y				
Deep	DW-23	Performance	Y	Y	Y			
Deep	DW-26I	Source	Y	Y				
Deep	DW-28D	Source	Y	Y				
Deep	DW-28I	Source	Y	Y	Y			
Deep	DW-29S	Source	Y	Y				
Deep	DW-30S	Performance	Y	Y				
Deep	DW-32I	Source		Y	Y			
Deep	DW-72B	Source		Y	Y			
Deep	IW-6	Source	Y	Y				
Shallow	BW 14-02S	Performance	Y	Y				
Shallow	BW 21-04D	Performance	Y	Y				
Shallow	BW 28-02S	Performance	Y	Y	Y			
Shallow	BW 28-04D	Performance	Y	Y				
Shallow	BW 45-03S	Performance	Y	Y				
Shallow	BW 79-02S	Source	Y	Y	Y			
Shallow	BW CG-01D	Source	Y	Y				
Shallow	BW CM-01S	Source	Y	Y				
Shallow	BW TTU-03D	Performance	Y	Y				
Shallow	SW 200-02	Sentinel	Y	Y		Y	Y	
Shallow	SW 212-01	Sentinel	Y	Y		Y	Y	
Shallow	SW 222-02	Sentinel	Y	Y		Y	Y	
Shallow	SW 28-41	Performance	Y	Y				
Shallow	SW 40-07A	Source	Y	Y				
Shallow	SW 40-57	Performance	Y	Y				
Shallow	SW 42-02	Performance	Y	Y				
Shallow	SW 47-02	Performance	Y	Y				
Shallow	SW 5-04	Source	Y	Y	Y			
Shallow	SW 74-07	Performance	Y	Y				
Shallow	SW SB-03	Sentinel	Y	Y	Y	Y	Y	Y
Shallow	SW TTU-03	Performance	Y	Y				
Surface	STR 04	Sentinel	Y	Y		Y	Y	
Surface	STR 40-15	Performance	Y	Y				
Surface	WEST 01	Source	Y	Y				

Note: All locations were sampled according to plan.

TABLE 2
WATER LEVELS AND ELEVATIONS - SPRING 2018
Atlantic Research Corporation, Gainesville, Virginia

Location	Aquifer Designation	Easting	Northing	Date	Measured Depth from Top of Casing (feet)	Calculated Ground Water Elevation (feet)	Notes
BW 78-12D	Deep	11745876.10	6973376.24	4/2/2018	9.19	312.40	
BW CM-03	Deep	11744931.61	6974081.002	4/2/2018	50.73	290.52	
BW NE-01D	Deep	11748511.40	6971963.168	4/2/2018	4.41	299.65	
DW 200-01	Deep	11745907.02	6969848.603	4/2/2018	--	--	Artesian
DW 213-01	Deep	11747380.12	6970939.555	4/2/2018	12.29	289.34	
DW 76-01	Deep	11745980.56	6973060.857	4/2/2018	33.57	282.58	
DW SB-01	Deep	11744622.12	6970739.074	4/2/2018	0.8	282.43	
DW SB-02	Deep	11745574.86	6970096.341	4/2/2018	--	--	Artesian, flowing, 0.8 psi
DW-12	Deep	11745130.60	6970423.686	4/2/2018	--	--	Artesian, flowing, 6.3 psi
DW-13	Deep	11745552.77	6972798.868	4/2/2018	--	--	NDTS System
DW-13 MID	Deep	11745440.55	6973206.479	4/2/2018	--	--	NDTS System
DW-15	Deep	11745218.89	6972452.084	4/2/2018	21.7	282.71	
DW-16	Deep	11745929.01	6972128.335	4/2/2018	14.24	283.01	
DW-18	Deep	11744246.68	6972574.935	4/2/2018	30.95	284.57	
DW-20	Deep	11745349.92	6971840.093	4/2/2018	11.07	282.68	
DW-23	Deep	11745211.96	6973195.945	4/2/2018	28.19	286.64	
DW-25	Deep	11745677.62	6973710.239	4/2/2018	31.98	301.53	
DW-26I	Deep	11745593.67	6973512.307	4/2/2018	38.34	292.26	
DW-28D	Deep	11745678.27	6973104.688	4/2/2018	39.59	280.18	
DW-28I	Deep	11745678.33	6973104.87	4/2/2018	11.25	308.42	
DW-29I	Deep	11745900.81	6973414.242	4/2/2018	29.45	293.15	
DW-29S	Deep	11745900.67	6973414.138	4/2/2018	28.4	294.36	
DW-30S	Deep	11745124.29	6973794.164	4/2/2018	42.57	291.66	
DW-32I	Deep	11745419.58	6973840.697	4/2/2018	45.02	294.59	
DW-36D	Deep	11745908.21	6973502.133	4/2/2018	29.56	293.94	
DW-6	Deep	11745936.42	6973767.673	4/2/2018	27.94	304.73	
DW-72B	Deep	11745365.84	6973654.521	4/2/2018	32.3	302.92	
IW-6	Deep	11745788.10	6973183.733	4/2/2018	36.95	282.16	
IW-7	Deep	11745952.19	6973583.312	4/2/2018	--	--	NDTS System
IW-8	Deep	11745943.59	6973588.22	4/2/2018	--	--	NDTS System
BW 14-02S	Shallow	11744492.58	6972647.172	4/2/2018	11.69	312.31	
BW 21-04D	Shallow	11744093.23	6972097.55	4/2/2018	19.36	281.48	
BW 28-02S	Shallow	11744795.19	6971455.766	4/2/2018	2.9	290.36	
BW 28-04D	Shallow	11744960.55	6971224.892	4/2/2018	8.74	289.93	
BW 45-03S	Shallow	11745580.97	6972216.06	4/2/2018	4.05	290.28	
BW 79-02S	Shallow	11745246.71	6973041.17	4/2/2018	7.18	303.75	
BW CG-01D	Shallow	11744107.41	6973714.55	4/2/2018	7.4	319.06	
BW CM-01S	Shallow	11744642.37	6973759.035	4/2/2018	15.75	318.51	
BW TTU-03D	Shallow	11744454.70	6973599.351	4/2/2018	14.65	318.80	
SW 200-02	Shallow	11745864.91	6969844.119	4/2/2018	8.97	269.02	

TABLE 2
WATER LEVELS AND ELEVATIONS - SPRING 2018
Atlantic Research Corporation, Gainesville, Virginia

Location	Aquifer Designation	Easting	Northing	Date	Measured Depth from Top of Casing (feet)	Calculated Ground Water Elevation (feet)	Notes
SW 212-01	Shallow	11745628.69	6970050.825	4/2/2018	14.35	267.96	
SW 222-02	Shallow	11745471.10	6970157.56	4/2/2018	7.14	265.77	
SW 28-41	Shallow	11745165.28	6970593.553	4/2/2018	2.1	269.56	
SW 40-07A	Shallow	11745240.26	6971569.379	4/2/2018	4.35	290.62	
SW 40-57	Shallow	11745458.50	6971273.179	4/2/2018	6.95	272.2	
SW 42-02	Shallow	11745330.37	6972399.63	4/2/2018	4.02	297.51	
SW 47-02	Shallow	11745091.33	6970880.229	4/2/2018	4.37	273.7	
SW 5-04	Shallow	11744338.01	6972287.943	4/2/2018	6.25	308.95	
SW 74-07	Shallow	11745661.80	6972650.032	4/2/2018	4.3	299.19	
SW SB-03	Shallow	11745128.26	6970406.514	4/2/2018	5.57	264.53	
SW TTU-03	Shallow	11744320.60	6973797.622	4/2/2018	3.8	327.47	
STR 04	Surface	11745332.07	6970225.437	4/2/2018	--	--	Flowing
STR 40-15	Surface	11745474.15	6971421.777	4/2/2018	--	--	Flowing
WEST 01	Surface	11743995.42	6973623.757	4/2/2018	--	--	Flowing

TABLE 3
EXCEEDANCE SUMMARY
Atlantic Research Corporation, Gainesville, Virginia

Compound	Ground Water Screening Levels	Surface Water Screening Levels	Sentinel Monitoring		Performance Monitoring			Source Area Monitoring			
			Deep Ground Water	Shallow Ground Water	Surface Water	Deep Aquifer	Shallow Aquifer	Surface Water	Deep Ground Water	Shallow Ground Water	Surface Water
Perchlorate	15	600				DW-20, DW-30S, DW 213-01	BW 14-02S, BW 21-04D, BW 28-02S, BW 28-04D, BW TTU-03D, SW 28-41, SW 42-02, SW 47-02, SW 74-07, SW TTU-03		BW 78-12D, DW-13[1], DW-26I, DW-28I, DW-29S, DW 76-01, IW-6	BW CG-01D, BW CM-01S, SW 5-04, SW 40-07A	
1,1,1-Trichloroethane	200	11							DW-28I, DW 76-01	BW 79-02S, SW 5-04	
1,1-Dichloroethene	7	25	DW SB-02[1]			DW-18, DW-23	BW 28-02S, BW 28-04D		DW-13[1], DW-26I, DW-28I, DW-28D, DW-32I, DW 76-01	BW 79-02S, SW 5-04	
Tetrachloroethene	5	111				DW-18, DW-20	BW 14-02S, BW 28-02S, BW 28-04D, BW 45-03S, BW TTU-03D, SW 28-41, SW 40-57, SW 47-02, SW 74-07		DW-13[1], DW-26I, DW-28I	SW 5-04, BW CM-01S, SW 40-07A	
Trichloroethene	5	21				DW-18	BW 14-02S, BW 28-02S, BW 45-03S, BW TTU-03D, SW 40-57, SW 74-07			SW 5-04' SW 40-07A	
cis-1,2-Dichloroethene	70	--					BW 45-03S, BW TTU-03D, SW 40-57,			SW 40-07A	
Vinyl Chloride	2	930					BW TTU-03D, SW 40-57		DW-32I, DW-72B	SW 40-07A	
1,4-Dioxane (Method 8270)	7.8					DW-23	BW 28-02S		DW-32I, DW 76-01		

Notes: Sample Locations are show in the matrix if the measured concentration exceeds the screening level. There were no exceedances in the monitored locations for 1,1,2-trichloroethane, 1,1-dichloroethane, benzene, 1,2,3-trichloropropane, carbon tetrachloride, chloroethane, or methylene chloride during the monitoring period.
Sentinel Wells were sampled semi-annually.
[1] Concentration exceeds screening level during both sampling events.

TABLE 4
Analytical Data for Surface Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	**Screening Levels**	**Units**	STR 04	STR 04	STR 40-15	WEST 01
			4/3/2018	10/9/2018	4/5/2018	4/4/2018
			SW	SW	SW	SW
Perchlorate	600	ug/l	23	8.3	6.8	310
1,1,1-Trichloroethane	11	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	1200	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	47	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
1,1-Dichloroethene	25	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	--	ug/l	< 1 U	< 0.2 U	< 1 U	< 1 U
1,2-Dichloroethane	100	ug/l	< 0.5 U	< 2 U	< 0.5 U	< 0.5 U
Benzene	370	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
Carbon Tetrachloride	13.3	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
Chloroethane	--	ug/l	< 0.5 U	< 0.3 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	--	ug/l	1	0.5 J	28	< 0.5 U
Methylene Chloride	98.1	ug/l	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U
Tetrachloroethene	111	ug/l	2	1	41	< 0.5 U
Trichloroethene	21	ug/l	< 0.5 U	< 0.2 U	4	< 0.5 U
Vinyl Chloride	930	ug/l	< 0.5 U	< 0.4 U	0.7 J	< 0.5 U

Notes:

Bold font indicates value above screening level [none in 2018].

Qualifiers: U = non-detect; J or j = estimated; see data validation memoranda for additional qualifier details.

SW = surface water sample; ug/l = micrograms per liter

Surface water screening levels are chosen based on the following hierarchy: 1) Chronic Virginia AWQS (Ambient Water Quality Standards), 2) Acute Virginia AWQS, 3) USEPA Region 3 AWQS and 4) USEPA Region 5 AWQS.

Perchlorate was screened against the level specified in "Perchlorate Environmental Contamination: Toxilogical Review and Risk Characterization External Review Draft (NCEA-1-0503, January 2002) per USEPA correspondence (letter dated 30 June 2004).

TABLE 5
Analytical Data for Sentinel Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	SW 200-02 4/3/2018 N	SW 200-02 10/9/2018 N	SW 212-01 4/3/2018 N	SW 212-01 10/9/2018 N	SW 222-02 4/3/2018 N	SW 222-02 12/18/2018 N	SW SB-03 4/3/2018 N
			Shallow Sentinel	Shallow Sentinel	Shallow Sentinel	Shallow Sentinel	Shallow Sentinel	Shallow Sentinel	Shallow Sentinel
Perchlorate	15	ug/L	0.095 J	< 0.20 U	0.8 J	< 0.20 U	2.7	0.38 J	13
1,1,1-Trichloroethane	200	ug/L	1	1	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U
1,1,2-Trichloroethane	5	ug/L	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U
1,1-Dichloroethane	140	ug/L	2	0.9 J	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	0.7 J
1,1-Dichloroethene	7	ug/L	2	0.8 J	< 0.5 U	< 0.2 U	0.7 J	< 0.2 U	< 0.5 U
1,2,3-Trichloropropane	0.0084	ug/L	< 1 U	< 0.2 U	< 1 U	< 0.2 U	< 1 U	< 0.2 U	< 1 U
1,2-Dichloroethane	5	ug/L	< 0.5 U	< 2 U	< 0.5 U	< 2 U	< 0.5 U	< 2 U	< 0.5 U
Benzene	5	ug/L	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U
Carbon tetrachloride	5	ug/L	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U
Chloroethane		ug/L	< 0.5 U	< 0.3 U	< 0.5 U	< 0.3 U	< 0.5 U	< 0.3 U	< 0.5 U
cis-1,2-Dichloroethene	70	ug/L	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	4
Methylene chloride	5	ug/L	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U
Tetrachloroethene	5	ug/L	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	0.7 J
Trichloroethene	5	ug/L	0.7 J	0.5 J	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U	1
Vinyl chloride	2	ug/L	< 0.5 U	< 0.4 U	< 0.5 U	< 0.4 U	< 0.5 U	< 0.4 U	< 0.5 U
1,4-Dioxane (8270)	7.8	ug/L							3

Notes:
Bold font indicates value above screening level (only one COC, 1,1-Dichloroethene at DW SB-02 in 2018
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter;
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2014) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard

TABLE 5
Analytical Data for Sentinel Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	SW SB-03 10/9/2018 N	SW SB-03 10/9/2018 FD	SW SB-03 12/18/2018 N	SW SB-03 12/18/2018 FD	DW 200-01 4/3/2018 N	DW 200-01 10/9/2018 N	DW SB-01 4/4/2018 N
			Shallow Sentinel	Shallow Sentinel	Shallow Sentinel	Shallow Sentinel	Deep Sentinel	Deep Sentinel	Deep Sentinel
Perchlorate	15	ug/l	0.64 J	0.60 J			0.16 J	< 0.20 U	0.08 J
1,1,1-Trichloroethane	200	ug/l	< 0.2 U	< 0.2 U			< 0.5 U	< 0.2 U	< 0.5 U
1,1,2-Trichloroethane	5	ug/l	< 0.2 U	< 0.2 U			< 0.5 U	< 0.2 U	< 0.5 U
1,1-Dichloroethane	140	ug/l	0.4 J	0.4 J			3	3	< 0.5 U
1,1-Dichloroethene	7	ug/l	0.7 J	0.6 J			5	5	< 0.5 U
1,2,3-Trichloropropane	0.0084	ug/l	< 0.2 U	< 0.2 U			< 1 U	< 0.2 U	< 1 U
1,2-Dichloroethane	5	ug/l	< 2 U	< 2 U			< 0.5 U	< 2 U	< 0.5 U
Benzene	5	ug/l	< 0.2 U	< 0.2 U			< 0.5 U	< 0.2 U	< 0.5 U
Carbon Tetrachloride	5	ug/l	< 0.2 U	< 0.2 U			< 0.5 U	< 0.2 U	< 0.5 U
Chloroethane		ug/l	< 0.3 U	< 0.3 U			< 0.5 U	< 0.3 U	< 0.5 U
cis-1,2-Dichloroethene	70	ug/l	0.9 J	0.9 J			< 0.5 U	< 0.2 U	< 0.5 U
Methylene Chloride	5	ug/l	< 0.2 U	< 0.2 U			< 0.5 U	< 0.2 U	< 0.5 U
Tetrachloroethene	5	ug/l	1	1			< 0.5 U	< 0.2 U	< 0.5 U
Trichloroethene	5	ug/l	0.6 J	0.5 J			< 0.5 U	< 0.2 U	< 0.5 U
Vinyl Chloride	2	ug/l	< 0.4 U	< 0.4 U			< 0.5 U	< 0.4 U	< 0.5 U
1,4-Dioxane (8270)	7.8	ug/l			0.5 j	0.3 j			

Notes:
Bold font indicates value above screening level (only one COC, 1,1-Dichloroethene at DW SB-02 in 2018
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter;
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2014) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard

TABLE 5
Analytical Data for Sentinel Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	DW SB-01 10/9/2018 N	DW SB-02 4/3/2018 N	DW SB-02 10/9/2018 N	DW SB-02 12/18/2018 N	DW-12 4/3/2018 N	DW-12 10/9/2018 N
			Deep Sentinel	Deep Sentinel	Deep Sentinel	Deep Sentinel	Deep Sentinel	Deep Sentinel
Perchlorate	15	ug/l	< 0.20 U	< 0.062 U	< 0.20 U		0.16 J	< 0.20 U
1,1,1-Trichloroethane	200	ug/l	< 0.2 U	< 0.5 U	< 0.2 U		< 0.5 U	< 0.2 U
1,1,2-Trichloroethane	5	ug/l	< 0.2 U	< 0.5 U	< 0.2 U		< 0.5 U	< 0.2 U
1,1-Dichloroethane	140	ug/l	0.4 J	9	10		2	2
1,1-Dichloroethene	7	ug/l	0.4 J	**11**	**14**		5	6
1,2,3-Trichloropropane	0.0084	ug/l	< 0.2 U	< 1 U	< 0.2 U		< 1 U	< 0.2 U
1,2-Dichloroethane	5	ug/l	< 2 U	< 0.5 U	< 2 U		< 0.5 U	< 2 U
Benzene	5	ug/l	< 0.2 U	< 0.5 U	< 0.2 U		< 0.5 U	< 0.2 U
Carbon Tetrachloride	5	ug/l	< 0.2 U	< 0.5 U	< 0.2 U		< 0.5 U	< 0.2 U
Chloroethane		ug/l	< 0.3 U	< 0.5 U	< 0.3 U		< 0.5 U	< 0.3 U
cis-1,2-Dichloroethene	70	ug/l	< 0.2 U	< 0.5 U	< 0.2 U		< 0.5 U	< 0.2 U
Methylene Chloride	5	ug/l	< 0.2 U	< 0.5 U	< 0.2 U		< 0.5 U	< 0.2 U
Tetrachloroethene	5	ug/l	0.2 J	< 0.5 U	0.4 J		0.5 J	0.6 J
Trichloroethene	5	ug/l	< 0.2 U	0.7 J	0.9 J		< 0.5 U	0.3 J
Vinyl Chloride	2	ug/l	< 0.4 U	0.6 J	0.7 J		< 0.5 U	< 0.4 U
1,4-Dioxane (8270)	7.8	ug/l		0.5		0.5 j	0.1 J	0.08 J

Notes:
Bold font indicates value above screening level (only one COC, 1,1-Dichloroethene at DW SB-02 in 2018
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter;
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2014) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard

TABLE 6
Analytical Data for Deep Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	BW 78-12D	DW 213-01	DW 76-01	DW-13	DW-13	DW-13 MID	DW-13 MID
			4/5/2018	4/4/2018	4/5/2018	4/4/2018	12/18/2018	4/4/2018	12/18/2018
			N	N	N	N	N	N	N
			Source	Performance	Source	NDTS	NDTS	NDTS	NDTS
Perchlorate	15	ug/l	**32000**	**54**	**2000**	**900**	**880**		
1,1,1-Trichloroethane	200	ug/l			**3700**	23	32	21	38
1,1,2-Trichloroethane	5	ug/l			< 5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U
1,1-Dichloroethane	140	ug/l			38	22	28	22	28
1,1-Dichloroethene	7	ug/l			**5400**	**69**	**85**	**65**	**90**
1,2,3-Trichloropropane	0.0084	ug/l			< 10 U	< 1 U	< 0.2 U	< 1 U	< 0.2 U
1,2-Dichloroethane	5	ug/l			< 5 U	< 0.5 U	< 2 U	< 0.5 U	< 2 U
Benzene	5	ug/l			< 5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U
Carbon Tetrachloride	5	ug/l			< 5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U
Chloroethane		ug/l			< 5 U	< 0.5 U	< 0.3 U	< 0.5 U	1
cis-1,2-Dichloroethene	70	ug/l			< 5 U	1 J	1	1 J	1
Methylene Chloride	5	ug/l			< 5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.2 U
Tetrachloroethene	5	ug/l			< 5 U	**8**	**8**	**16**	**22**
Trichloroethene	5	ug/l			< 5 U	2	2	0.9 J	1
Vinyl Chloride	2	ug/l			< 5 U	2	1	2	1
1,4-Dioxane (8270)	7.8	ug/l			**10**	4	3 j		

Notes:
-- or NS = Not Sampled
Bold font indicates value above screening level
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2016) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level

TABLE 6
Analytical Data for Deep Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	DW-15	DW-16	DW-18	DW-20	DW-23	DW-26I	DW-28D
			4/3/2018	4/4/2018	4/4/2018	4/5/2018	4/5/2018	4/4/2018	4/5/2018
			N	N	N	N	N	N	N
			Performance	Performance	Performance	Performance	Performance	Source	Source
Perchlorate	15	ug/l				**480**	11	**20**	12
1,1,1-Trichloroethane	200	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	77	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	140	ug/l	< 0.5 U	10	14	8	16	17	27
1,1-Dichloroethene	7	ug/l	< 0.5 U	5	**27**	4	**54**	**8**	**14**
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	70	ug/l	< 0.5 U	< 0.5 U	17	3	< 0.5 U	< 0.5 U	< 0.5 U
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	ug/l	< 0.5 U	< 0.5 U	**21**	**12**	3	**65**	2
Trichloroethene	5	ug/l	< 0.5 U	< 0.5 U	**23**	4	0.6 J	1	< 0.5 U
Vinyl Chloride	2	ug/l	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	2
1,4-Dioxane (8270)	7.8	ug/l					**10**		

Notes:
NS = Not Sampled
Bold font indicates value above screening level
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2016) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level

TABLE 6
Analytical Data for Deep Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	DW-28I	DW-29S	DW-30S	DW-32I	DW-72B	IW-6
			4/3/2018	4/5/2018	4/3/2018	4/3/2018	4/3/2018	4/5/2018
			N	N	N	N	N	N
			Source	Source	Performance	Source	Source	Source
Perchlorate	15	ug/l	**1400**	**800000**	**210**			**1800**
1,1,1-Trichloroethane	200	ug/l	**540**	2	< 0.5 U	2	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	0.6 J	< 0.5 U	< 0.5 U
1,1-Dichloroethane	140	ug/l	50	4	0.7 J	36	7	2
1,1-Dichloroethene	7	ug/l	**1000**	6	2	**520**	7	< 0.5 U
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	5	ug/l	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	0.7 J	< 0.5 U	< 0.5 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	70	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	ug/l	**160**	< 0.5 U	< 0.5 U	0.5 J	< 0.5 U	< 0.5 U
Trichloroethene	5	ug/l	1 J	< 0.5 U	< 0.5 U	0.9 J	< 0.5 U	< 0.5 U
Vinyl Chloride	2	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	**8**	**4**	< 0.5 U
1,4-Dioxane (8270)	7.8	ug/l	6			**25**	7	

Notes:
NS = Not Sampled
Bold font indicates value above screening level
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2016) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level

TABLE 7
Analytical Data for Shallow Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	BW 14-02S	BW 14-02S	BW 21-04D	BW 28-02S	BW 28-02S	BW 28-04D	BW 45-03S
			4/5/2018	4/5/2018	4/4/2018	4/4/2018	4/4/2018	4/3/2018	4/5/2018
			FD	N	N	FD	N	N	N
			Performance	Performance	Performance	Performance	Performance	Performance	Performance
Perchlorate	15	ug/l	**1200**	**1200**	**84**	**2900 j**	**4700 j**	**410**	< 0.062 J u
1,1,1-Trichloroethane	200	ug/l	14	14	2	10	10	11	< 0.5 U
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	140	ug/l	1	1	< 0.5 U	2	2	2	1
1,1-Dichloroethene	7	ug/l	6	6	< 0.5 U	**9**	**9**	**12**	0.7 J
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	70	ug/l	16	16	< 0.5 U	12	12	2	**93**
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	ug/l	**210**	**210**	0.7 J	**150**	**150**	**55**	**160**
Trichloroethene	5	ug/l	**25**	**25**	< 0.5 U	**12**	**12**	3	**21**
Vinyl Chloride	2	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	2
1,4-Dioxane (8270)	7.8	ug/l				**11**	**9 j**		

Notes:
Bold font indicates value above screening level
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2016) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level

TABLE 7
Analytical Data for Shallow Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	BW 79-02S	BW CG-01D	BW CG-01D	BW CM-01S	BW TTU-03D	SW 28-41	SW 40-07A
			4/4/2018	4/4/2018	4/4/2018	4/4/2018	4/4/2018	4/3/2018	4/3/2018
			N	FD	N	N	N	N	N
			Source	Source	Source	Source	Performance	Performance	Source
Perchlorate	15	ug/l	4.4	**1700**	**1600**	**2000**	**59**	**380**	**690**
1,1,1-Trichloroethane	200	ug/l	**240**	< 0.5 U	< 0.5 U	< 0.5 U	0.7 J	5	0.7 J
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	140	ug/l	15	5	4	0.8 J	< 0.5 U	1 J	< 0.5 U
1,1-Dichloroethene	7	ug/l	**63**	< 0.5 U	< 0.5 U	0.6 J	0.9 J	2	1
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	2
cis-1,2-Dichloroethene	70	ug/l	< 0.5 U	1 j	< 0.5 U j	0.8 J	**190**	2	**270**
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	ug/l	0.5 J	3	3	**9**	**820**	**22**	**790**
Trichloroethene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	**130**	2	**34**
Vinyl Chloride	2	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	**3**	< 0.5 U	**25**
1,4-Dioxane (8270)	7.8	ug/l	2						

Notes:
Bold font indicates value above screening level
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2016) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level

TABLE 7
Analytical Data for Shallow Ground Water Sampling Locations
Atlantic Research Corporation, Gainesville, Virginia

Compound	Screening Levels	Units	SW 40-57	SW 42-02	SW 47-02	SW 5-04	SW 74-07	SW TTU-03
			4/3/2018	4/3/2018	4/3/2018	4/4/2018	4/4/2018	4/4/2018
			N	N	N	N	N	N
			Performance	Performance	Performance	Source	Performance	Performance
Perchlorate	15	ug/l	2.8	**150**	**870**	**340**	**54**	**300**
1,1,1-Trichloroethane	200	ug/l	< 0.5 U	< 0.5 U	2	**13000**	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
1,1-Dichloroethane	140	ug/l	0.8 J	< 0.5 U	0.9 J	69	< 0.5 U	< 0.5 U
1,1-Dichloroethene	7	ug/l	2	< 0.5 U	2	**280**	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 1 U	< 20 U	< 1 U	< 1 U
1,2-Dichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene	70	ug/l	**210**	0.7 J	3	< 10 U	63	< 0.5 U
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
Tetrachloroethene	5	ug/l	**500**	1	**22**	**79**	**730**	< 0.5 U
Trichloroethene	5	ug/l	**47**	< 0.5 U	4	**44**	**46**	< 0.5 U
Vinyl Chloride	2	ug/l	**7**	< 0.5 U	< 0.5 U	< 10 U	< 0.5 U	< 0.5 U
1,4-Dioxane (8270)	7.8	ug/l				2		

Notes:
Bold font indicates value above screening level
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details
N = normal groundwater sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2016) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level

TABLE 8
Analytical Data for Quality Control Samples
Atlantic Research Corporation, Gainesville, Virginia

Compound	**Screening Levels**	**Units**	EQUIPMENT BLANK	EQUIPMENT BLANK	EQUIPMENT BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK
			4/4/2018	4/5/2018	10/9/2018	4/3/2018	4/4/2018	4/5/2018	10/9/2018
Perchlorate	15	ug/l	< 0.062 U	< 0.062 J u	< 0.20 U				
1,1,1-Trichloroethane	200	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
1,1-Dichloroethane	140	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
1,1-Dichloroethene	7	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 0.2 U	< 1 U	< 1 U	< 1 U	< 0.2 U
1,2-Dichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.3 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.3 U
cis-1,2-Dichloroethene	70	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Tetrachloroethene	5	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Trichloroethene	5	ug/l	< 0.5 U	< 0.5 U	< 0.2 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Vinyl Chloride	2	ug/l	< 0.5 U	< 0.5 U	< 0.4 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.4 U
1,4-Dioxane (8270)	7.8	ug/l	< 0.05 U	< 0.05 U	< 0.05 U				

Notes:
Bold font indicates value above screening level [none in 2018].
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details.
N = sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2014) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level.

TABLE 8
Analytical Data for Quality Control Samples
Atlantic Research Corporation, Gainesville, Virginia

Compound	**Screening Levels**	**Units**	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
			4/3/2018	4/4/2018	4/5/2018	10/9/2018	12/18/2018
Perchlorate	15	ug/l					
1,1,1-Trichloroethane	200	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
1,1,2-Trichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
1,1-Dichloroethane	140	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
1,1-Dichloroethene	7	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
1,2,3-Trichloropropane	0.0084	ug/l	< 1 U	< 1 U	< 1 U	< 0.2 U	< 0.2 U
1,2-Dichloroethane	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 2 U	< 2 U
Benzene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
Carbon Tetrachloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
Chloroethane		ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.3 U	< 0.3 U
cis-1,2-Dichloroethene	70	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
Methylene Chloride	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
Tetrachloroethene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
Trichloroethene	5	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U	< 0.2 U
Vinyl Chloride	2	ug/l	< 0.5 U	< 0.5 U	< 0.5 U	< 0.4 U	< 0.4 U
1,4-Dioxane (8270)	7.8	ug/l					

Notes:
Bold font indicates value above screening level [none in 2017].
Qualifiers: U = non-detect; J or j = estimated; B = detected in method blank; see data validation memoranda for additional qualifier details.
N = sample; FD/DUP = duplicate sample; ug/l = micrograms per liter
The screening levels are based on the following hierarchy for drinking water: 1) Federal MCL; 2) Regional Screening Levels Tap Water Ingestion (May 2014) value at the lower of the criteria calculated at either the target cancer risk of 1E-5 or target hazard quotient of 1.
The perchlorate screening level is a USEPA Interim Health Advisory Level.

TABLE 9
SUMMARY OF CONCENTRATION TRENDS
Atlantic Research Corporation, Gainesville, Virginia

Compound	Ground Water Screening Levels	Surface Water Screening Levels	Sentinel Monitoring			Performance Monitoring			Source Area Monitoring		
			Deep Ground Water	Shallow Ground Water	Surface Water	Deep Ground Water	Shallow Ground Water	Surface Water	Deep Ground Water	Shallow Ground Water	Surface Water
Perchlorate	15	600	BSL	BSL	BSL	DW-20, DW-30S, DW 213-01	BW 14-02S, BW 21-04D, BW 28-02S, BW 28-04D, BW TTU-03D, SW 28-41, SW 42-02, SW 47-02, SW 74-07, SW TTU-03	BSL	BW 78-12D, DW-13, DW-26I DW-28I, DW-29S, DW 76-01, IW-6	BW CG-01D, BW CM-01S, SW 5-04, SW 40-07A	BSL
1,1,1-Trichloroethane	200	11	BSL	BSL	BSL	BSL	BSL	BSL	DW-28I, DW 76-01	BW 79-02S, SW 5-04	BSL
1,1-Dichloroethene	7	25	DW SB-02	BSL	BSL	DW-18, DW-23	BW 28-02S, BW 28-04D	BSL	DW-13, DW-26I DW-28I, DW-28D, DW-32I, DW-72B, DW 76-01	BW 79-02S, SW 5-04	BSL
Tetrachloroethene	5	111	BSL	BSL	BSL	DW-18, DW-20	BW 14-02S, BW 28-02S, BW 28-04D, BW 45-03S, BW TTU-03D, SW 28-41, SW 40-57, SW 47-02, SW 74-07	BSL	DW-13, DW-26I, DW-28I	BW CM-01S, SW 5-04, SW 40-07A	BSL
Trichloroethene	5	21	BSL	BSL	BSL	DW-18	BW 14-02S, BW 28-02S, BW 45-03S, BW TTU-03D, SW 40-57, SW 74-07	BSL	BSL	SW 5-04 SW 40-07A	BSL
cis-1,2-Dichloroethene	70	--	BSL	BSL	BSL	BSL	BW 45-03S, BW TTU-03D, SW 40-57	BSL	BSL	SW 40-07A	BSL
Vinyl Chloride	2	930	BSL	BSL	BSL	BSL	BW TTU-03D, SW 40-57	BSL	DW-32I, DW-72B	SW 40-07A	BSL
1,4-Dioxane (8270)	7.8		BSL	BSL	BSL	DW-23	BW 28-02S	BSL	DW-32I, DW 76-01	BSL	BSL

Notes:
There were no exceedances in the monitored locations for 1,1,2-trichloroethane, 1,1-dichloroethane, benzene, 1,2,3-trichloropropane, carbon tetrachloride, chloroethane, or methylene chloride during the monitoring period.
BSL – below screening level;
XXX – decreasing (or probably decreasing) trend;
XXX – stable trend;
XXX – no trend;
XXX – increasing (or probably increasing) trend

TABLE 10
SUMMARY OF NDTS OPERATION
Atlantic Research Corporation, Gainesville, Virginia

Recirculation Rates

Dates	Extraction (DW-13) gpm	Injection Pressure (IW-8) psi	Comments
01/01/2018 to 12/31/2018	50 - 62	64 - 76	System is currently operating under these conditions.

Amendment Additive

Dates	Additive	Average Daily Injection (gal)	Comments
1/1/2018 - 12/31/2018	EVO	4.5	For year
		7.5	While extraction pump operating and EVO pump operating.

Shutdown and O&M Activities

Shutdown Date	Restart Date	Estimated Downtime (days)	Activity
1/20/2018	1/24/2018	4	Bag filter pressures caused shutdown; replaced.
3/26/2018	3/28/2018	2	VFD fault reset.
6/21/2018	11/5/2018	137	The subsurface electrical line providing power to the NDTS was cut by digging activities associated with redevelopment preparations by the property owner contractor on or about June 21, 2018. The system was first observed to have no power during the weekly inspection on June 27, 2018. The severed line and extensive damage was discovered on July 5, 2018 and a new underground power line needed to be installed. Responsibility, repair plans, contractor quotes, contractual arrangements, scheduling delays, hurricane Florence, and coordination efforts including health and safety requirements resulted in power being restored on September 14, 2018. With the restoration of power, it was determined that the PLC unit operating the NDTS was also damaged as well. The PLC unit was removed, evaluated by the manufacturer, and eventually replaced with an upgraded unit by November 5, 2018, when the NDTS was returned to operational status.

Acronyms:

gpm - gallons per minute
psi - pounds per square inch
VFD - variable frequency drive
NDTS - Northern Deep Treatment System

APPENDIX A

SUMMARY TABLES OF HISTORICAL DATA

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Source	BW 78-12D	03-Mar-05	GW	0	1380								
Deep	Source	BW 78-12D	11-May-06	GW	0	62000								
Deep	Source	BW 78-12D	16-Nov-06	GW	0	27000								
Deep	Source	BW 78-12D	04-Oct-07	GW	0	250000	0.8 U	1 U	5	2 J	1 U	0.8 U	1 U	
Deep	Source	BW 78-12D	05-Jun-08	GW	0	13000	5 UJ	5 UJ	1.1 J	5 UJ	5 UJ	5 UJ	5 UJ	
Deep	Source	BW 78-12D	13-Oct-09	GW	0	32000	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Source	BW 78-12D	30-Mar-10	GW	0	7200	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Source	BW 78-12D	07-Sep-11	GW	0	13000								
Deep	Source	BW 78-12D	14-May-12	GW	0	5700								
Deep	Source	BW 78-12D	22-May-13	GW	0	28000								
Deep	Source	BW 78-12D	15-May-14	GW	0	40000								
Deep	Source	BW 78-12D	14-May-15	GW	0	17000	0.5 U	0.5 U	2	0.5 J	0.5 U	0.5 U	0.5 U	
Deep	Source	BW 78-12D	01-Apr-16	GW	0	21000	0.5 U	0.5 U	2	0.8 J	0.5 U	0.5 U	0.5 U	
Deep	Source	BW 78-12D	20-Apr-17	GW	0	16000	0.5 U	0.5 U	0.5 U	0.7 J	0.5 U	0.5 U	0.5 U	
Deep	Source	BW 78-12D	05-Apr-18	GW	0	32000								
Deep	Sentinel	DW 200-01	23-Jun-08	GW	0	1 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW 200-01	14-Oct-09	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW 200-01	23-Mar-10	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW 200-01	02-Sep-11	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.048 UJ
Deep	Sentinel	DW 200-01	03-May-12	GW	0	0.79 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW 200-01	29-May-13	GW	0	1 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.051 U
Deep	Sentinel	DW 200-01	18-Nov-13	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW 200-01	18-May-14	GW	0	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.073 J
Deep	Sentinel	DW 200-01	13-May-15	GW	0	0.2 U	0.5 U	1	3	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW 200-01	05-Nov-15	GW	0	0.2 U	0.5 U	1	3	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW 200-01	30-Mar-16	GW	0	0.2 U	0.5 U	1	5	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW 200-01	27-Oct-16	GW	0	0.2 U	0.5 U	1	2	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW 200-01	18-Apr-17	GW	0	0.2 U	0.5 U	1	0.8 J	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW 200-01	03-Oct-17	GW	0	0.2 U	0.5 U	1	0.6 J	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW 200-01	03-Apr-18	GW	0	0.16 J	0.50 U	3	5	0.50 U	0.50 U	0.50 U	0.50 U	
Deep	Sentinel	DW 200-01	09-Oct-18	GW	0	0.20 U	0.20 U	3	5	0.20 U	0.20 U	0.20 U	0.40 U	
Deep	Performance	DW 213-01	14-Aug-08	GW	0	49	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Performance	DW 213-01	08-Oct-09	GW	0	58	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Performance	DW 213-01	23-Mar-10	GW	0	39	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Performance	DW 213-01	01-Sep-11	GW	0	45								
Deep	Performance	DW 213-01	07-May-12	GW	0	43								
Deep	Performance	DW 213-01	21-May-13	GW	0	43	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Performance	DW 213-01	15-May-14	GW	0	44								
Deep	Performance	DW 213-01	14-May-15	GW	0	54	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Performance	DW 213-01	29-Mar-16	GW	0	52	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Performance	DW 213-01	18-Apr-17	GW	0	56	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Performance	DW 213-01	04-Apr-18	GW	0	54								
Deep	Source	DW 76-01	25-Nov-08	GW	0	2600	41	10	460	0.9 J	1 U	0.8 U	1 U	70 U
Deep	Source	DW 76-01	13-Oct-09	GW	0	2200	140	32	580	2 J	1 J	0.8 U	3 J	70 U
Deep	Source	DW 76-01	26-Mar-10	GW	0	1400	210	20	1100	2 J	1 U	0.8 U	2 J	70 U

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Source	DW 76-01	10-Nov-10	GW	0		88	17	890	2 J	1 U	0.8 U	1 J	70 U
Deep	Source	DW 76-01	12-Sep-11	GW	0	1100	74	20	1000	2 J	1 U	0.8 U	1 J	24 J
Deep	Source	DW 76-01	01-May-12	GW	0		69	17	1000	2 J	1 U	0.8 U	1 U	
Deep	Source	DW 76-01	29-May-13	GW	0	1200	81	16	900	2 J	1 U	0.8 U	1 U	31 j
Deep	Source	DW 76-01	15-May-14	GW	0	1500	580	29	1200	3	1	0.5 U	2	62
Deep	Source	DW 76-01	13-May-15	GW	0	1600	240	17	890	1 J	1 U	1 U	1 U	68
Deep	Source	DW 76-01	31-Mar-16	GW	0	1400	120	15	710	2	0.7 J	0.5 U	0.7 J	40
Deep	Source	DW 76-01	19-Apr-17	GW	0	1500	640	21	1700	2	1	0.5 U	0.5 U	13
Deep	Source	DW 76-01	05-Apr-18	GW	0	2000	3700	38	5400	5.0 U	5.0 U	5.0 U	5.0 U	10
Deep	Sentinel	DW SB-01	04-Sep-09	GW	0	2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-01	24-Mar-10	GW	0	2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-01	01-Sep-11	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.056 UJ
Deep	Sentinel	DW SB-01	07-May-12	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW SB-01	07-May-12	GW	1	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW SB-01	28-May-13	GW	0	1 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.14 j
Deep	Sentinel	DW SB-01	18-Nov-13	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-01	19-May-14	GW	0	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.11
Deep	Sentinel	DW SB-01	13-May-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	06-Nov-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	29-Mar-16	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	27-Oct-16	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	27-Oct-16	GW	1	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	18-Apr-17	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	03-Oct-17	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW SB-01	04-Apr-18	GW	0	0.08 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Deep	Sentinel	DW SB-01	09-Oct-18	GW	0	0.20 U	0.20 U	0.4 J	0.4 J	0.2 J	0.20 U	0.20 U	0.40 U	
Deep	Sentinel	DW SB-02	04-Sep-09	GW	0	2 U	0.8 U	4 J	11	0.8 J	1 J	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-02	23-Mar-10	GW	0	0.2 U	0.8 U	4 J	11	0.8 U	1 J	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-02	05-Apr-11	GW	0		0.8 U	4 J	10	0.8 U	1 J	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-02	01-Sep-11	GW	0	0.2 U	0.8 U	4 J	11	0.8 U	1 U	0.8 U	1 U	0.19 J
Deep	Sentinel	DW SB-02	12-Dec-11	GW	0		0.8 U	3 J	10	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW SB-02	01-May-12	GW	0	0.2 U	0.8 U	4 J	11	0.9 J	1 J	0.8 U	1 U	
Deep	Sentinel	DW SB-02	07-Nov-12	GW	0		0.8 U	4 J	11	0.8 U	1 J	0.8 U	1 U	
Deep	Sentinel	DW SB-02	28-May-13	GW	0	1 U	0.8 U	4 J	11	0.8 U	1 U	0.8 U	1 U	0.37
Deep	Sentinel	DW SB-02	18-Nov-13	GW	0	0.2 U	0.8 U	3 J	8	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW SB-02	19-May-14	GW	0	1 U	0.5 U	4	10	0.5 J	0.9 J	0.5 U	0.5 U	0.29
Deep	Sentinel	DW SB-02	11-Nov-14	GW	0		0.5 U	4	9	0.6 J	1 J	0.5 U	0.5 U	
Deep	Sentinel	DW SB-02	12-May-15	GW	0	0.2 U	0.5 U	3	8	0.6 J	0.8 J	0.5 U	0.5 U	0.32
Deep	Sentinel	DW SB-02	12-May-15	GW	1	0.2 U	0.5 U	3	8	0.5 J	0.8 J	0.5 U	0.5 U	0.29
Deep	Sentinel	DW SB-02	05-Nov-15	GW	0	0.2 U	0.5 U	4	11	0.5 U	1	0.5 U	0.5 U	
Deep	Sentinel	DW SB-02	29-Mar-16	GW	0	0.2 U	0.5 U	5	10	0.5 U	1	0.5 U	0.5 U	0.34
Deep	Sentinel	DW SB-02	29-Mar-16	GW	1	0.2 U	0.5 U	5	11	0.5 U	1	0.5 U	0.5 U	0.35
Deep	Sentinel	DW SB-02	27-Oct-16	GW	0	0.2 U	0.5 U	5	11	0.5 U	0.7 J	0.5 U	0.5 U	
Deep	Sentinel	DW SB-02	18-Apr-17	GW	1	0.2 U	0.5 U	4	9	0.5 U	0.9 J	0.5 U	0.5 U	6.9 u
Deep	Sentinel	DW SB-02	18-Apr-17	GW	0	0.2 U	0.5 U	4	9	0.5 U	0.9 J	0.5 U	0.5 U	2.4 u

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Sentinel	DW SB-02	03-Oct-17	GW	1	0.2 U	0.5 U	7	9	0.5 U	0.6 J	0.5 U	0.5 U	0.45
Deep	Sentinel	DW SB-02	03-Oct-17	GW	0	0.2 U	0.5 U	7	9	0.5 U	0.6 J	0.5 U	0.5 U	0.47
Deep	Sentinel	DW SB-02	03-Apr-18	GW	0	0.062 U	0.50 U	9	11	0.50 U	0.7 J	0.50 U	0.6 J	0.5
Deep	Sentinel	DW SB-02	09-Oct-18	GW	0	0.20 U	0.20 U	10	14	0.4 J	0.9 J	0.20 U	0.7 J	
Deep	Sentinel	DW SB-02	18-Dec-18	GW	0									0.5 j
Deep	Sentinel	DW-12	09-May-05	GW	0	0.7 U	0.8 U	2 J	5	2 J	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	22-Nov-05	GW	0	2.3 J	0.8 U	2 J	7	2 J	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	10-May-06	GW	0	6	0.8 U	2 J	10	2 J	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	16-Nov-06	GW	0	2 U	0.8 U	1 J	7	1 J	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	28-Sep-07	GW	0	0.2 U	0.8 U	3 J	12	2 J	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	13-May-08	GW	0	1 U	5 UJ	2 J	7.2 J	1.6 J	5 UJ	5 UJ	5 UJ	
Deep	Sentinel	DW-12	05-Oct-09	GW	0	0.2 U	0.8 U	2 J	7	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	24-Nov-09	GW	0	0.2 U	0.8 U	2 J	8	1 J	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	03-Feb-10	GW	0	2 U	0.8 U	2 J	8	1 J	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	07-Apr-10	GW	0	2 U	0.8 U	2 J	7	1 J	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	16-Jun-10	GW	0	2 U	0.8 U	2 J	7	1 J	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	10-Aug-10	GW	0	0.2 U	0.8 U	2 J	7	0.8 J	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	10-Nov-10	GW	0		0.8 U	2 J	7	1 J	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	05-Apr-11	GW	0		0.8 U	2 J	7	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	01-Sep-11	GW	0	0.2 U	0.8 U	2 J	8	0.8 J	1 U	0.8 U	1 U	0.11 J
Deep	Sentinel	DW-12	12-Dec-11	GW	0		0.8 U	2 J	7	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	01-May-12	GW	0	0.2 U	0.8 U	2 J	8	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	07-Nov-12	GW	0		0.8 U	2 J	8	0.8 U	1 U	0.8 U	1 U	
Deep	Sentinel	DW-12	21-May-13	GW	0	1 U	0.8 U	2 Jj	7 j	0.8 U	1 U	0.8 U	1 U	0.18 j
Deep	Sentinel	DW-12	18-Nov-13	GW	0	0.2 U	0.8 U	2 J	7	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Sentinel	DW-12	18-May-14	GW	0	1 U	0.5 U	2	7	0.7 J	0.5 U	0.5 U	0.5 U	0.18
Deep	Sentinel	DW-12	18-May-14	GW	1	1 U	0.5 U	2	7	0.7 J	0.5 U	0.5 U	0.5 U	0.18
Deep	Sentinel	DW-12	11-Nov-14	GW	0		0.5 U	2	6	0.5 J	0.5 U	0.5 U	0.5 U	
Deep	Sentinel	DW-12	12-May-15	GW	0	0.2 U	0.5 U	2	7	0.6 J	0.5 U	0.5 U	0.5 U	0.26 u
Deep	Sentinel	DW-12	05-Nov-15	GW	0	0.2 U	0.5 U	3	11	1	0.6 J	0.5 U	0.5 U	
Deep	Sentinel	DW-12	30-Mar-16	GW	0	0.2 U	0.5 U	3	10	1	0.5 J	0.5 U	0.5 U	0.28
Deep	Sentinel	DW-12	26-Oct-16	GW	0	0.2 U	0.5 U	3	9	1 J	0.5 J	0.5 U	0.5 U	
Deep	Sentinel	DW-12	18-Apr-17	GW	0	0.2 U	0.5 U	2	7	0.8 J	0.5 U	0.5 U	0.5 U	0.2
Deep	Sentinel	DW-12	02-Oct-17	GW	0	0.2 U	0.5 U	2	5	0.7 J	0.5 U	0.5 U	0.5 U	0.16 J
Deep	Sentinel	DW-12	03-Apr-18	GW	0	0.16 J	0.50 U	2	5	0.5 J	0.50 U	0.50 U	0.50 U	0.1 J
Deep	Sentinel	DW-12	09-Oct-18	GW	0	0.20 U	0.20 U	2	6	0.6 J	0.3 J	0.20 U	0.40 U	0.08 J
Deep	NDTS Extraction	DW-13	13-Jan-05	GW	0	6940	260	23	310	160	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	16-Feb-05	GW	0	4750	300	22	290	130	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	17-Mar-05	GW	0	4120	300	19	270	110	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	14-Apr-05	GW	0	4160	230	22	240	110	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	10-May-05	GW	0	4020	260	20	290	85	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	18-Jun-05	GW	0		280	23	300	130	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	25-Jul-05	GW	0		220	18	240	98	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	21-Sep-05	GW	0		460	38	510	50	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	26-Oct-05	GW	0	5000	200	16	270	78	1 U	0.8 U	1 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	NDTS Extraction	DW-13	29-Nov-05	GW	0	6600	370	29	410	72	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	13-Dec-05	GW	0	5000	260	19	240	100	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	03-Jan-06	GW	0	3500	240	19	270	88	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	15-Feb-06	GW	0	1300	110	13	200	68	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	06-Mar-06	GW	0	2200	87	12	120	62	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	25-Apr-06	GW	0	2200	110	13	190	59	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	12-May-06	GW	0	4100	110	14	180	71	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	31-Jul-06	GW	0	8700	170	18	290	110	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	16-Aug-06	GW	0	4600	140	16	230	75	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	21-Sep-06	GW	0	4200	130	15	270	80	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	26-Oct-06	GW	0	5800	150	18	280	87	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	13-Nov-06	GW	0	3800	120	13	230	88	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	20-Apr-07	GW	0	14000	180	19	230	130	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	02-May-07	GW	0	8900	160	17	250	97	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	16-May-07	GW	0	4700	130	14	260	82	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	05-Jun-07	GW	0	4500	110	13	280	74	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	12-Jun-07	GW	0	3800	140	15	290	79	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	26-Jun-07	GW	0	5000	150 J	16 J	210 J	95 J	1 J	0.8 UJ	1 UJ	
Deep	NDTS Extraction	DW-13	13-Jul-07	GW	0	4200	110	13	250	66	1 U	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	24-Jul-07	GW	0	4100	110 R	14 R	220 R	60 R	1 UR	0.8 UR	1 UR	
Deep	NDTS Extraction	DW-13	07-Aug-07	GW	0	4600	110 R	14 R	230 R	69 R	1 R	0.8 UR	1 UR	
Deep	NDTS Extraction	DW-13	19-Sep-07	GW	0	4400	110	14	230	72	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	04-Oct-07	GW	0	5800	150	14	240	73	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	15-Oct-07	GW	0	12000	300	36	550	100	2 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	01-Nov-07	GW	0	13000	260 J	32	440	85	2 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	14-Nov-07	GW	0	9200	240	25	430	88	2 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	27-Nov-07	GW	0	7100	180	20	280	85	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	11-Dec-07	GW	0	5900	110	14	250	63	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	28-Dec-07	GW	0	16000	240	23	350	83	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	09-Jan-08	GW	0	6200	120	16	240	62	1 J	0.8 U	1 U	70 U
Deep	NDTS Extraction	DW-13	07-Feb-08	GW	0	4400	100	14	240	70	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	04-Mar-08	GW	0	7400	170	19	300	98	2 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	18-Mar-08	GW	0	9900	230	25	350	110	2 J	0.8 J	1 U	
Deep	NDTS Extraction	DW-13	03-Apr-08	GW	0	3000	140	15	290	88	1 J	0.8 U	1 U	
Deep	NDTS Extraction	DW-13	17-Apr-08	GW	0	8000	110	15	270	88	2 J	0.8 U	1 U	70 U
Deep	NDTS Extraction	DW-13	01-May-08	GW	0	2600	110 J	16 J	240 J	74 J	1 J	0.8 UJ	1 UJ	
Deep	NDTS Extraction	DW-13	15-May-08	GW	0	4400	100 J	50 UJ	170 J	70 J	50 UJ	50 UJ	50 UJ	
Deep	NDTS Extraction	DW-13	28-May-08	GW	0	4000	85 J	12 J	180 J	67 J	50 UJ	50 UJ	50 UJ	
Deep	NDTS Extraction	DW-13	11-Jun-08	GW	0	4300	84 J	12 J	200 J	67 J	50 UJ	50 UJ	50 UJ	
Deep	NDTS Extraction	DW-13	26-Jun-08	GW	0	5400 J	98	14	250	75	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	10-Jul-08	GW	0	4700	95	14	260	63	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	24-Jul-08	GW	0	23000	170	21	310	88	3 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	07-Aug-08	GW	0	7200	90	14	210	69	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	21-Aug-08	GW	0	23000	180 J	23 J	190 J	77 J	2 J	0.8 UJ	1 UJ	70 UJ
Deep	NDTS Extraction	DW-13	04-Sep-08	GW	0	13000	230	26	310	78	3 J	0.8 U	1 U	70 U

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	NDTS Extraction	DW-13	18-Sep-08	GW	0	8800	200	26	360	110	3 J	0.8 U	1 U	70 U
Deep	NDTS Extraction	DW-13	30-Sep-08	GW	0	10000	110	16	260	76	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	15-Oct-08	GW	0	4400	95 J	17 J	250 J	58 J	2 J	0.8 UJ	1 J	70 UJ
Deep	NDTS Extraction	DW-13	30-Oct-08	GW	0	5800	99	18	240	67	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	12-Nov-08	GW	0	5200	86	16	210	55	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	25-Nov-08	GW	0	5000	99	17	220	63	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	10-Dec-08	GW	0	5600	84	17	220	58	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	23-Dec-08	GW	0	5000	89	18	210	58	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	08-Jan-09	GW	0	9700	85	18	220	58	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	22-Jan-09	GW	0	10000	180	27	300	100	3 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	17-Feb-09	GW	0	9900 J	160	23	300	74	3 J	0.8 U	1 U	70 U
Deep	NDTS Extraction	DW-13	06-Mar-09	GW	0	4800	89	15	230	72	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	18-Mar-09	GW	0	7600	89	19	260	72	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	03-Apr-09	GW	0	5400	97	21	270	64	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	16-Apr-09	GW	0	4800	86	19	260	74	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	29-Apr-09	GW	0	4900	89	20	270	76	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	12-May-09	GW	0	4500	86	19	270	68	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	27-May-09	GW	0	4100	91	20	270 J	73	2 J	0.8 U	1 J	70 U
Deep	NDTS Extraction	DW-13	25-Sep-09	GW	0	4100	66	19	270	46	2 J	0.8 U	2 J	70 U
Deep	NDTS Extraction	DW-13	27-Oct-09	GW	0	4200	72	23	230	38	2 J	0.8 U	2 J	70 U
Deep	NDTS Extraction	DW-13	24-Nov-09	GW	0	4000	82	26	270	43	2 J	0.8 U	2 J	70 U
Deep	NDTS Extraction	DW-13	05-Jan-10	GW	0	28000	68	26	240	46	2 J	0.8 U	2 J	70 U
Deep	NDTS Extraction	DW-13	03-Feb-10	GW	0	3900	85	29	250	43	2 J	0.8 U	2 J	70 U
Deep	NDTS Extraction	DW-13	03-Feb-10	GW	1	3200	86	29	250	43	2 J	0.8 U	3 J	70 U
Deep	NDTS Extraction	DW-13	01-Mar-10	GW	0	3400	74	27	250	49	2 J	0.8 U	2 J	70 U
Deep	NDTS Extraction	DW-13	07-Apr-10	GW	0	4500 J	75	29	250	47	2 J	0.8 U	3 J	150 J
Deep	NDTS Extraction	DW-13	07-Apr-10	GW	1	3300 J	75	29	260	47	2 J	0.8 U	3 J	70 U
Deep	NDTS Extraction	DW-13	16-Jun-10	GW	0	4200	69	30	260	43	3 J	0.8 U	4 J	70 U
Deep	NDTS Extraction	DW-13	10-Aug-10	GW	0	3900	70	33	250	36	2 J	0.8 U	6	70 U
Deep	NDTS Extraction	DW-13	07-Oct-10	GW	0	3500	91	36	240	32	3 J	0.8 U	9	70 U
Deep	NDTS Extraction	DW-13	07-Oct-10	GW	1	3600	91	37	250	33	3 J	0.8 U	9	70 U
Deep	NDTS Extraction	DW-13	06-Dec-10	GW	0	2800	64	35	210	34	3 J	0.8 U	7	70 U
Deep	NDTS Extraction	DW-13	03-Feb-11	GW	0	3900 J	76	37	210	33	3 J	0.8 U	7	70 U
Deep	NDTS Extraction	DW-13	08-Jun-11	GW	0	3000	60	40	170	37	3 J	0.8 U	6	70 U
Deep	NDTS Extraction	DW-13	14-Sep-11	GW	0	3000	52	36	130	28	3 J	0.8 U	4 J	3.9 J
Deep	NDTS Extraction	DW-13	14-Dec-11	GW	0	6900	62	44	160	32	3 J	0.8 U	6	
Deep	NDTS Extraction	DW-13	27-Feb-12	GW	0	2400	66	38	150	27	3 J	0.8 U	4 J	70 U
Deep	NDTS Extraction	DW-13	27-Feb-12	GW	1	2600	69	40	160	27	3 J	0.8 U	5 J	70 U
Deep	NDTS Extraction	DW-13	09-May-12	GW	0	2300	50	38	150	26	2 J	0.8 U	4 J	
Deep	NDTS Extraction	DW-13	09-May-12	GW	1	1700	56	42	160	27	2 J	0.8 U	4 J	
Deep	NDTS Extraction	DW-13	16-Aug-12	GW	0	3000	51	42	130	24	3 J	0.8 U	3 J	
Deep	NDTS Extraction	DW-13	16-Aug-12	GW	1	2400	56	43	150	28	3 J	0.8 U	3 J	
Deep	NDTS Extraction	DW-13	06-Nov-12	GW	0	500	100	33	230	47	2 J	0.8 U	3 J	
Deep	NDTS Extraction	DW-13	06-Nov-12	GW	1	550	100	36	250	43	2 J	0.8 U	3 J	
Deep	NDTS Extraction	DW-13	28-May-13	GW	0	1900	57	46	150	34	3 J	0.8 U	3 J	7.3

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	NDTS Extraction	DW-13	09-Apr-14	GW	0	1500	58	42	110	42	2	0.6 J	2	70 U
Deep	NDTS Extraction	DW-13	27-May-14	GW	0	4500	42	35	100	28	2	0.5 U	2	70 U
Deep	NDTS Extraction	DW-13	04-Dec-14	GW	0	1900	68	41	130	30	2	1 J	3	70 U
Deep	NDTS Extraction	DW-13	11-May-15	GW	0	1600	41	38	100	30	2	1	2	6.4
Deep	NDTS Extraction	DW-13	05-Nov-15	GW	0	1200	40	37	110	25	1	1	2	6.1
Deep	NDTS Extraction	DW-13	28-Mar-16	GW	0	1500	41	29	100	4	2	0.8 J	2	6.8
Deep	NDTS Extraction	DW-13	26-Oct-16	GW	0	970	42	32	120	7	2	1	2	4.4 j
Deep	NDTS Extraction	DW-13	17-Apr-17	GW	0	800	28	27	80	6	2	0.9 J	2	4.3
Deep	NDTS Extraction	DW-13	03-Oct-17	GW	0	720	28	22	67	8	2	1	1	4.1
Deep	NDTS Extraction	DW-13	04-Apr-18	GW	0	900	23	22	69	8	2	1 J	2	4
Deep	NDTS Extraction	DW-13	18-Dec-18	GW	0	880	32	28	85	8	2	1	1	3 j
Deep	NDTS Midpoint	DW-13 MID	13-Jan-05	GW	0		8	7	4 J	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	16-Feb-05	GW	0		9	7	5	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	17-Mar-05	GW	0		11	9	7	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	14-Apr-05	GW	0		17	14	13	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	10-May-05	GW	0		17	17	19	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	18-Jun-05	GW	0		14	22	11	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	25-Jul-05	GW	0		28	24	47	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	21-Sep-05	GW	0		36	33	68	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	26-Oct-05	GW	0		50	25	100	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	29-Nov-05	GW	0		47	24	99	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	13-Dec-05	GW	0		64	24	120	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	03-Jan-06	GW	0	3800	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	15-Feb-06	GW	0		0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	06-Mar-06	GW	0		0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	25-Apr-06	GW	0		0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	12-May-06	GW	0		0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	31-Jul-06	GW	0		0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	16-Aug-06	GW	0		0.8 U	2 J	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	21-Sep-06	GW	0		5	9	15	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	26-Oct-06	GW	0		5	8	18	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	13-Nov-06	GW	0		8	7	28	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	20-Apr-07	GW	0		12	11	40	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	02-May-07	GW	0		17	13	52	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	16-May-07	GW	0		16	12	49	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	05-Jun-07	GW	0		16	12	56	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	12-Jun-07	GW	0		24	16	73	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	26-Jun-07	GW	0		23 J	16 J	77 J	0.8 UJ	1 UJ	0.8 UJ	1 UJ	
Deep	NDTS Midpoint	DW-13 MID	13-Jul-07	GW	0		25	18	82	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	24-Jul-07	GW	0		27	19	77	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	07-Aug-07	GW	0		30 R	19 R	89 R	0.8 UR	1 UR	0.8 UR	1 UR	
Deep	NDTS Midpoint	DW-13 MID	19-Sep-07	GW	0		31	18	93	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	04-Oct-07	GW	0		47	19	110	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	15-Oct-07	GW	0		48	24	140	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	01-Nov-07	GW	0		45 J	19	130	0.8 U	1 U	0.8 U	1 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	NDTS Midpoint	DW-13 MID	14-Nov-07	GW	0		44	18	120	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	27-Nov-07	GW	0		44	18	130	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	11-Dec-07	GW	0		42	19	140	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	28-Dec-07	GW	0		59	18	160	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	09-Jan-08	GW	0		60	20	150	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	07-Feb-08	GW	0		36	15	93	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	04-Mar-08	GW	0		68	18	160	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	18-Mar-08	GW	0		70	19	190	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	03-Apr-08	GW	0		79	19	210	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	17-Apr-08	GW	0		75	18	210	0.8 U	1 U	0.8 U	1 U	70 U
Deep	NDTS Midpoint	DW-13 MID	01-May-08	GW	0		84	20	200	0.8 U	1 U	0.8 U	1 U	
Deep	NDTS Midpoint	DW-13 MID	15-May-08	GW	0		78 J	50 UJ	160 J	50 UJ	50 UJ	50 UJ	50 UJ	
Deep	NDTS Midpoint	DW-13 MID	28-May-08	GW	0		66 J	14 J	150 J	50 UJ	50 UJ	50 UJ	50 UJ	
Deep	NDTS Midpoint	DW-13 MID	11-Jun-08	GW	0		69 J	14 J	170 J	25 UJ	25 UJ	25 UJ	25 UJ	
Deep	NDTS Midpoint	DW-13 MID	26-Jun-08	GW	0		88	16	220	0.8 U	1 U	0.8 U	1 U	70 U
Deep	NDTS Midpoint	DW-13 MID	10-Jul-08	GW	0		88	16	240	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	24-Jul-08	GW	0		81	15	240	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	07-Aug-08	GW	0		89	15	200	0.8 U	1 U	0.8 U	1 U	70 U
Deep	NDTS Midpoint	DW-13 MID	21-Aug-08	GW	0		120 J	22 J	250 J	0.8 UJ	1 UJ	0.8 UJ	1 J	70 UJ
Deep	NDTS Midpoint	DW-13 MID	04-Sep-08	GW	0		120	18	210	0.8 U	1 U	0.8 U	1 U	70 U
Deep	NDTS Midpoint	DW-13 MID	18-Sep-08	GW	0		93	16	210	0.8 U	1 U	0.8 U	1 U	70 U
Deep	NDTS Midpoint	DW-13 MID	30-Sep-08	GW	0		100	15	230	0.8 U	1 U	0.8 U	1 U	70 U
Deep	NDTS Midpoint	DW-13 MID	15-Oct-08	GW	0		110 J	17 J	220 J	0.8 UJ	1 UJ	0.8 UJ	1 UJ	70 UJ
Deep	NDTS Midpoint	DW-13 MID	30-Oct-08	GW	0		110	18	230	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	12-Nov-08	GW	0		100	17	220	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	25-Nov-08	GW	0		110	16	210	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	10-Dec-08	GW	0		98	18	210	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	23-Dec-08	GW	0		110	18	210	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	08-Jan-09	GW	0		100	17	220	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	22-Jan-09	GW	0		110	19	240	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	17-Feb-09	GW	0		100	17	240	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	06-Mar-09	GW	0		110	14	210	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	18-Mar-09	GW	0		110	18	250	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	03-Apr-09	GW	0		110	20	240	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	16-Apr-09	GW	0		100	19	260	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	29-Apr-09	GW	0		110	20	260	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	12-May-09	GW	0		97	18	250	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	27-May-09	GW	0		110	20	280 J	0.8 U	1 U	0.8 U	1 J	70 U
Deep	NDTS Midpoint	DW-13 MID	27-Oct-09	GW	0		90	22	250	0.8 U	1 U	0.8 U	2 J	70 U
Deep	NDTS Midpoint	DW-13 MID	24-Nov-09	GW	0		87	24	260	0.8 U	1 U	0.8 U	2 J	70 U
Deep	NDTS Midpoint	DW-13 MID	05-Jan-10	GW	0		76	24	230	0.8 U	1 U	0.8 U	2 J	70 U
Deep	NDTS Midpoint	DW-13 MID	03-Feb-10	GW	0		93	28	250	0.8 U	1 U	0.8 U	2 J	70 U
Deep	NDTS Midpoint	DW-13 MID	01-Mar-10	GW	0		79	25	240	0.8 U	1 U	0.8 U	2 J	70 U
Deep	NDTS Midpoint	DW-13 MID	07-Apr-10	GW	0		81	29	250	0.8 U	1 U	0.8 U	3 J	70 U
Deep	NDTS Midpoint	DW-13 MID	16-Jun-10	GW	0		76	31	270	0.8 U	1 U	0.8 U	4 J	70 U

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	NDTS Midpoint	DW-13 MID	10-Aug-10	GW	0		77	31	270	0.8 U	1 U	0.8 U	6	70 U
Deep	NDTS Midpoint	DW-13 MID	07-Oct-10	GW	0		100	36	280	0.8 U	1 U	0.8 U	9	70 U
Deep	NDTS Midpoint	DW-13 MID	06-Dec-10	GW	0	2800	80	38	270	0.8 U	1 U	0.8 U	8	70 U
Deep	NDTS Midpoint	DW-13 MID	03-Feb-11	GW	0		80	36	220	0.8 U	1 U	0.8 U	7	70 U
Deep	NDTS Midpoint	DW-13 MID	08-Jun-11	GW	0		70	40	210	0.8 U	1 U	0.8 U	6	70 U
Deep	NDTS Midpoint	DW-13 MID	14-Sep-11	GW	0		59	38	160	0.8 U	1 U	0.8 U	4 J	
Deep	NDTS Midpoint	DW-13 MID	14-Dec-11	GW	0		62	43	170	0.8 U	1 U	0.8 U	6	
Deep	NDTS Midpoint	DW-13 MID	27-Feb-12	GW	0		74	39	180	0.8 U	1 U	0.8 U	5 J	70 U
Deep	NDTS Midpoint	DW-13 MID	09-May-12	GW	0		63	42	200	0.8 U	1 U	0.8 U	4 J	
Deep	NDTS Midpoint	DW-13 MID	16-Aug-12	GW	0		66	44	180	0.8 U	1 U	0.8 U	3 J	
Deep	NDTS Midpoint	DW-13 MID	06-Nov-12	GW	0	1600								
Deep	NDTS Midpoint	DW-13 MID	28-May-13	GW	0		70	49	170	1 J	1 J	0.8 U	3 J	
Deep	NDTS Midpoint	DW-13 MID	09-Apr-14	GW	0		68	46	140	0.7 J	1	0.5 J	3	70 U
Deep	NDTS Midpoint	DW-13 MID	27-May-14	GW	0		45	38	110	0.8 J	1	0.5 J	2	70 U
Deep	NDTS Midpoint	DW-13 MID	04-Dec-14	GW	0		87	53	180	10	2	1	3	70 U
Deep	NDTS Midpoint	DW-13 MID	11-May-15	GW	0		0.5 U	1	1	1	0.5 U	0.5 U	0.5 U	
Deep	NDTS Midpoint	DW-13 MID	05-Nov-15	GW	0		55	44	140	5	2	1	2	
Deep	NDTS Midpoint	DW-13 MID	28-Mar-16	GW	0		30	23	73	19	0.9 J	0.7 J	2	
Deep	NDTS Midpoint	DW-13 MID	26-Oct-16	GW	0		29	30	96	22	1	1	2	
Deep	NDTS Midpoint	DW-13 MID	17-Apr-17	GW	0		21	26	68	19	1	1	2	
Deep	NDTS Midpoint	DW-13 MID	03-Oct-17	GW	0		22	22	59	18	1	1	1	
Deep	NDTS Midpoint	DW-13 MID	04-Apr-18	GW	0		21	22	65	16	0.9 J	1 J	2	
Deep	NDTS Midpoint	DW-13 MID	18-Dec-18	GW	0		38	28	90	22	1	1	1	
Deep	Performance	DW-15	15-Feb-05	GW	0	0.7 U	6	4 J	21	5 J	1 U	0.8 U	1 U	
Deep	Performance	DW-15	09-May-05	GW	0	0.7 U	2 J	6	17	4 J	1 U	0.8 U	1 U	
Deep	Performance	DW-15	09-May-06	GW	0	0.37 J	0.8 U	4 J	8	2 J	2 J	0.8 U	1 U	
Deep	Performance	DW-15	20-Feb-07	GW	0	4.4	0.8 U	4 J	8	1 J	1 U	0.8 U	1 J	
Deep	Performance	DW-15	14-Oct-09	GW	0	0.3 J	0.8 U	3 J	6	0.8 U	3 J	1 J	3 J	70 U
Deep	Performance	DW-15	17-Mar-10	GW	0	0.2 U	0.8 U	2 J	7	0.8 U	4 J	1 J	2 J	70 U
Deep	Performance	DW-15	17-Mar-10	GW	1	0.2 U	0.8 U	2 J	8	0.8 U	4 J	2 J	2 J	70 U
Deep	Performance	DW-15	30-Aug-11	GW	0		0.8 U	7	5 J	0.8 U	3 J	0.9 J	8	
Deep	Performance	DW-15	03-May-12	GW	0		0.8 U	6	12	0.8 U	4 J	1 J	7	
Deep	Performance	DW-15	07-Nov-12	GW	0		0.8 U	4 J	4 J	0.8 U	2 J	3 J	6	
Deep	Performance	DW-15	21-May-13	GW	0	1 U	0.8 U	6	8	0.8 U	3 J	1 J	6	
Deep	Performance	DW-15	31-May-13	GW	0									2 j
Deep	Performance	DW-15	20-Nov-13	GW	0		0.8 U	1 J	2 J	0.8 U	2 J	2 J	3 J	70 U
Deep	Performance	DW-15	14-May-14	GW	0		0.5 U	1	2	0.5 U	2	0.7 J	2	
Deep	Performance	DW-15	14-May-15	GW	0	0.2 U	0.5 U	8	16	0.5 U	4	2	9	
Deep	Performance	DW-15	30-Mar-16	GW	0	0.2 U	0.5 U	9	17	0.5 U	4	1	9	
Deep	Performance	DW-15	18-Apr-17	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2	2	
Deep	Performance	DW-15	03-Apr-18	GW	0		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1	
Deep	Performance	DW-16	15-Feb-05	GW	0	188	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Performance	DW-16	09-May-05	GW	0	180	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Performance	DW-16	09-May-06	GW	0	720	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Deep	Performance	DW-16	19-Feb-07	GW	0	190								

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Performance	DW-16	28-Sep-07	GW	0	230	1 J	1 U	6	1 J	1 U	0.8 U	1 U	
Deep	Performance	DW-16	28-Sep-07	GW	1	230	1 J	1 U	6	1 J	1 U	0.8 U	1 U	
Deep	Performance	DW-16	13-May-08	GW	0	170	5 UJ	5 UJ	2.3 J	5 UJ	5 UJ	5 UJ	5 UJ	
Deep	Performance	DW-16	17-Mar-10	GW	0	46 J	0.8 U	11	40	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Performance	DW-16	30-Aug-11	GW	0	21	0.8 U	26	36	0.8 U	1 U	0.8 U	4 J	
Deep	Performance	DW-16	12-Dec-11	GW	0		0.8 U	33	33	0.8 U	1 U	0.8 U	4 J	
Deep	Performance	DW-16	02-May-12	GW	0		0.8 U	15	18	0.8 U	1 U	0.8 U	2 J	
Deep	Performance	DW-16	07-Nov-12	GW	0		0.8 U	14	20	0.8 U	1 U	0.8 U	1 J	
Deep	Performance	DW-16	22-May-13	GW	0	7.6 j	0.8 U	19 j	15 j	0.8 U	1 U	0.8 U	1 Jj	1.5 j
Deep	Performance	DW-16	20-Nov-13	GW	0	3	0.8 U	17	18	0.8 U	1 U	0.8 U	1 J	70 U
Deep	Performance	DW-16	14-May-14	GW	0		0.5 U	16	16	0.5 U	0.5 U	0.5 U	1	
Deep	Performance	DW-16	11-Nov-14	GW	0		0.5 U	17	13	0.5 U	0.5 U	0.5 U	1	
Deep	Performance	DW-16	15-May-15	GW	0	2	0.5 U	18	12	0.5 U	0.5 U	0.5 U	1	
Deep	Performance	DW-16	30-Mar-16	GW	0	3.2	0.5 U	18	11	0.5 U	0.5 U	0.5 U	0.9 J	
Deep	Performance	DW-16	18-Apr-17	GW	0	0.2 U	0.5 U	11	5	0.5 U	0.5 U	0.5 U	0.5 J	
Deep	Performance	DW-16	04-Apr-18	GW	0		0.50 U	10	5	0.50 U	0.50 U	0.50 U	0.50 U	
Deep	Performance	DW-18	19-Feb-07	GW	0	140	0.8 U	1 U	1 J	0.8 U	2 J	0.8 U	1 U	
Deep	Performance	DW-18	31-Aug-11	GW	0	0.2 U	0.8 U	6	11	0.8 U	18	6	1 U	
Deep	Performance	DW-18	12-Dec-11	GW	0	0.2 U								
Deep	Performance	DW-18	03-May-12	GW	0	0.2 U	0.8 U	11	19	0.8 U	29	16	1 U	
Deep	Performance	DW-18	22-May-13	GW	0	1 U	0.8 U	10 j	17 j	0.8 U	28 j	19 j	1 U	1.4 j
Deep	Performance	DW-18	14-May-14	GW	0	1 U	0.5 U	13	25	0.5 U	29	29	0.5 U	
Deep	Performance	DW-18	11-Nov-14	GW	0	1 U								
Deep	Performance	DW-18	15-May-15	GW	0	0.2 U	0.5 U	1	2	0.5 U	4	2	0.5 U	
Deep	Performance	DW-18	31-Mar-16	GW	0	0.2 U	0.5 U	11	22	0.5 U	29	24	0.5 U	
Deep	Performance	DW-18	19-Apr-17	GW	0	0.2 U	0.5 U	12	20	0.9 J	28	23	0.5 U	
Deep	Performance	DW-18	04-Apr-18	GW	0		0.50 U	14	27	21	23	17	0.50 U	
Deep	Performance	DW-20	15-Feb-05	GW	0	42.1	0.8 U	3 J	6	3 J	1 U	0.9 J	1 U	
Deep	Performance	DW-20	19-Feb-07	GW	0	500	0.8 U	8	15	17	2 J	3 J	1 U	
Deep	Performance	DW-20	27-Sep-07	GW	0	570	0.8 U	9	19	18	2 J	4 J	1 U	
Deep	Performance	DW-20	14-May-08	GW	0	430	5 UJ	6.5 J	7.6 J	11 J	1.6 J	2.5 J	5 UJ	
Deep	Performance	DW-20	28-Aug-09	GW	0	2 UJ	0.8 UJ	3 J	13 J	3 J	1 UJ	0.8 UJ	1 UJ	70 UJ
Deep	Performance	DW-20	01-Apr-10	GW	0	2 U	0.8 U	3 J	16	3 J	1 U	0.8 U	1 U	70 U
Deep	Performance	DW-20	30-Aug-11	GW	0	0.2 U	0.8 U	4 J	14	2 J	1 U	0.8 U	1 U	
Deep	Performance	DW-20	04-May-12	GW	0		0.8 U	4 J	13	4 J	1 U	0.8 U	1 U	
Deep	Performance	DW-20	04-May-12	GW	1		0.8 U	4 J	13	3 J	1 U	0.8 U	1 U	
Deep	Performance	DW-20	22-May-13	GW	0	1 U	0.8 U	4 Jj	13 j	2 Jj	1 U	0.8 U	1 U	0.7 j
Deep	Performance	DW-20	18-May-14	GW	0	1 U	0.5 U	5	14	3	0.5 U	0.5 U	0.5 J	
Deep	Performance	DW-20	11-Nov-15	GW	0	0.2 U	0.5 U	10	19	2	0.5 U	0.5 U	0.6 J	0.81
Deep	Performance	DW-20	01-Apr-16	GW	0	0.2 U	0.5 U	7	14	2	0.5 U	0.5 U	0.5 J	0.63
Deep	Performance	DW-20	18-Apr-17	GW	0	280	0.5 U	8	6	7	2	2	0.5 U	0.05 U
Deep	Performance	DW-20	05-Apr-18	GW	0	480	0.50 U	8	4	12	4	3	0.50 U	
Deep	Performance	DW-23	16-Feb-05	GW	0	14.8	67	19	66	6	1 U	0.8 U	1 U	
Deep	Performance	DW-23	20-Feb-07	GW	0	32	36	14	32	5	1 U	0.8 U	1 J	
Deep	Performance	DW-23	14-Oct-09	GW	0	35	61	15	40	3 J	1 U	0.8 U	1 U	70 U

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Performance	DW-23	17-Mar-10	GW	0	27	78	13	52	4 J	1 U	0.8 U	1 U	70 U
Deep	Performance	DW-23	31-Aug-11	GW	0	23	48	15	47	4 J	1 U	0.8 U	1 U	
Deep	Performance	DW-23	31-Aug-11	GW	1	24	52	15	47	4 J	1 U	0.8 U	1 U	
Deep	Performance	DW-23	02-May-12	GW	0	22	54	16	49	7	1 U	0.8 U	1 U	
Deep	Performance	DW-23	23-May-13	GW	0	18	65	15	43	4 J	1 U	0.8 U	1 U	12
Deep	Performance	DW-23	14-May-14	GW	0	21	53	16	59	5	0.8 J	0.5 U	0.7 J	9
Deep	Performance	DW-23	05-Apr-18	GW	0	11	77	16	54	3	0.6 J	0.50 U	0.50 U	10
Deep	Source	DW-26I	17-Feb-05	GW	0	0.7 U	37	5 J	590	340	2 J	0.8 U	1 U	
Deep	Source	DW-26I	05-Jun-08	GW	0		500 UJ	500 UJ	640 J	740 J	500 UJ	500 UJ	500 UJ	
Deep	Source	DW-26I	13-Oct-09	GW	0	280	6	2 J	290	850	1 U	0.8 U	1 U	70 U
Deep	Source	DW-26I	06-Apr-10	GW	0	480	2 J	2 U	130	1400	2 U	2 U	2 U	140 U
Deep	Source	DW-26I	11-Nov-10	GW	0		5 J	4 J	110	1100	1 J	2 J	1 U	70 U
Deep	Source	DW-26I	08-Sep-11	GW	0	180	4 J	12	72	720	1 U	1 J	4 J	
Deep	Source	DW-26I	14-Dec-11	GW	0		3 J	8	94	800	1 U	1 J	3 J	
Deep	Source	DW-26I	14-Dec-11	GW	1		3 J	8	92	780	1 U	1 J	3 J	
Deep	Source	DW-26I	11-May-12	GW	0	120	2 J	17	42	420	1 U	1 J	3 J	
Deep	Source	DW-26I	23-May-13	GW	0	90	1 J	21	25	360	1 U	0.8 J	2 J	2.7
Deep	Source	DW-26I	13-May-14	GW	0	220	1	13	94	550	0.8 J	1	1	
Deep	Source	DW-26I	11-Nov-14	GW	0		1	10	35	380	0.6 J	0.6 J	0.8 J	
Deep	Source	DW-26I	04-Apr-18	GW	0	20	0.50 U	17	8	65	1	0.50 U	0.50 U	
Deep	Source	DW-28D	17-Feb-05	GW	0	10500	180	14	260	18	1 U	0.8 U	1 U	
Deep	Source	DW-28D	10-May-05	GW	0	5090	120	12	250	21	1 U	0.8 U	1 U	
Deep	Source	DW-28D	15-Feb-06	GW	0	3000	35	9	140	17	1 J	0.8 U	1 U	
Deep	Source	DW-28D	12-May-06	GW	0	4900	32	7	130	18	1 U	0.8 U	1 U	
Deep	Source	DW-28D	16-Aug-06	GW	0	33000	200	18	230	18	1 U	0.8 U	1 U	
Deep	Source	DW-28D	16-Nov-06	GW	0	7800	48	8	170	16	1 U	0.8 U	1 U	
Deep	Source	DW-28D	16-Feb-07	GW	0	120000	860	69	810	15	1 U	0.8 U	1 U	
Deep	Source	DW-28D	27-Sep-07	GW	0	3600	25	9	140	15	1 U	0.8 U	1 U	
Deep	Source	DW-28D	12-May-08	GW	0	2900	50 UJ	50 UJ	76 J	50 UJ	50 UJ	50 UJ	50 UJ	
Deep	Source	DW-28D	21-May-08	GW	0	2900	50 UJ	50 UJ	64 J	50 UJ	50 UJ	50 UJ	50 UJ	
Deep	Source	DW-28D	23-Sep-09	GW	0	3200	5	5	86	21	1 J	0.8 U	1 U	70 U
Deep	Source	DW-28D	29-Mar-10	GW	0	1200	7	14	97	15	1 J	0.8 U	1 U	70 U
Deep	Source	DW-28D	08-Sep-11	GW	0	380	10	35	67	7	1 U	0.8 U	12	
Deep	Source	DW-28D	11-May-12	GW	0		5 J	41	45	6	1 U	0.8 U	7	
Deep	Source	DW-28D	23-May-13	GW	1	150	3 J	55	31	5	1 U	0.8 U	5	3.7
Deep	Source	DW-28D	23-May-13	GW	0	150	3 J	59	32	5	1 U	0.8 U	6	3.5
Deep	Source	DW-28D	14-May-14	GW	0	13000	28	47	73	18	2	0.6 J	4	
Deep	Source	DW-28D	05-Apr-18	GW	0	12	0.50 U	27	14	2	0.50 U	0.50 U	2	
Deep	Source	DW-28I	17-Feb-05	GW	0	928	4000	230	3900	8 U	10 U	8 U	10 U	
Deep	Source	DW-28I	10-May-05	GW	0	1740	4000	230	4600	4 U	5 U	4 U	5 U	
Deep	Source	DW-28I	15-Feb-06	GW	0	630	5300	360	5000	0.8 U	3 J	0.8 U	1 U	
Deep	Source	DW-28I	12-May-06	GW	0	500	3100	270	3100	0.8 U	1 J	0.8 U	1 U	
Deep	Source	DW-28I	16-Aug-06	GW	0	940	1800	190	2000	0.8 U	1 U	0.8 U	1 U	
Deep	Source	DW-28I	16-Nov-06	GW	0	640	2000	160	2400	0.8 U	1 U	0.8 U	1 U	
Deep	Source	DW-28I	16-Feb-07	GW	0	900	2500	200	2300	2 U	2 U	2 U	2 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Source	DW-28I	01-Oct-07	GW	0	77000	1600	120	1600	24	1 J	0.8 U	1 U	
Deep	Source	DW-28I	15-May-08	GW	0	29000	2900 J	170 J	3200 J	500 UJ	500 UJ	500 UJ	500 UJ	
Deep	Source	DW-28I	09-Jun-08	GW	0	40000	1600 J	110 J	2500 J	500 UJ	500 UJ	500 UJ	500 UJ	
Deep	Source	DW-28I	29-Sep-09	GW	0	54000	360	49	710	86	2 J	0.8 U	1 U	70 U
Deep	Source	DW-28I	29-Mar-10	GW	0	57000	640	63	1000	79	2 J	0.8 U	1 U	70 U
Deep	Source	DW-28I	11-Nov-10	GW	0		74	32	240	31	2 J	0.8 U	10	70 U
Deep	Source	DW-28I	11-Nov-10	GW	1		73	32	230	30	2 J	0.8 U	10	70 U
Deep	Source	DW-28I	06-Sep-11	GW	0	15000	36	39	130	26	2 J	0.8 U	9	5.6
Deep	Source	DW-28I	14-Dec-11	GW	0		610	86	1100	120	2 U	2 U	4 J	
Deep	Source	DW-28I	11-May-12	GW	0	11000	30	40	96	16	3 J	0.8 U	5	
Deep	Source	DW-28I	23-May-13	GW	0	9800	24	53	72	18	3 J	0.8 U	4 J	5.3
Deep	Source	DW-28I	14-May-14	GW	0	680	1100	160	1700	220	0.8 J	0.5 J	0.8 J	27
Deep	Source	DW-28I	12-Nov-14	GW	0		160	57	180	31	2	0.9 J	3	
Deep	Source	DW-28I	15-May-15	GW	0	7700	140	55	250	27	2	1	4	7
Deep	Source	DW-28I	01-Apr-16	GW	0	8100	140	55	260	37	1	1	3	8.3
Deep	Source	DW-28I	20-Apr-17	GW	0	4800	120	35	250	52	1	1	2	0.24
Deep	Source	DW-28I	03-Apr-18	GW	0	1400	540	50	1000	160	1 J	0.50 U	0.50 U	6
Deep	Source	DW-29S	17-Feb-05	GW	0	390000	4 J	2 J	21	12	1 U	0.8 U	1 U	
Deep	Source	DW-29S	11-May-05	GW	0	529000	5 J	2 J	11	0.8 U	1 U	0.8 U	1 U	
Deep	Source	DW-29S	10-May-06	GW	0	1600000	1 J	3 J	16	0.8 U	1 U	0.8 U	1 U	
Deep	Source	DW-29S	16-Feb-07	GW	0	1500000	5 J	2 J	13	0.8 U	1 U	0.8 U	1 U	
Deep	Source	DW-29S	03-Oct-07	GW	0	510000								
Deep	Source	DW-29S	16-May-08	GW	0	410000	0.86 J	1.7 J	7.4 U	5 UJ	5 UJ	5 UJ	5 UJ	
Deep	Source	DW-29S	25-Sep-09	GW	0	160000	0.8 U	1 U	7	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Source	DW-29S	31-Mar-10	GW	0	84000	0.8 U	1 J	6	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Source	DW-29S	07-Sep-11	GW	0	67000								
Deep	Source	DW-29S	10-May-12	GW	0	75000								
Deep	Source	DW-29S	22-May-13	GW	0	170000								4.7
Deep	Source	DW-29S	13-May-14	GW	0	150000								
Deep	Source	DW-29S	15-May-15	GW	0	24	0.5 U	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Source	DW-29S	01-Apr-16	GW	0	220000	0.5 J	8	8	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Source	DW-29S	20-Apr-17	GW	0	120000	0.5 U	4	3	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Source	DW-29S	05-Apr-18	GW	0	800000	2	4	6	0.50 U	0.50 U	0.50 U	0.50 U	
Deep	Performance	DW-30S	17-Feb-05	GW	0	680	78	9	140	7	1 U	0.8 U	1 U	
Deep	Performance	DW-30S	11-May-05	GW	0	497	37	8	93	1 J	1 U	0.8 U	1 U	
Deep	Performance	DW-30S	08-May-06	GW	0	390	21	6	62	1 J	1 U	0.8 U	1 U	
Deep	Performance	DW-30S	22-May-08	GW	0		9.4 J	3.1 J	33 J	5 UJ	5 UJ	5 UJ	5 UJ	
Deep	Performance	DW-30S	16-Oct-09	GW	0	180	1 J	1 U	8	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Performance	DW-30S	29-Mar-10	GW	0	140	4 J	1 U	2 J	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Performance	DW-30S	08-Sep-11	GW	0	170	0.8 J	1 U	9	0.8 U	1 U	0.8 U	1 U	
Deep	Performance	DW-30S	29-May-13	GW	0	200	0.8 U	1 U	6	0.8 U	1 U	0.8 U	1 U	0.14
Deep	Performance	DW-30S	14-May-15	GW	0	140	0.5 U	0.5 U	1	0.5 U	0.5 U	1	0.5 U	
Deep	Performance	DW-30S	31-Mar-16	GW	0	250	0.5 U	0.6 J	11	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Performance	DW-30S	19-Apr-17	GW	0	210	0.5 U	0.5 U	3	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Performance	DW-30S	03-Apr-18	GW	0	210	0.50 U	0.7 J	2	0.50 U	0.50 U	0.50 U	0.50 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Source	DW-32I	22-Nov-05	GW	0	61	360	150	4300 J	2 J	13	1 J	290	
Deep	Source	DW-32I	08-May-06	GW	0	40	370	200	5900	2 J	14	2 J	120	
Deep	Source	DW-32I	28-Sep-07	GW	0	0.5 J	250	420	5700	5 J	20	4 J	320	
Deep	Source	DW-32I	03-Jun-08	GW	0	0.35 J	130 J	140 J	2200 J	500 UJ	500 UJ	500 UJ	330 J	
Deep	Source	DW-32I	15-Oct-09	GW	0	0.2 U	88	260	2600	6	14	2 J	140	400
Deep	Source	DW-32I	30-Mar-10	GW	0	0.25 J	510	730	9900	16	51	5	240	1500
Deep	Source	DW-32I	30-Mar-10	GW	1	0.32 J	520	730	11000	16	51	5	240	1600
Deep	Source	DW-32I	06-Sep-11	GW	0		92	190	2100	2 J	7	1 J	110	270
Deep	Source	DW-32I	13-Dec-11	GW	0		160	470	5300	8	21	2 J	140	
Deep	Source	DW-32I	08-May-12	GW	0		40	130	1500	2 J	4 J	0.8 U	96	
Deep	Source	DW-32I	30-May-13	GW	0	1 U	120	300	3200	6	14	2 J	110	300
Deep	Source	DW-32I	15-May-14	GW	0		200	720	7400	12	31	3	100	660 j
Deep	Source	DW-32I	12-Nov-14	GW	0		83	270	2400	4	10	0.5 U	46	
Deep	Source	DW-32I	14-May-15	GW	0	0.2 U	140	630	6400	7 J	24	6 J	110	550
Deep	Source	DW-32I	01-Apr-16	GW	0	0.2 U	28	250	2000	4	8	1 U	33	250
Deep	Source	DW-32I	19-Apr-17	GW	0	0.28 J	3	38	280	1	1	0.5 U	36	0.055 J
Deep	Source	DW-32I	03-Apr-18	GW	0		2	36	520	0.5 J	0.9 J	0.50 U	8	25
Deep	Source	DW-72B	20-Aug-08	GW	0	0.2 U	1 J	30	81	0.8 U	1 U	0.8 U	22	70 U
Deep	Source	DW-72B	20-Aug-08	GW	1	0.2 U	1 J	29	79	0.8 U	1 U	0.8 U	22	70 U
Deep	Source	DW-72B	28-Sep-09	GW	0	0.2 U	4 J	67 J	160	4 J	2 J	0.8 U	120	70 U
Deep	Source	DW-72B	23-Nov-09	GW	0	0.2 U	3 J	75	130	0.8 U	2 J	0.8 U	120	70 U
Deep	Source	DW-72B	03-Feb-10	GW	0	0.2 U	6	110	180	0.8 U	3 J	0.8 U	160	98 J
Deep	Source	DW-72B	07-Apr-10	GW	0	0.2 U	5 J	110	170	0.8 U	3 J	0.8 U	140	120 J
Deep	Source	DW-72B	16-Jun-10	GW	0	0.2 U	9	200	280	1 J	5	1 J	180	140 J
Deep	Source	DW-72B	10-Aug-10	GW	0	0.2 U	8	180	260	1 J	5 J	1 J	280	170 J
Deep	Source	DW-72B	07-Oct-10	GW	0	0.2 U	5 J	88	160	0.9 J	2 J	0.8 U	140	76 J
Deep	Source	DW-72B	07-Dec-10	GW	0	0.2 U	5 J	130	210	1 J	3 J	0.8 U	180	170 J
Deep	Source	DW-72B	03-Feb-11	GW	0	2 U	0.8 U	1 J	1 J	0.8 U	1 U	0.8 U	1 U	70 U
Deep	Source	DW-72B	09-Jun-11	GW	0	0.2 U	7	170	270	1 J	4 J	0.9 J	210	190 J
Deep	Source	DW-72B	15-Sep-11	GW	0	0.2 U	4 J	100	190	0.9 J	3 J	0.8 U	110	
Deep	Source	DW-72B	14-Dec-11	GW	0	0.2 U	3 J	110	180	0.9 J	3 J	0.8 U	160	
Deep	Source	DW-72B	10-May-12	GW	0	0.2 U	5	150	340	1 J	4 J	0.9 J	220	
Deep	Source	DW-72B	28-May-13	GW	0	1 U	2 J	71	130	0.8 U	2 J	0.8 U	98	89 j
Deep	Source	DW-72B	20-Nov-13	GW	0	0.2 U	2 J	61	280	0.8 U	2 J	0.8 U	130	73 J
Deep	Source	DW-72B	13-May-14	GW	0	1 U	0.7 J	39	100	0.5 U	1	0.5 U	64	
Deep	Source	DW-72B	11-Nov-14	GW	0	1 U	2	95	270	0.6 J	2	0.6 J	130	
Deep	Source	DW-72B	15-May-15	GW	0	0.2 U	1	72	230	0.5 U	1	0.5 U	94	70
Deep	Source	DW-72B	01-Apr-16	GW	0	0.2 U	2	100	310	0.5 U	3	0.6 J	130	91
Deep	Source	DW-72B	19-Apr-17	GW	0	0.32 J	0.5 U	32	36	0.5 U	0.5 U	0.5 U	30	18
Deep	Source	DW-72B	03-Apr-18	GW	0		0.50 U	7	7	0.50 U	0.50 U	0.50 U	4	7
Deep	Source	IW-6	27-Oct-05	GW	0	570000	9	3 J	29	0.8 U	1 U	0.8 U	1 U	
Deep	Source	IW-6	16-Jul-09	GW	0	5500	38	44	200	0.8 U	27	1 J	3 J	70 UJ
Deep	Source	IW-6	11-Nov-10	GW	0		10	7	10	5 J	1 U	0.8 U	4 J	70 U
Deep	Source	IW-6	12-Sep-11	GW	0	230000	2 J	8	20	6	1 U	0.8 U	2 J	
Deep	Source	IW-6	14-Dec-11	GW	0		0.8 U	3 J	3 J	0.8 U	1 U	0.8 U	1 J	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Deep	Source	IW-6	11-May-12	GW	0	180000	4 J	17	22	7	1 U	0.8 U	2 J	
Deep	Source	IW-6	30-May-13	GW	0	110000	4 J	31	21	8	1 U	0.8 U	3 J	5.1
Deep	Source	IW-6	15-May-14	GW	0		2	31	15	5	0.5 U	0.5 U	2	
Deep	Source	IW-6	12-Nov-14	GW	0		1 J	22	7	4	0.5 U	0.5 U	0.8 J	
Deep	Source	IW-6	15-May-15	GW	0	100000	1	31	12	5	0.5 U	0.5 U	2	
Deep	Source	IW-6	01-Apr-16	GW	0	4500	0.5 U	10	2	0.9 J	0.5 U	0.5 U	0.5 U	
Deep	Source	IW-6	20-Apr-17	GW	0	290	0.5 U	2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Deep	Source	IW-6	05-Apr-18	GW	0	1800	0.50 U	2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Shallow	Performance	BW 14-02S	03-Mar-05	GW	0	7740	31	5 J	14	130	11	11	1 U	
Shallow	Performance	BW 14-02S	09-May-06	GW	0	11000	49	6	27	270	17	22	1 U	
Shallow	Performance	BW 14-02S	29-Jul-09	GW	0	2700	29	3 J	15	300	37	34	1 U	70 U
Shallow	Performance	BW 14-02S	29-Mar-10	GW	0	2800	34 J	3 J	14	310 J	35	30	1 U	70 U
Shallow	Performance	BW 14-02S	10-Nov-10	GW	0		27	2 J	10	230	26	24	1 U	70 U
Shallow	Performance	BW 14-02S	14-Sep-11	GW	0	2800	27	3 J	11	240	27	25	1 U	
Shallow	Performance	BW 14-02S	02-May-12	GW	0	2700	34	3 J	14	290	33	28	1 U	
Shallow	Performance	BW 14-02S	02-May-12	GW	1	2700	39	3 J	13	300	33	32	1 U	
Shallow	Performance	BW 14-02S	30-May-13	GW	0	2500	40	3 J	16	250	27	24	1 U	
Shallow	Performance	BW 14-02S	16-May-14	GW	0	2500	24	2	11	260	24	21	0.5 U	
Shallow	Performance	BW 14-02S	14-May-15	GW	0	2200	26	2	11	300	29	22	0.5 U	
Shallow	Performance	BW 14-02S	01-Apr-16	GW	0	1600	17	1	8	290	29	22	0.5 U	
Shallow	Performance	BW 14-02S	19-Apr-17	GW	0	1100	13	1	6	240	26	19	0.5 U	
Shallow	Performance	BW 14-02S	05-Apr-18	GW	1	1200	14	1	6	210	25	16	0.50 U	
Shallow	Performance	BW 14-02S	05-Apr-18	GW	0	1200	14	1	6	210	25	16	0.50 U	
Shallow	Performance	BW 21-04D	02-Mar-05	GW	0	356	0.8 U	10	0.8 U	1 J	1 U	3 J	1 U	
Shallow	Performance	BW 21-04D	17-May-05	GW	0	451								
Shallow	Performance	BW 21-04D	22-Nov-05	GW	0	1800								
Shallow	Performance	BW 21-04D	09-May-06	GW	0	3400								
Shallow	Performance	BW 21-04D	02-Oct-07	GW	0	6700	0.8 U	2 J	0.8 U	1 J	1 U	0.8 U	1 U	
Shallow	Performance	BW 21-04D	14-Sep-11	GW	0	1800	0.8 U	1 U	0.8 U	1 J	1 U	0.8 U	1 U	
Shallow	Performance	BW 21-04D	14-May-12	GW	0	1500								
Shallow	Performance	BW 21-04D	30-May-13	GW	0	420								
Shallow	Performance	BW 21-04D	16-May-14	GW	0	250	0.5 U	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U	
Shallow	Performance	BW 21-04D	15-May-15	GW	0	200	0.5 U	0.5 U	0.5 U	0.7 J	0.5 U	0.5 U	0.5 U	
Shallow	Performance	BW 21-04D	31-Mar-16	GW	0	240	1	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U	
Shallow	Performance	BW 21-04D	19-Apr-17	GW	0	140	4	0.5 U	0.5 U	0.7 J	0.5 U	0.5 U	0.5 U	
Shallow	Performance	BW 21-04D	04-Apr-18	GW	0	84	2	0.50 U	0.50 U	0.7 J	0.50 U	0.50 U	0.50 U	
Shallow	Performance	BW 28-02S	29-Jun-05	GW	0	3410	22	6	25	150	52	21	1 U	
Shallow	Performance	BW 28-02S	09-May-06	GW	0	3300	17	5	21	130	49	15	1 U	
Shallow	Performance	BW 28-02S	28-Jul-09	GW	0	6100 J	13	4 J	17	140	25	11 J	1 U	92 J
Shallow	Performance	BW 28-02S	16-Mar-10	GW	0	6000	14	4 J	19	140	22	11	1 U	80 J
Shallow	Performance	BW 28-02S	08-Sep-11	GW	0	5700	16	3 J	15	150	20	11	1 U	36 J
Shallow	Performance	BW 28-02S	09-May-12	GW	0	2800	14	3 J	17	190	20	13	1 U	
Shallow	Performance	BW 28-02S	28-May-13	GW	0	3600	13	3 J	16	200	20	15	1 U	34 j
Shallow	Performance	BW 28-02S	17-May-14	GW	0	2900	13	3	12	190	19	14	0.5 U	28
Shallow	Performance	BW 28-02S	14-May-15	GW	0	2800	11	2	10	180	16	14	0.5 U	22

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Performance	BW 28-02S	01-Apr-16	GW	0	3800	12	2	12	160	14	13	0.5 U	18
Shallow	Performance	BW 28-02S	20-Apr-17	GW	0	3100	11	2	11	170	13	13	0.5 U	4.3
Shallow	Performance	BW 28-02S	04-Apr-18	GW	1	2900 j	10	2	9	150	12	12	0.50 U	11
Shallow	Performance	BW 28-02S	04-Apr-18	GW	0	4700 j	10	2	9	150	12	12	0.50 U	9 j
Shallow	Performance	BW 28-04D	21-Nov-05	GW	0	620	94	7	42	50	4 J	21	1 U	
Shallow	Performance	BW 28-04D	10-May-06	GW	0		100	9	47	140	15	19	1 U	
Shallow	Performance	BW 28-04D	12-Aug-09	GW	0	350	71	7	42	95	17	8	1 U	70 U
Shallow	Performance	BW 28-04D	16-Mar-10	GW	0	270	52	5	36	150	16	6	1 U	70 U
Shallow	Performance	BW 28-04D	08-Sep-11	GW	0	420	63	6	36	65	8	4 J	1 U	
Shallow	Performance	BW 28-04D	11-May-12	GW	0	270	42	4 J	35	130	18	6	1 U	
Shallow	Performance	BW 28-04D	28-May-13	GW	0	530	40	4 J	38	64	5 J	3 J	1 U	
Shallow	Performance	BW 28-04D	15-May-14	GW	0		24	3	25	55	5	3	0.5 U	
Shallow	Performance	BW 28-04D	13-May-15	GW	0	150	11	2	12	42	1	1	0.5 U	
Shallow	Performance	BW 28-04D	30-Mar-16	GW	0	320	15	2	14	70	3	2	0.5 U	
Shallow	Performance	BW 28-04D	18-Apr-17	GW	0	540	14	2	15	60	3	3	0.5 U	
Shallow	Performance	BW 28-04D	03-Apr-18	GW	0	410	11	2	12	55	3	2	0.50 U	
Shallow	Performance	BW 45-03S	29-Nov-05	GW	0	0.52 J	0.8 U	42	17	82	23	17	1 U	
Shallow	Performance	BW 45-03S	16-May-06	GW	0		2 J	2 J	1 J	270	120	85	2 J	
Shallow	Performance	BW 45-03S	12-Aug-09	GW	0	88	0.8 U	2 J	1 J	260	33	150	4 J	70 U
Shallow	Performance	BW 45-03S	17-Mar-10	GW	0	33	0.8 U	2 J	1 J	250	32	130	4 J	70 U
Shallow	Performance	BW 45-03S	07-Sep-11	GW	0	10	0.8 U	2 J	1 J	210	28	150	5 J	
Shallow	Performance	BW 45-03S	07-May-12	GW	0	7.6	0.8 U	2 J	1 J	230	33	120	4 J	
Shallow	Performance	BW 45-03S	09-Nov-12	GW	0		0.8 U	2 J	1 J	220	36	180	2 J	
Shallow	Performance	BW 45-03S	29-May-13	GW	0	10	0.8 U	2 J	1 J	270	46	160	4 J	
Shallow	Performance	BW 45-03S	21-Nov-13	GW	0	4	0.8 U	2 J	1 J	260	42	180	4 J	70 U
Shallow	Performance	BW 45-03S	18-May-14	GW	0	9.5	0.5 U	2	0.9 J	280	47	160	5	
Shallow	Performance	BW 45-03S	15-May-15	GW	0	9.2	0.5 U	1	1	240	41	190	5	
Shallow	Performance	BW 45-03S	30-Mar-16	GW	0	2.8	0.5 J	1	0.5 U	300	40	160	4	
Shallow	Performance	BW 45-03S	18-Apr-17	GW	0	1	0.5 U	1	0.5 U	240	30	130	3	
Shallow	Performance	BW 45-03S	05-Apr-18	GW	0	0.062 J u	0.50 U	1	0.7 J	160	21	93	2	
Shallow	Source	BW 79-02S	22-Nov-05	GW	0	30	300	15	76	0.8 U	1 U	0.8 U	1 U	
Shallow	Source	BW 79-02S	15-May-06	GW	0	28	380	14	83	0.8 J	1 U	0.8 U	1 U	
Shallow	Source	BW 79-02S	07-Sep-11	GW	0	11	420	22	120	0.8 U	1 U	0.8 U	1 U	2.6 J
Shallow	Source	BW 79-02S	15-May-12	GW	0		310	18	110	0.8 U	1 U	0.8 U	1 U	
Shallow	Source	BW 79-02S	08-Nov-12	GW	0		410	23	120	0.8 U	1 U	0.8 U	1 U	
Shallow	Source	BW 79-02S	30-May-13	GW	0	7.4	610	30	150	0.8 U	1 U	0.8 U	1 U	3.2
Shallow	Source	BW 79-02S	16-May-14	GW	0	6.8	380	23	110	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Source	BW 79-02S	13-May-15	GW	0	6.5	330	20	110	1	0.5 U	0.5 U	0.5 U	
Shallow	Source	BW 79-02S	30-Mar-16	GW	0	5.9	440	25	110	0.6 J	0.5 U	0.5 U	0.5 U	
Shallow	Source	BW 79-02S	19-Apr-17	GW	0	6.1	480	29	160	1	0.5 U	0.5 U	0.5 U	
Shallow	Source	BW 79-02S	04-Apr-18	GW	0	4.4	240	15	63	0.5 J	0.50 U	0.50 U	0.50 U	2
Shallow	Source	BW CG-01D	11-May-06	GW	0	22000	2 J	42	4 J	62	1 J	5 J	1 U	
Shallow	Source	BW CG-01D	25-Aug-06	GW	0	43000	2 J	45	5	39	1 J	6	1 U	
Shallow	Source	BW CG-01D	17-Nov-06	GW	0	38000	380	49	5	17	4 J	15	1 U	
Shallow	Source	BW CG-01D	01-Oct-07	GW	0	19000	2 J	74	9	21	1 J	4 J	1 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Source	BW CG-01D	23-May-08	GW	0	25000	100 UJ	75 J	100 UJ	100 UJ	100 UJ	100 UJ	100 UJ	
Shallow	Source	BW CG-01D	11-Aug-09	GW	0	24000	1 J	100	10	28	2 J	7	1 U	70 U
Shallow	Source	BW CG-01D	31-Mar-10	GW	0	16000	0.8 U	61	5	49	1 J	5	1 U	70 U
Shallow	Source	BW CG-01D	09-Sep-11	GW	0	12000	0.8 U	76	5	13	1 J	4 J	1 U	9.2 J
Shallow	Source	BW CG-01D	09-Sep-11	GW	1	11000	0.8 U	75	5	13	1 U	4 J	1 U	8.8 J
Shallow	Source	BW CG-01D	10-May-12	GW	0		0.8 U	26	0.8 U	8	1 U	1 J	1 U	
Shallow	Source	BW CG-01D	30-May-13	GW	0	18000	0.8 U	41	0.8 U	9	1 J	4 J	1 U	6.5 j
Shallow	Source	BW CG-01D	30-May-13	GW	1	17000	0.8 U	40	0.8 U	8	1 J	4 J	1 U	6.3
Shallow	Source	BW CG-01D	15-May-14	GW	0	11000	0.5 U	21	2	11	1	3	0.5 U	
Shallow	Source	BW CG-01D	15-May-15	GW	0	5100	0.5 U	13	0.5 U	8	1	3	0.5 U	
Shallow	Source	BW CG-01D	01-Apr-16	GW	0	3700	0.5 U	9	3	5	0.8 J	2	0.5 U	
Shallow	Source	BW CG-01D	20-Apr-17	GW	0	2400	0.5 U	5	0.5 U	2	0.5 U	1	0.5 U	
Shallow	Source	BW CG-01D	04-Apr-18	GW	1	1700	0.50 U	5	0.50 U	3	0.50 U	1 j	0.50 U	
Shallow	Source	BW CG-01D	04-Apr-18	GW	0	1600	0.50 U	4	0.50 U	3	0.50 U	0.50 U j	0.50 U	
Shallow	Source	BW CM-01S	30-Jun-05	GW	0	32700	8	10	12	96	1 J	12	1 U	
Shallow	Source	BW CM-01S	15-May-06	GW	0	11000	29	13	29	260	4 J	33	1 U	
Shallow	Source	BW CM-01S	15-May-06	GW	1		29	13	29	260	4 J	33	1 U	
Shallow	Source	BW CM-01S	15-Aug-06	GW	0	68000	43	18	40	290	6	51	1 U	
Shallow	Source	BW CM-01S	17-Nov-06	GW	0	52000								
Shallow	Source	BW CM-01S	02-Oct-07	GW	0	29000	24	11	19	280	3 J	25	1 U	
Shallow	Source	BW CM-01S	23-May-08	GW	0	30000	18 J	50 UJ	19 J	260 J	50 UJ	33 J	50 UJ	
Shallow	Source	BW CM-01S	11-Aug-09	GW	0	42000	20	11	26	270	5 J	45	1 U	70 U
Shallow	Source	BW CM-01S	31-Mar-10	GW	0	29000	17	10	23	230	4 J	38	1 U	70 U
Shallow	Source	BW CM-01S	08-Sep-11	GW	0	190	0.8 U	1 U	0.8 U	2 J	1 U	0.8 U	1 U	
Shallow	Source	BW CM-01S	03-Apr-12	GW	0	6900	1 J	3 J	3 J	44	1 U	5 J	1 U	
Shallow	Source	BW CM-01S	31-May-13	GW	0	4800	0.8 U	2 J	2 J	23	1 U	2 J	1 U	
Shallow	Source	BW CM-01S	15-May-14	GW	0	2400	0.5 J	2	2	24	0.5 U	2	0.5 U	
Shallow	Source	BW CM-01S	14-May-15	GW	0	5800	0.8 J	2	3	42	0.7 J	4	0.5 U	
Shallow	Source	BW CM-01S	01-Apr-16	GW	0	4200	0.6 J	3	3	35	0.5 U	4	0.5 U	
Shallow	Source	BW CM-01S	19-Apr-17	GW	0	2000	0.5 U	1	0.5 U	12	0.5 U	1	0.5 U	
Shallow	Source	BW CM-01S	04-Apr-18	GW	0	2000	0.50 U	0.8 J	0.6 J	9	0.50 U	0.8 J	0.50 U	
Shallow	Performance	BW TTU-03D	29-Nov-05	GW	0	1000	13	14	11 J	2200	1100	2000	19	
Shallow	Performance	BW TTU-03D	15-May-06	GW	0	110	9	15	12	810	860	2200	32	
Shallow	Performance	BW TTU-03D	17-Nov-06	GW	0		170	12	11	680	690	1700	26	
Shallow	Performance	BW TTU-03D	30-May-08	GW	0	63 J	250 UJ	250 UJ	250 UJ	390 J	350 J	920 J	250 UJ	
Shallow	Performance	BW TTU-03D	13-Aug-09	GW	0	200	1 J	4 J	4 J	610	280	790	31	70 U
Shallow	Performance	BW TTU-03D	13-Aug-09	GW	1	200	1 J	4 J	4 J	610	270	810	34	70 U
Shallow	Performance	BW TTU-03D	31-Mar-10	GW	0	140	2 J	4 J	2 U	1400	500	460	14	140 U
Shallow	Performance	BW TTU-03D	13-Sep-11	GW	0	270	2 J	4 J	3 J	620	170	300	11	
Shallow	Performance	BW TTU-03D	04-Apr-12	GW	0	290	2 J	4 J	3 J	790	160	260	8	
Shallow	Performance	BW TTU-03D	04-Apr-12	GW	1	300	2 J	4 J	3 J	750	170	270	8	
Shallow	Performance	BW TTU-03D	28-May-13	GW	0	73	0.8 U	2 J	1 J	360	100	270	2 J	
Shallow	Performance	BW TTU-03D	15-May-14	GW	0	800	0.5 U	0.9 J	0.6 J	170	120	130	3	
Shallow	Performance	BW TTU-03D	14-May-15	GW	0	71	0.5 U	0.7 J	0.5 J	330	94	100	2	
Shallow	Performance	BW TTU-03D	01-Apr-16	GW	0	41	0.5 U	0.6 J	0.7 J	290	88	170	3	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Performance	BW TTU-03D	20-Apr-17	GW	0	87	2	0.6 J	1	1900	230	130	5	
Shallow	Performance	BW TTU-03D	04-Apr-18	GW	0	59	0.7 J	0.50 U	0.9 J	820	130	190	3	
Shallow	Sentinel	SW 200-02	31-May-08	GW	0	1 U	1.5 J	2 J	3.6 J	5 UJ	5 UJ	5 UJ	5 UJ	
Shallow	Sentinel	SW 200-02	30-Jul-09	GW	0	0.2 U	0.8 J	1 J	2 J	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW 200-02	16-Mar-10	GW	0	0.2 U	1 J	1 J	2 J	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW 200-02	01-Sep-11	GW	0	0.2 U	1 J	1 J	2 J	0.8 U	1 U	0.8 U	1 U	0.53 J
Shallow	Sentinel	SW 200-02	02-May-12	GW	0	0.25 J	3 J	2 J	3 J	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW 200-02	22-May-13	GW	0	1 U	3 Jj	2 Jj	3 Jj	0.8 U	1 U	0.8 U	1 U	0.73 j
Shallow	Sentinel	SW 200-02	22-May-13	GW	1	1 U	2 J	2 J	2 J	0.8 U	1 U	0.8 U	1 U	0.75
Shallow	Sentinel	SW 200-02	19-Nov-13	GW	0	0.2 U	2 J	2 J	3 J	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW 200-02	19-Nov-13	GW	1	0.2 U	2 J	2 J	3 J	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW 200-02	13-May-14	GW	0	1 U	2	1	2	0.5 U	0.5 U	0.5 U	0.5 U	0.36
Shallow	Sentinel	SW 200-02	13-May-14	GW	1	1 U	2	1	2	0.5 U	0.5 J	0.5 U	0.5 U	0.35
Shallow	Sentinel	SW 200-02	12-May-15	GW	0	0.2 U	2	1	2	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	12-May-15	GW	1	0.2 U	2	1	2	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	05-Nov-15	GW	0	0.2 U	2	2	3	0.5 U	0.8 J	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	29-Mar-16	GW	0	0.2 U	2	1	2	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	29-Mar-16	GW	1	0.26 J	2	1	2	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	26-Oct-16	GW	0	0.2 U	2	1	2	0.5 U	0.6 J	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	17-Apr-17	GW	1	0.2 U	2	2	3	0.5 U	1	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	17-Apr-17	GW	0	0.22 U	2	2	3	0.5 U	1	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	03-Oct-17	GW	0	0.2 U	1	1	1	0.5 U	0.6 J	0.5 U	0.5 U	
Shallow	Sentinel	SW 200-02	03-Apr-18	GW	0	0.095 J	1	2	2	0.50 U	0.7 J	0.50 U	0.50 U	
Shallow	Sentinel	SW 200-02	09-Oct-18	GW	0	0.20 U	1	0.9 J	0.8 J	0.20 U	0.5 J	0.20 U	0.40 U	
Shallow	Sentinel	SW 212-01	19-Mar-10	GW	0	2.9	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW 212-01	13-Sep-11	GW	0	1.3	4 J	3 J	0.8 U	0.8 U	1 U	0.8 U	1 U	0.056 UJ
Shallow	Sentinel	SW 212-01	03-May-12	GW	0	0.24 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW 212-01	23-May-13	GW	0	1	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW 212-01	13-May-14	GW	0	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 212-01	12-May-15	GW	0	0.64 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 212-01	05-Nov-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 212-01	30-Mar-16	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 212-01	18-Apr-17	GW	0	0.4 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 212-01	03-Oct-17	GW	0	dry	dry	dry	dry	dry	dry	dry	dry	
Shallow	Sentinel	SW 212-01	03-Apr-18	GW	0	0.8 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Shallow	Sentinel	SW 212-01	09-Oct-18	GW	0	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.40 U	
Shallow	Sentinel	SW 222-02	30-May-08	GW	0	12	3 J	5 UJ	3.3 J	5 UJ	5 UJ	5 UJ	5 UJ	
Shallow	Sentinel	SW 222-02	16-Mar-10	GW	0	1.8	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW 222-02	01-Sep-11	GW	0	13	3 J	1 U	3 J	0.8 U	1 J	0.8 U	1 U	4.4 J
Shallow	Sentinel	SW 222-02	07-May-12	GW	0	8.6	3 J	1 U	4 J	0.8 U	1 J	0.8 U	1 U	
Shallow	Sentinel	SW 222-02	22-May-13	GW	0	4.6 j	1 Jj	1 U	2 Jj	0.8 U	1 U	0.8 U	1 U	2.6 j
Shallow	Sentinel	SW 222-02	19-Nov-13	GW	0	5	1 J	1 U	3 J	0.8 U	1 J	0.8 U	1 U	70 U
Shallow	Sentinel	SW 222-02	13-May-14	GW	0	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12
Shallow	Sentinel	SW 222-02	12-May-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 U
Shallow	Sentinel	SW 222-02	06-Nov-15	GW	0	2.6	0.5 U	0.6 J	2	0.5 U	0.5 J	0.5 U	0.5 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Sentinel	SW 222-02	29-Mar-16	GW	0	0.32 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 U
Shallow	Sentinel	SW 222-02	26-Oct-16	GW	0	0.92 J	0.8 J	0.7 J	2	0.5 U	0.6 J	0.5 U	0.5 U	
Shallow	Sentinel	SW 222-02	18-Apr-17	GW	0	0.36 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.05 U
Shallow	Sentinel	SW 222-02	03-Oct-17	GW	0	0.24 J	0.6 J	0.6 J	1	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW 222-02	03-Apr-18	GW	0	2.7	0.50 U	0.50 U	0.7 J	0.50 U	0.50 U	0.50 U	0.50 U	
Shallow	Sentinel	SW 222-02	18-Dec-18	GW	0	0.38 J	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.40 U	
Shallow	Performance	SW 28-41	04-Mar-05	GW	0	0.7 U	5 J	3 J	4 J	11	6	2 J	1 U	
Shallow	Performance	SW 28-41	18-May-05	GW	0	5.7	8	4 J	4 J	13	6	3 J	1 U	
Shallow	Performance	SW 28-41	16-Aug-05	GW	0	47	14	2 J	8	13	11	4 J	1 U	
Shallow	Performance	SW 28-41	28-Nov-05	GW	0	8.8	8	2 J	5 J	10	5 J	2 J	1 U	
Shallow	Performance	SW 28-41	12-May-06	GW	0	59	4 J	2 J	3 J	14	4 J	2 J	1 U	
Shallow	Performance	SW 28-41	16-Nov-06	GW	0	0.2 U	6	1 J	2 J	7	4 J	2 J	1 U	
Shallow	Performance	SW 28-41	03-Oct-07	GW	0	1.5	1 J	1 J	1 J	4 J	4 J	5	1 U	
Shallow	Performance	SW 28-41	20-May-08	GW	0	43	2.6 U	1.3 J	1.8 U	4.8 U	4.1 U	3.6 J	5 UJ	
Shallow	Performance	SW 28-41	04-Aug-09	GW	0	560	8	1 J	3 J	19	4 J	4 J	1 U	70 U
Shallow	Performance	SW 28-41	29-Mar-10	GW	0	930	13	2 J	5 J	27	4 J	6	1 U	70 U
Shallow	Performance	SW 28-41	09-Sep-11	GW	0	1100	16 U	2 UJ	4 J	30	4 J	5 J	1 U	
Shallow	Performance	SW 28-41	09-Sep-11	GW	1	1100	17 U	2 UJ	5 J	32	4 J	5 J	1 U	
Shallow	Performance	SW 28-41	08-May-12	GW	0	760								
Shallow	Performance	SW 28-41	30-May-13	GW	0	570	13	1 J	3 J	39	4 J	5	1 U	
Shallow	Performance	SW 28-41	14-May-15	GW	0	430	7	1	2	35	4	8	0.5 U	
Shallow	Performance	SW 28-41	30-Mar-16	GW	0	130	4	0.6 J	0.6 J	12	2	2	0.5 U	
Shallow	Performance	SW 28-41	18-Apr-17	GW	0	440	8	1	2	24	2	3	0.5 U	
Shallow	Performance	SW 28-41	03-Apr-18	GW	0	380	5	1 J	2	22	2	2	0.50 U	
Shallow	Source	SW 40-07A	04-Mar-05	GW	0	1870	4 J	2 J	7	890	13	210	1 U	
Shallow	Source	SW 40-07A	12-May-05	GW	0	1060	2 J	2 U	4 J	1600	21	290	2 U	
Shallow	Source	SW 40-07A	16-Aug-05	GW	0	880	2 J	1 J	4 J	990	32	270	1 J	
Shallow	Source	SW 40-07A	22-Nov-05	GW	0	860	4 U	5 U	7 J	3200	100	1000	13 J	
Shallow	Source	SW 40-07A	16-May-06	GW	0	480	3 J	2 J	9	730	310	540	2 J	
Shallow	Source	SW 40-07A	16-Nov-06	GW	0	190	4 J	2 J	10	140	38	3100	300	
Shallow	Source	SW 40-07A	14-Feb-07	GW	0	610	3 J	2 J	10 J	560	200	1200	54	
Shallow	Source	SW 40-07A	02-Oct-07	GW	0	640	2 J	2 J	6	240	44	1000	230	
Shallow	Source	SW 40-07A	16-May-08	GW	0	620	100 UJ	100 UJ	100 UJ	100 UJ	550 J	100 UJ	150 J	
Shallow	Source	SW 40-07A	31-Jul-09	GW	0	620	1 J	1 J	4 J	500	74	290	14	70 U
Shallow	Source	SW 40-07A	29-Mar-10	GW	0	310	0.8 U	1 U	2 J	630	56	260	8	70 U
Shallow	Source	SW 40-07A	29-Mar-10	GW	1	320	0.8 U	1 U	3 J	690	59	280	8	70 U
Shallow	Source	SW 40-07A	09-Sep-11	GW	0	94	8 U	10 U	8 U	4900	660	1800	220	
Shallow	Source	SW 40-07A	09-Sep-11	GW	1	100	10 UJ	5 U	5 J	5100	680	1900	220	
Shallow	Source	SW 40-07A	09-May-12	GW	0	700	0.8 U	1 U	2 J	260	18	100	3 J	
Shallow	Source	SW 40-07A	28-May-13	GW	0	560	0.8 J	1 U	2 J	920	60	310	10	
Shallow	Source	SW 40-07A	14-May-14	GW	0	320	0.5 U	0.5 U	0.9 J	510	20	130	5	
Shallow	Source	SW 40-07A	13-May-15	GW	0	320	0.5 U	0.5 U	1	1600	44	260	21	
Shallow	Source	SW 40-07A	30-Mar-16	GW	0	290	0.5 U	0.5 U	0.5 U	290	11	110	4	
Shallow	Source	SW 40-07A	18-Apr-17	GW	0	1300	1	0.5 U	1	51	2	16	0.5 U	
Shallow	Source	SW 40-07A	03-Apr-18	GW	0	690	0.7 J	0.50 U	1	790	34	270	25	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Performance	SW 40-57	28-Nov-05	GW	0	14	3 J	3 U	8 J	2400	390	550	46	
Shallow	Performance	SW 40-57	16-May-06	GW	0	36	4 J	2 J	6	980	170	330	40	
Shallow	Performance	SW 40-57	15-Aug-06	GW	0	47	3 J	2 J	7	1500	290	470	64	
Shallow	Performance	SW 40-57	16-Nov-06	GW	0	100	4 J	2 J	7	2300	290	560	71	
Shallow	Performance	SW 40-57	03-Oct-07	GW	0	86	3 J	1 J	5	2000	210	370	71	
Shallow	Performance	SW 40-57	27-May-08	GW	0	52 J	500 UJ	500 UJ	500 UJ	1500 J	500 UJ	300 J	500 UJ	
Shallow	Performance	SW 40-57	18-Aug-09	GW	0	20	2 U	3 U	4 J	2600	170	860	62	180 U
Shallow	Performance	SW 40-57	01-Apr-10	GW	0	19	1 J	1 U	3 J	1200	110	330	34	70 U
Shallow	Performance	SW 40-57	14-Sep-11	GW	0	23	4 U	5 U	4 U	2100	120	390	19 J	
Shallow	Performance	SW 40-57	08-May-12	GW	0	18	0.8 U	1 U	3 J	960	91	240	17	
Shallow	Performance	SW 40-57	29-May-13	GW	0	33	2 J	1 U	4 J	1400	120	360	17	
Shallow	Performance	SW 40-57	18-May-14	GW	0	26	1	0.8 J	3	960	90	320	17	
Shallow	Performance	SW 40-57	13-May-15	GW	0	18	0.5 J	0.8 J	3	670	51	260	11	
Shallow	Performance	SW 40-57	31-Mar-16	GW	0	7.9	0.5 U	0.9 J	2	540	35	170	6	
Shallow	Performance	SW 40-57	19-Apr-17	GW	0	8.4	0.5 U	1	2	600	54	240	8	
Shallow	Performance	SW 40-57	03-Apr-18	GW	0	2.8	0.50 U	0.8 J	2	500	47	210	7	
Shallow	Performance	SW 42-02	23-Feb-05	GW	0	2250								
Shallow	Performance	SW 42-02	18-May-05	GW	0	1690								
Shallow	Performance	SW 42-02	17-May-06	GW	0	1200								
Shallow	Performance	SW 42-02	13-Sep-11	GW	0	710	0.8 U	1 U	3 J	3 J	1 U	0.8 U	1 U	
Shallow	Performance	SW 42-02	16-May-12	GW	0		0.8 J	1 U	4 J	3 J	1 U	1 J	1 U	
Shallow	Performance	SW 42-02	31-May-13	GW	0	940	0.8 U	1 U	4 J	3 J	1 U	0.8 U	1 U	
Shallow	Performance	SW 42-02	14-May-14	GW	0		0.7 J	0.5 U	4	4	0.5 U	0.6 J	0.5 U	
Shallow	Performance	SW 42-02	13-May-15	GW	0	520	0.5 U	0.5 U	2	4	0.7 J	3	0.8 J	
Shallow	Performance	SW 42-02	01-Apr-16	GW	0	490	0.5 U	0.5 U	0.9 J	2	0.7 J	1	0.5 U	
Shallow	Performance	SW 42-02	19-Apr-17	GW	0	1100	0.5 U	0.5 U	1	5	0.5 U	1	0.5 U	
Shallow	Performance	SW 42-02	03-Apr-18	GW	0	150	0.50 U	0.50 U	0.50 U	1	0.50 U	0.7 J	0.50 U	
Shallow	Performance	SW 47-02	04-Mar-05	GW	0	1410	4 J	2 J	5	27	4 J	4 J	1 U	
Shallow	Performance	SW 47-02	18-May-05	GW	0	1390								
Shallow	Performance	SW 47-02	17-May-06	GW	0	1200								
Shallow	Performance	SW 47-02	13-Aug-09	GW	0	970	2 J	2 J	4 J	25	9	5 J	1 U	70 U
Shallow	Performance	SW 47-02	29-Mar-10	GW	0	730	2 J	1 U	3 J	19	5	3 J	1 U	70 U
Shallow	Performance	SW 47-02	15-Sep-11	GW	0	43	0.8 U	1 U	0.8 U	2 J	1 U	0.8 U	1 U	
Shallow	Performance	SW 47-02	16-May-12	GW	0		0.8 J	1 U	1 J	8	5 J	2 J	1 U	
Shallow	Performance	SW 47-02	31-May-13	GW	0	460	1 J	1 U	2 J	11	6	3 J	1 U	
Shallow	Performance	SW 47-02	31-May-13	GW	1	460	2 J	1 J	2 J	14	6	4 J	1 U	
Shallow	Performance	SW 47-02	14-May-14	GW	0		3	1	4	30	6	5	0.5 U	
Shallow	Performance	SW 47-02	14-May-15	GW	0	740	3	1	3	36	7	6	0.5 U	
Shallow	Performance	SW 47-02	30-Mar-16	GW	0	320	1	0.7 J	2	18	4	3	0.5 U	
Shallow	Performance	SW 47-02	18-Apr-17	GW	0	710	2	1	2	21	6	6	0.5 U	
Shallow	Performance	SW 47-02	03-Apr-18	GW	0	870	2	0.9 J	2	22	4	3	0.50 U	
Shallow	Source	SW 5-04	23-Feb-05	GW	0	405	120000	240 J	1300	32	89	6	1 U	
Shallow	Source	SW 5-04	17-May-05	GW	0		44000	340 J	360 J	80 U	100 U	80 U	100 U	
Shallow	Source	SW 5-04	22-Nov-05	GW	0		69000	120 J	620	80 U	100 U	80 U	100 U	
Shallow	Source	SW 5-04	15-May-06	GW	0		800000	600 J	2100 J	400 U	500 U	400 U	500 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Source	SW 5-04	16-Nov-06	GW	0		81000	370	580	60 J	66 J	20 U	25 U	
Shallow	Source	SW 5-04	23-Apr-08	GW	0									6
Shallow	Source	SW 5-04	03-Aug-09	GW	0		170000	630 J	2600	160 U	200 U	160 U	200 U	14000 U
Shallow	Source	SW 5-04	04-Aug-09	GW	0	800								
Shallow	Source	SW 5-04	29-Mar-10	GW	0	570	16000	46 J	160	130	27 J	16 U	20 U	1400 U
Shallow	Source	SW 5-04	11-Nov-10	GW	0	370								
Shallow	Source	SW 5-04	09-Sep-11	GW	0	360	370000	2100	5300	160 U	240 J	160 U	200 U	2.4 J
Shallow	Source	SW 5-04	09-Sep-11	GW	1	420	310000	2100	5900	210 J	240 J	80 U	100 U	2.3 J
Shallow	Source	SW 5-04	12-Dec-11	GW	0	770								
Shallow	Source	SW 5-04	04-Apr-12	GW	0	410	21000	300	220	120	33	10	1 U	
Shallow	Source	SW 5-04	09-Nov-12	GW	0	480	32000	720	540	98 J	50 U	40 U	50 U	
Shallow	Source	SW 5-04	31-May-13	GW	0	450	200000	1600	3000	80 U	140 J	80 U	100 U	3
Shallow	Source	SW 5-04	20-Nov-13	GW	0	400	60000	180 J	580	88 J	55 J	40 U	50 U	3500 U
Shallow	Source	SW 5-04	19-May-14	GW	0	460	10000	33	210	98	22	10 U	10 U	
Shallow	Source	SW 5-04	11-Nov-14	GW	0	410								
Shallow	Source	SW 5-04	15-May-15	GW	0	420	7600	9	82	110	23	8	3 U	
Shallow	Source	SW 5-04	30-Mar-16	GW	0	350	12000	51	180	90	23	5 J	5 U	
Shallow	Source	SW 5-04	18-Apr-17	GW	0	310	15000	110	1700	190	41	12	5 U	
Shallow	Source	SW 5-04	04-Apr-18	GW	0	340	13000	69	280	79	44	10 U	10 U	2
Shallow	Performance	SW 74-07	04-Mar-05	GW	0	86.6	0.8 U	1 U	0.8 U	89	87	230	2 J	
Shallow	Performance	SW 74-07	17-May-05	GW	0		5 J	1 U	0.8 U	360	54	51	1 U	
Shallow	Performance	SW 74-07	17-May-06	GW	0		0.8 U	1 U	0.8 U	600	34	50	2 J	
Shallow	Performance	SW 74-07	03-Oct-07	GW	0	1300	0.8 U	1 U	0.8 U	230	59	320	17	
Shallow	Performance	SW 74-07	19-May-08	GW	0	2200	250 UJ	250 UJ	250 UJ	910 J	250 UJ	250 UJ	250 UJ	
Shallow	Performance	SW 74-07	17-Aug-09	GW	0	520	0.8 U	1 U	0.8 U	710	75	150	4 J	70 U
Shallow	Performance	SW 74-07	18-Mar-10	GW	0	1000	0.8 U	1 U	0.8 U	800	21	26	1 U	70 U
Shallow	Performance	SW 74-07	18-Mar-10	GW	1	950	0.8 U	1 U	0.8 U	960	22	27	1 J	70 U
Shallow	Performance	SW 74-07	10-Nov-10	GW	0		0.8 U	1 U	0.8 U	330	35	110	2 J	70 U
Shallow	Performance	SW 74-07	14-Sep-11	GW	0	50	0.8 U	1 U	0.8 U	290	38	290	4 J	
Shallow	Performance	SW 74-07	14-May-12	GW	0	130	0.8 U	1 U	0.8 U	640	26	53	1 U	
Shallow	Performance	SW 74-07	14-May-12	GW	1	130	0.8 U	1 U	0.8 U	610	26	52	1 U	
Shallow	Performance	SW 74-07	31-May-13	GW	0	150 j	0.8 U	1 U	0.8 U	620	28	65	1 U	0.051 U
Shallow	Performance	SW 74-07	31-May-13	GW	1	210	0.8 U	1 U	0.8 U	660	28	65	1 U	0.055 U
Shallow	Performance	SW 74-07	18-May-14	GW	0	210	0.5 U	0.5 U	0.5 U	890	23	17	0.5 U	
Shallow	Performance	SW 74-07	18-May-14	GW	1	160	0.5 U	0.5 U	0.5 U	770	24	25	0.6 J	
Shallow	Performance	SW 74-07	14-May-15	GW	0	73	0.5 U	0.5 U	0.5 U	500	19	22	0.5 U	
Shallow	Performance	SW 74-07	14-May-15	GW	1	74	0.5 U	0.5 U	0.5 U	520	18	22	0.5 U	
Shallow	Performance	SW 74-07	31-Mar-16	GW	0	22	0.5 U	0.5 U	0.5 U	440	32	69	0.5 U	
Shallow	Performance	SW 74-07	31-Mar-16	GW	1	22	0.5 U	0.5 U	0.5 U	440	32	67	0.5 U	
Shallow	Performance	SW 74-07	19-Apr-17	GW	1	97	0.5 U	0.5 U	0.5 U	800	46	90	0.6 J	
Shallow	Performance	SW 74-07	19-Apr-17	GW	0	95	0.5 U	0.5 U	0.5 U	790	46	91	0.8 J	
Shallow	Performance	SW 74-07	04-Apr-18	GW	0	54	0.50 U	0.50 U	0.50 U	730	46	63	0.50 U	
Shallow	Sentinel	SW SB-01	12-Aug-09	GW	0	2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-01	24-Mar-10	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-01	31-Aug-11	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.049 UJ

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Sentinel	SW SB-01	07-May-12	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW SB-01	21-May-13	GW	0	1 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW SB-01	19-Nov-13	GW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-01	13-May-14	GW	0	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-01	13-May-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-01	06-Nov-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-01	30-Mar-16	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-01	26-Oct-16	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-01	18-Apr-17	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-02	12-Aug-09	GW	0	2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-02	24-Mar-10	GW	0	0.71 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-02	01-Sep-11	GW	0	0.58 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.05 UJ
Shallow	Sentinel	SW SB-02	02-May-12	GW	0	0.73 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW SB-02	21-May-13	GW	0	1 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	0.053 U
Shallow	Sentinel	SW SB-02	20-Nov-13	GW	0	0.45 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-02	13-May-14	GW	0	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-02	13-May-15	GW	0	0.2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-02	06-Nov-15	GW	0	0.36 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-02	29-Mar-16	GW	0	0.29 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-02	26-Oct-16	GW	0	0.47 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-02	18-Apr-17	GW	0	0.37 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Sentinel	SW SB-03	18-Aug-09	GW	0	2 U	0.8 U	1 J	2 J	0.9 J	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-03	24-Mar-10	GW	0	2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Sentinel	SW SB-03	01-Sep-11	GW	0	8.5	0.8 U	1 J	2 J	0.8 U	1 U	2 J	1 U	1.8 J
Shallow	Sentinel	SW SB-03	03-May-12	GW	0	0.27 J	0.8 U	1 U	1 J	0.8 U	1 U	0.8 J	1 U	
Shallow	Sentinel	SW SB-03	22-May-13	GW	0	1 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Sentinel	SW SB-03	20-Nov-13	GW	0	0.53 J	0.8 U	1 J	2 J	0.8 U	1 U	1 J	1 U	70 U
Shallow	Sentinel	SW SB-03	13-May-14	GW	0	4.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	
Shallow	Sentinel	SW SB-03	12-May-15	GW	0	0.2 U	0.5 U	0.6 J	0.5 U	0.5 U	0.5 U	2	0.5 U	2.9
Shallow	Sentinel	SW SB-03	06-Nov-15	GW	0	1.4	0.5 U	2	2	0.5 J	0.9 J	3	0.5 U	
Shallow	Sentinel	SW SB-03	06-Nov-15	GW	1	1.6	0.5 U	2	2	0.5 U	0.8 J	3	0.5 U	
Shallow	Sentinel	SW SB-03	30-Mar-16	GW	0	0.38 J	0.5 U	0.5 J	0.5 U	0.5 U	0.5 U	2	0.5 U	3.7
Shallow	Sentinel	SW SB-03	26-Oct-16	GW	0	0.81 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J	0.5 U	
Shallow	Sentinel	SW SB-03	18-Apr-17	GW	0	3.7	0.5 U	0.6 J	0.5 U	0.5 U	0.8 J	2	0.5 U	2.9
Shallow	Sentinel	SW SB-03	03-Oct-17	GW	0	1.2	0.5 U	0.8 J	1	0.7 J	0.5 U	0.6 J	0.5 U	0.57
Shallow	Sentinel	SW SB-03	03-Apr-18	GW	0	13	0.50 U	0.7 J	0.50 U	0.7 J	1	4	0.50 U	3
Shallow	Sentinel	SW SB-03	09-Oct-18	GW	1	0.60 J	0.20 U	0.4 J	0.6 J	1	0.5 J	0.9 J	0.40 U	
Shallow	Sentinel	SW SB-03	09-Oct-18	GW	0	0.64 J	0.20 U	0.4 J	0.7 J	1	0.6 J	0.9 J	0.40 U	
Shallow	Sentinel	SW SB-03	18-Dec-18	GW	1									0.3 j
Shallow	Sentinel	SW SB-03	18-Dec-18	GW	0									0.5 j
Shallow	Performance	SW TTU-03	11-Jun-08	GW	0	980	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	
Shallow	Performance	SW TTU-03	31-Mar-10	GW	0	1100	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Performance	SW TTU-03	10-Nov-10	GW	0	1200	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Performance	SW TTU-03	15-Jun-11	GW	0	48	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Performance	SW TTU-03	14-Dec-11	GW	0	36	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Shallow	Performance	SW TTU-03	10-May-12	GW	0	980	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Performance	SW TTU-03	09-Nov-12	GW	0	4200	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Performance	SW TTU-03	29-May-13	GW	0	26000	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Shallow	Performance	SW TTU-03	20-Nov-13	GW	0	3800	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Shallow	Performance	SW TTU-03	15-May-14	GW	0	2700								
Shallow	Performance	SW TTU-03	12-Nov-14	GW	0	1300	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Performance	SW TTU-03	14-May-15	GW	0	1600	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Performance	SW TTU-03	01-Apr-16	GW	0	460	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Performance	SW TTU-03	20-Apr-17	GW	0	770	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Shallow	Performance	SW TTU-03	04-Apr-18	GW	0	300	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	
Surface	Sentinel	STR 02	23-Nov-05	SW	0	8.1	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 02	16-Feb-06	SW	0	0.91 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 02	18-May-06	SW	0	0.2 U	0.8 U	5	4 J	0.8 U	6	0.8 U	1 U	
Surface	Sentinel	STR 02	21-Feb-07	SW	0	0.5 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 02	26-Mar-10	SW	0	0.2 U	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Surface	Sentinel	STR 02	11-Nov-10	SW	0	0.2 U	0.8 U	1 J	1 J	0.8 U	2 J	0.8 U	1 U	70 U
Surface	Sentinel	STR 02	08-Sep-11	GW	0	1.8	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 02	17-May-12	SW	0	0.2 U	0.8 U	2 J	2 J	0.8 U	3 J	0.8 U	1 U	
Surface	Sentinel	STR 04	03-Mar-05	SW	0	74	0.8 U	1 U	0.8 U	4 J	1 U	2 J	1 U	
Surface	Sentinel	STR 04	03-Mar-05	SW	1	74.5	0.8 U	1 U	0.8 U	3 J	1 U	1 J	1 U	
Surface	Sentinel	STR 04	19-May-05	SW	0	24.6	0.8 U	1 U	0.8 U	2 J	1 U	1 J	1 U	
Surface	Sentinel	STR 04	19-May-05	SW	1	26	0.8 U	1 U	0.8 U	2 J	1 U	0.9 J	1 U	
Surface	Sentinel	STR 04	17-Aug-05	SW	0	2	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 04	17-Aug-05	SW	1	2.3	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 04	23-Nov-05	SW	0	23	0.8 U	1 U	0.8 U	2 J	1 U	0.9 J	1 U	
Surface	Sentinel	STR 04	23-Nov-05	SW	1	27	0.8 U	1 U	0.8 U	2 J	1 U	0.9 J	1 U	
Surface	Sentinel	STR 04	16-Feb-06	SW	0	20	0.8 U	1 U	0.8 U	2 J	1 U	1 J	1 U	
Surface	Sentinel	STR 04	16-Feb-06	SW	1	22	0.8 U	1 U	0.8 U	2 J	1 U	1 J	1 U	
Surface	Sentinel	STR 04	18-May-06	SW	0	13	0.8 U	1 U	0.8 U	2 J	1 U	1 J	1 U	
Surface	Sentinel	STR 04	18-May-06	SW	1	14	0.8 U	1 U	0.8 U	2 J	1 U	1 J	1 U	
Surface	Sentinel	STR 04	15-Aug-06	SW	0	1.5	3 J	3 J	3 J	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 04	15-Aug-06	SW	1	1.5	3 J	3 J	2 J	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 04	17-Nov-06	SW	0	11	0.8 U	1 U	0.8 U	1 J	1 U	0.8 U	1 U	
Surface	Sentinel	STR 04	13-Feb-07	SW	0	42	0.8 U	1 U	0.8 U	8	2 J	4 J	1 U	
Surface	Sentinel	STR 04	25-Sep-07	SW	0	0.2 J	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Sentinel	STR 04	19-Aug-09	SW	0	60	2 J	3 J	2 J	3 J	3 J	2 J	1 U	70 U
Surface	Sentinel	STR 04	26-Mar-10	SW	0	35	0.8 U	1 U	0.8 U	1 J	1 U	0.8 U	1 U	70 U
Surface	Sentinel	STR 04	11-Nov-10	SW	0	13	0.8 U	1 U	0.8 U	6	1 U	4 J	1 U	70 U
Surface	Sentinel	STR 04	01-Sep-11	SW	0	34	0.8 U	1 U	0.8 U	1 J	1 U	0.8 U	1 U	1.1 J
Surface	Sentinel	STR 04	01-Sep-11	SW	1	31	0.8 U	1 U	0.8 U	2 J	1 U	0.8 U	1 U	1.2 J
Surface	Sentinel	STR 04	17-May-12	SW	0	9.5	0.8 U	1 U	0.8 U	2 J	1 U	2 J	1 U	
Surface	Sentinel	STR 04	29-May-13	SW	0	14	0.8 U	1 U	0.8 U	1 J	1 U	0.8 U	1 U	0.55
Surface	Sentinel	STR 04	19-Nov-13	SW	0	21	0.8 U	1 U	0.8 U	3 J	1 U	0.9 J	1 U	70 U
Surface	Sentinel	STR 04	17-May-14	SW	0	7.6	0.5 U	0.5 U	0.5 U	1	0.5 U	0.7 J	0.5 U	
Surface	Sentinel	STR 04	12-May-15	SW	0	16	0.5 U	0.5 U	0.5 U	2	0.5 U	0.9 J	0.5 U	

Table 1
Data Summary
Atlantic Research Corporation, Gainesville, Virginia

Aquifer	Function	Location	Date Sampled	Matrix	Dup	Perchlorate µg/L	111TCA µg/L	11DCA µg/L	11DCE µg/L	PCE µg/L	TCE µg/L	cis-12DCE µg/L	VC µg/L	14-Dioxane µg/L
Surface	Sentinel	STR 04	05-Nov-15	SW	0	9.8	0.5 U	0.5 U	0.5 U	3	0.5 U	2	0.5 U	
Surface	Sentinel	STR 04	29-Mar-16	SW	0	20	0.5 U	0.5 U	0.5 U	1	0.5 U	0.8 J	0.5 U	
Surface	Sentinel	STR 04	26-Oct-16	SW	0	9.1	0.5 U	0.5 U	0.5 U	2	0.5 U	0.8 J	0.5 U	
Surface	Sentinel	STR 04	18-Apr-17	SW	0	12	0.5 U	0.5 U	0.5 U	2	0.5 U	1	0.5 U	
Surface	Sentinel	STR 04	03-Oct-17	GW	0	2.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.9 J	0.5 U	
Surface	Sentinel	STR 04	03-Apr-18	WS	0	23	0.50 U	0.50 U	0.50 U	2	0.50 U	1	0.50 U	
Surface	Sentinel	STR 04	09-Oct-18	WS	0	8.3	0.20 U	0.20 U	0.20 U	1	0.20 U	0.5 J	0.40 U	
Surface	Performance	STR 40-15	19-May-05	SW	0	67.9	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Performance	STR 40-15	18-May-06	SW	0	23	0.8 U	1 U	0.8 U	4 J	2 J	8	1 U	
Surface	Performance	STR 40-15	17-Nov-06	SW	0	24								
Surface	Performance	STR 40-15	19-Aug-09	SW	0	7.3	0.8 U	1 U	0.8 J	140	34	230	8	70 U
Surface	Performance	STR 40-15	26-Mar-10	SW	0	5.6	0.8 U	1 U	0.8 U	3 J	1 U	7	1 U	70 U
Surface	Performance	STR 40-15	01-Sep-11	GW	0	0.27 J	0.8 U	1 U	0.8 U	0.8 U	1 U	2 J	1 U	
Surface	Performance	STR 40-15	17-May-12	SW	0		0.8 U	1 U	0.8 U	0.8 U	1 U	1 J	1 U	
Surface	Performance	STR 40-15	29-May-13	SW	0	15	0.8 U	1 U	0.8 U	34	8	65	2 J	
Surface	Performance	STR 40-15	17-May-14	SW	0		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	3	0.5 U	
Surface	Performance	STR 40-15	12-May-15	SW	0	4.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	
Surface	Performance	STR 40-15	29-Mar-16	SW	0	6.6	0.5 U	0.5 U	0.5 U	6	1	10	0.5 U	
Surface	Performance	STR 40-15	18-Apr-17	SW	0	3.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1	0.5 U	
Surface	Performance	STR 40-15	05-Apr-18	WS	0	6.8	0.50 U	0.50 U	0.50 U	41	4	28	0.7 J	
Surface	Source / TTF Area	West 01	04-Feb-09	SW	0	1400	0.8 U	9	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Surface	Source / TTF Area	West 01	26-Mar-10	SW	0	230	0.8 U	1 J	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Surface	Source / TTF Area	West 01	26-Mar-10	SW	1	240	0.8 U	1 J	0.8 U	0.8 U	1 U	0.8 U	1 U	70 U
Surface	Source / TTF Area	West 01	08-Sep-11	GW	0	88	0.8 U	1 U	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Source / TTF Area	West 01	30-May-13	SW	0	1800	0.8 U	3 J	0.8 U	0.8 U	1 U	0.8 U	1 U	
Surface	Source / TTF Area	West 01	18-May-14	SW	0	1200	0.5 U	2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
Surface	Source / TTF Area	West 01	12-May-15	SW	0	1100	0.5 U	0.5 U	0.5 U	1	0.5 U	0.5 U	0.5 U	
Surface	Source / TTF Area	West 01	29-Mar-16	SW	0	500	0.5 U	0.5 U	0.5 U	2	0.5 U	1 J	0.5 U	
Surface	Source / TTF Area	WEST 01	18-Apr-17	SW	0	210	0.5 U	0.5 U	0.5 U	2	0.5 U	0.5 U	0.5 U	
Surface	Source / TTF Area	WEST 01	04-Apr-18	WS	0	310	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	

Notes:
Monitoring locations on current sampling are included.
Laboratory data since January 2005 is shown. 2018 data shown in blue.
Duplicate Codes: 0 = not a duplicate; 1= field duplicate
Matrix Codes: GW = groundwater; SW = surface water
Data Qualifiers: U or u = non-detect; J = estimated

APPENDIX B

ANALYTICAL LABORATORY REPORTS (ON CD)

eurofins
Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Sequa Corporation
300 Blaisdell Road
Orangeburg NY 10962

Report Date: April 20, 2018 11:07

Project: ARC - Gainesville, VA

Account #: 12502
Group Number: 1928174
SDG: ARA34
PO Number: 192457.0002.06
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	TRC Solutions	Attn: Geoff King
Electronic Copy To	TRC Solutions	Attn: John Lair

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
DW-30S/040318 Grab Groundwater	04/03/2018 14:20	9543516
SW42-02/040318 Grab Groundwater	04/03/2018 09:50	9543517
DW-15/040318 Grab Groundwater	04/03/2018 09:30	9543518
DW-72B/040318 Grab Groundwater	04/03/2018 12:50	9543519
DW-32I/040318 Grab Groundwater	04/03/2018 15:30	9543520
DW-28I/040318 Grab Groundwater	04/03/2018 16:55	9543521
SW40-57/040318 Grab Groundwater	04/03/2018 17:42	9543522
STR-04/040318 Grab Groundwater	04/03/2018 12:38	9543523
DW-12/040318 Grab Groundwater	04/03/2018 11:41	9543524
SW200-02/040318 Grab Groundwater	04/03/2018 10:48	9543525
DW200-01/040318 Grab Groundwater	04/03/2018 10:08	9543526
DWSB-02/040318 Grab Groundwater	04/03/2018 09:27	9543527
SW40-07A/040318 Grab Groundwater	04/03/2018 16:50	9543528
BW28-04D/040318 Grab Groundwater	04/03/2018 15:57	9543529
SW47-02/040318 Grab Groundwater	04/03/2018 15:26	9543530
SW28-41/040318 Grab Groundwater	04/03/2018 14:55	9543531
SWSB-03/040318 Grab Groundwater	04/03/2018 13:43	9543532
SW222-02/040318 Grab Groundwater	04/03/2018 11:56	9543533
SW212-01/040318 Grab Groundwater	04/03/2018 09:30	9543534
TB-01/040318 Water	04/03/2018	9543535
FB-01/040318 Grab Groundwater	04/03/2018 16:10	9543536
DW-16/040418 Grab Groundwater	04/04/2018 08:20	9543537
DW213-01/040418 Grab Groundwater	04/04/2018 13:40	9543538
DW-18/040418 Grab Groundwater	04/04/2018 09:55	9543539
DWSB-01/040418 Grab Groundwater	04/04/2018 11:45	9543540
SW5-04/040418 Grab Groundwater	04/04/2018 15:35	9543541
SW74-07/040418 Grab Groundwater	04/04/2018 13:05	9543542
BW79-02S/040418 Grab Groundwater	04/04/2018 11:51	9543543
SWTTU-03/040418 Grab Groundwater	04/04/2018 10:45	9543544
BWCM-01S/040418 Grab Groundwater	04/04/2018 08:45	9543545
BW21-04D/040418 Grab Groundwater	04/04/2018 15:14	9543546
DW-13MID/040418 Grab Groundwater	04/04/2018 12:31	9543547
DW-13INF/040418 Grab Groundwater	04/04/2018 12:37	9543548
FB-02/040418 Grab Groundwater	04/04/2018 16:40	9543549
BWTTU-03D/040418 Grab Groundwater	04/04/2018 10:09	9543550
West-01/040418 Grab Groundwater	04/04/2018 09:00	9543551
BWCG-01D/040418-BKG Grab Groundwater	04/04/2018 08:40	9543552
BWCG-01D/040418-MS Grab Groundwater	04/04/2018 08:40	9543553
BWCG-01D/040418-MSD Grab Groundwater	04/04/2018 08:40	9543554
DUP-01/040418 Grab Groundwater	04/04/2018	9543555
DW-26I/040418 Grab Groundwater	04/04/2018 16:20	9543556
EB-01/040418 Grab Groundwater	04/04/2018 17:40	9543557
BW28-02S/040418-BKG Grab Groundwater	04/04/2018 17:00	9543558
BW28-02S/040418-MS Grab Groundwater	04/04/2018 17:00	9543559
BW28-02S/040418-MSD Grab Groundwater	04/04/2018 17:00	9543560

eurofins
Lancaster Laboratories
Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Client Sample Description	Sample Collection Date/Time	ELLE#
TB-02/040418 Water	04/04/2018	9543561
DUP-02/040418 Grab Groundwater	04/04/2018	9543562

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-30S/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 14:20
SDG#: ARA34-01

Sequa Corporation
ELLE Sample #: WW 9543516
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	0.7 J	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	2	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	210	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181022AA	04/12/2018 22:50	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181022AA	04/12/2018 22:50	Don V Viray	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 16:31	Richard A Shober	100

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW42-02/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543517
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 09:50
SDG#: ARA34-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	0.7 J	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	1	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	150	0.62	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181022AA	04/12/2018 23:14	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181022AA	04/12/2018 23:14	Don V Viray	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 16:44	Richard A Shober	10

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-15/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543518
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 09:30
SDG#: ARA34-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	1	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181022AA	04/12/2018 23:37	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181022AA	04/12/2018 23:37	Don V Viray	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-72B/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 12:50
SDG#: ARA34-04

Sequa Corporation
ELLE Sample #: WW 9543519
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	7	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	7	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	4	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	7	0.05	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181022AA	04/13/2018 00:01	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181022AA	04/13/2018 00:01	Don V Viray	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 10:37	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-32I/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 15:30
SDG#: ARA34-05

Sequa Corporation
ELLE Sample #: WW 9543520
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	0.7 J	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	36	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	520	5	10
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	0.5 J	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	2	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	0.6 J	0.5	1
10335	Trichloroethene	79-01-6	0.9 J	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	8	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	25	0.5	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181031AA	04/13/2018 12:19	Nicole S Lamoreaux	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 23:29	Matthew S Krause	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181031AA	04/13/2018 12:19	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181032AA	04/13/2018 23:29	Matthew S Krause	10
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 17:59	Catherine E Bachman	10
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-28I/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 16:55
SDG#: ARA34-06

Sequa Corporation
ELLE Sample #: WW 9543521
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	50	0.5	1
10335	1,2-Dichloroethane	107-06-2	1	0.5	1
10335	1,1-Dichloroethene	75-35-4	1,000	5	10
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	160	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	540	5	10
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	1 J	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	6	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,400	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181031AA	04/13/2018 12:43	Nicole S Lamoreaux	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181031AA	04/13/2018 13:06	Nicole S Lamoreaux	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181031AA	04/13/2018 12:43	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	N181031AA	04/13/2018 13:06	Nicole S Lamoreaux	10
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 11:38	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/19/2018 21:02	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW40-57/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543522
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 17:42
SDG#: ARA34-07

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	0.8 J	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	2	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	210	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	500	5	10
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	47	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	7	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2.8	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181031AA	04/13/2018 13:30	Nicole S Lamoreaux	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 23:53	Matthew S Krause	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181031AA	04/13/2018 13:30	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181032AA	04/13/2018 23:53	Matthew S Krause	10
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/15/2018 01:25	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **STR-04/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 12:38
SDG#: ARA34-08

Sequa Corporation
ELLE Sample #: WW 9543523
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	2	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	23	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 20:06	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 20:06	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/15/2018 01:38	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-12/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543524
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 11:41
SDG#: ARA34-09

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	2	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	5	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	0.5 J	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	0.1 J	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.16 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 20:29	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 20:29	Matthew S Krause	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 12:09	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/15/2018 02:03	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW200-02/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 10:48
SDG#: ARA34-10

Sequa Corporation
ELLE Sample #: WW 9543525
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	2	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	2	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	1	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	0.7 J	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.095 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 20:52	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 20:52	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 17:22	Richard A Shober	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW200-01/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 10:08
SDG#: ARA34-11

Sequa Corporation
ELLE Sample #: WW 9543526
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	3	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	5	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.16 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 21:14	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 21:14	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/15/2018 02:28	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DWSB-02/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 09:27
SDG#: ARA34-12

Sequa Corporation
ELLE Sample #: WW 9543527
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	9	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	11	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	0.7 J	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	0.6 J	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	0.5	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 21:37	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 21:37	Matthew S Krause	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 12:40	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 17:35	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW40-07A/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 16:50
SDG#: ARA34-13

Sequa Corporation
ELLE Sample #: WW 9543528
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	2	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	1	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	270	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	790	5	10
10335	1,1,1-Trichloroethane	71-55-6	0.7 J	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	34	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	25	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	690	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 00:17	Matthew S Krause	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 00:40	Matthew S Krause	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/14/2018 00:17	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181032AA	04/14/2018 00:40	Matthew S Krause	10
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 17:48	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW28-04D/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 15:57
SDG#: ARA34-14

Sequa Corporation
ELLE Sample #: WW 9543529
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	2	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	12	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	2	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	55	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	11	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	3	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	410	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 18:45	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 18:45	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 18:00	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW47-02/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 15:26
SDG#: ARA34-15

Sequa Corporation
ELLE Sample #: WW 9543530
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	0.9 J	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	2	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	3	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	22	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	2	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	4	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	870	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 19:09	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 19:09	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 18:13	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW28-41/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543531
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 14:55
SDG#: ARA34-16

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	1 J	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	2	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	2	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	22	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	5	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	2	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	380	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 19:32	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 19:32	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 18:26	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SWSB-03/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543532
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 13:43
SDG#: ARA34-17

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	0.7 J	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	4	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	0.7 J	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	1	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	3	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	13	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 19:56	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 19:56	Matthew S Krause	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 13:11	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/15/2018 03:45	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW222-02/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 11:56
SDG#: ARA34-18

Sequa Corporation
ELLE Sample #: WW 9543533
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	0.7 J	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2.7	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 22:00	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 22:00	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/15/2018 03:57	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW212-01/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543534
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 09:30
SDG#: ARA34-19

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.80 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 22:23	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 22:23	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 18:39	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **TB-01/040318 Water**
ARC-Gainesville, VA

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018
SDG#: ARA34-20TB

Sequa Corporation
ELLE Sample #: WW 9543535
ELLE Group #: 1928174
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 18:34	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 18:34	Matthew S Krause	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **FB-01/040318 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543536
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/03/2018 16:10
SDG#: ARA34-21FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4181031AA	04/13/2018 18:57	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181031AA	04/13/2018 18:57	Matthew S Krause	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-16/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 08:20
SDG#: ARA34-22

Sequa Corporation
ELLE Sample #: WW 9543537
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	10	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	5	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 20:20	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 20:20	Matthew S Krause	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW213-01/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 13:40
SDG#: ARA34-23

Sequa Corporation
ELLE Sample #: WW 9543538
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	54	0.62	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 20:20	Richard A Shober	10

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-18/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 09:55
SDG#: ARA34-24

Sequa Corporation
ELLE Sample #: WW 9543539
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	14	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	27	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	17	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	21	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	23	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 20:43	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 20:43	Matthew S Krause	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DWSB-01/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 11:45
SDG#: ARA34-25

Sequa Corporation
ELLE Sample #: WW 9543540
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.080 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 21:07	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 21:07	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 20:33	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW5-04/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 15:35
SDG#: ARA34-26

Sequa Corporation
ELLE Sample #: WW 9543541
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	10	20
10335	Carbon Tetrachloride	56-23-5	N.D.	10	20
10335	Chloroethane	75-00-3	N.D.	10	20
10335	1,1-Dichloroethane	75-34-3	69	10	20
10335	1,2-Dichloroethane	107-06-2	N.D.	10	20
10335	1,1-Dichloroethene	75-35-4	280	10	20
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	10	20
10335	Methylene Chloride	75-09-2	N.D.	10	20
10335	Tetrachloroethene	127-18-4	79	10	20
10335	1,1,1-Trichloroethane	71-55-6	13,000	100	200
10335	1,1,2-Trichloroethane	79-00-5	N.D.	10	20
10335	Trichloroethene	79-01-6	44	10	20
10335	1,2,3-Trichloropropane	96-18-4	N.D.	20	20
10335	Vinyl Chloride	75-01-4	N.D.	10	20
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	2	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	340	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 17:11	Nicole S Lamoreaux	20
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 17:35	Nicole S Lamoreaux	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181041AA	04/14/2018 17:11	Nicole S Lamoreaux	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181041AA	04/14/2018 17:35	Nicole S Lamoreaux	200
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 13:41	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 20:46	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW74-07/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543542
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 13:05
SDG#: ARA34-27

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	63	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	730	5	10
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	46	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	54	0.62	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 01:04	Matthew S Krause	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 01:28	Matthew S Krause	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/14/2018 01:04	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181032AA	04/14/2018 01:28	Matthew S Krause	10
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 20:58	Richard A Shober	10

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW79-02S/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 11:51
SDG#: ARA34-28

Sequa Corporation
ELLE Sample #: WW 9543543
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	15	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	63	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	0.5 J	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	240	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	2	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	4.4	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 01:51	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/14/2018 01:51	Matthew S Krause	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 14:12	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 21:11	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SWTTU-03/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 10:45
SDG#: ARA34-29

Sequa Corporation
ELLE Sample #: WW 9543544
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	300	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 21:31	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 21:31	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 21:24	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BWCM-01S/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 08:45
SDG#: ARA34-30

Sequa Corporation
ELLE Sample #: WW 9543545
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	0.8 J	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	0.6 J	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	0.8 J	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	9	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2,000	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 21:54	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 21:54	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/19/2018 21:53	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW21-04D/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 15:14
SDG#: ARA34-31

Sequa Corporation
ELLE Sample #: WW 9543546
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	0.7 J	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	2	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	84	0.62	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 22:18	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 22:18	Matthew S Krause	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 22:02	Richard A Shober	10

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-13MID/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 12:31
SDG#: ARA34-32

Sequa Corporation
ELLE Sample #: WW 9543547
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	22	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	65	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	1 J	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	16	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	21	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	0.9 J	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	2	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 22:42	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 22:42	Matthew S Krause	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-13INF/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 12:37
SDG#: ARA34-33

Sequa Corporation
ELLE Sample #: WW 9543548
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	22	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	69	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	1 J	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	8	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	23	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	2	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	2	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	4	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	900	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 23:06	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 23:06	Matthew S Krause	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 14:43	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 22:15	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **FB-02/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543549
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 16:40
SDG#: ARA34-34FB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/13/2018 18:21	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/13/2018 18:21	Matthew S Krause	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BWTTU-03D/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543550
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 10:09
SDG#: ARA34-35

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	0.9 J	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	190	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	820	5	10
10335	1,1,1-Trichloroethane	71-55-6	0.7 J	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	130	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	3	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	59	0.62	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 02:39	Matthew S Krause	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181032AA	04/14/2018 03:02	Matthew S Krause	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181032AA	04/14/2018 02:39	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181032AA	04/14/2018 03:02	Matthew S Krause	10
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 22:27	Richard A Shober	10

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **West-01/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 09:00
SDG#: ARA34-36

Sequa Corporation
ELLE Sample #: WW 9543551
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	310	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 02:12	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 02:12	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 22:40	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BWCG-01D/040418-BKG Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543552
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 08:40
SDG#: ARA34-37BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	4	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	3	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,600	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 01:01	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 01:01	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/19/2018 22:19	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BWCG-01D/040418-MS Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 08:40
SDG#: ARA34-37MS

Sequa Corporation
ELLE Sample #: WW 9543553
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	22	0.5	1
10335	Carbon Tetrachloride	56-23-5	19	0.5	1
10335	Chloroethane	75-00-3	18	0.5	1
10335	1,1-Dichloroethane	75-34-3	25	0.5	1
10335	1,2-Dichloroethane	107-06-2	19	0.5	1
10335	1,1-Dichloroethene	75-35-4	27	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	23	0.5	1
10335	Methylene Chloride	75-09-2	22	0.5	1
10335	Tetrachloroethene	127-18-4	24	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	19	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	20	0.5	1
10335	Trichloroethene	79-01-6	21	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	19	1	1
10335	Vinyl Chloride	75-01-4	20	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2,200	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 01:25	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 01:25	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/19/2018 22:31	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BWCG-01D/040418-MSD Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543554
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 08:40
SDG#: ARA34-37MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	22	0.5	1
10335	Carbon Tetrachloride	56-23-5	19	0.5	1
10335	Chloroethane	75-00-3	20	0.5	1
10335	1,1-Dichloroethane	75-34-3	25	0.5	1
10335	1,2-Dichloroethane	107-06-2	19	0.5	1
10335	1,1-Dichloroethene	75-35-4	27	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	23	0.5	1
10335	Methylene Chloride	75-09-2	22	0.5	1
10335	Tetrachloroethene	127-18-4	25	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	19	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	21	0.5	1
10335	Trichloroethene	79-01-6	21	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	19	1	1
10335	Vinyl Chloride	75-01-4	20	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2,100	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 01:48	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 01:48	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/19/2018 22:44	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DUP-01/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018
SDG#: ARA34-38FD

Sequa Corporation
ELLE Sample #: WW 9543555
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	5	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	1	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	3	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,700	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 02:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 02:35	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/19/2018 22:57	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-26I/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 16:20
SDG#: ARA34-39

Sequa Corporation
ELLE Sample #: WW 9543556
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	17	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	8	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	65	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	1	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	20	0.62	10

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 02:59	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 02:59	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/19/2018 23:09	Richard A Shober	10

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **EB-01/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 17:40
SDG#: ARA34-40EB

Sequa Corporation
ELLE Sample #: WW 9543557
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	N.D.	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N181034AA	04/14/2018 00:38	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N181034AA	04/14/2018 00:38	Kevin D Kelly	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 15:14	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040003A	04/18/2018 23:56	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW28-02S/040418-BKG Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543558
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 17:00
SDG#: ARA34-41BKG

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	2	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	9	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	12	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	150	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	10	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	12	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	9	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	4,700	62	1000

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 11:39	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181041AA	04/14/2018 11:39	Nicole S Lamoreaux	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 09:06	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/19/2018 21:15	Richard A Shober	1000

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW28-02S/040418-MS Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543559
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 17:00
SDG#: ARA34-42MS

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Benzene	71-43-2	21		0.5	1
10335	Carbon Tetrachloride	56-23-5	19		0.5	1
10335	Chloroethane	75-00-3	18		0.5	1
10335	1,1-Dichloroethane	75-34-3	22		0.5	1
10335	1,2-Dichloroethane	107-06-2	18		0.5	1
10335	1,1-Dichloroethene	75-35-4	33		0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	33		0.5	1
10335	Methylene Chloride	75-09-2	16		0.5	1
10335	Tetrachloroethene	127-18-4	170		0.5	1
10335	1,1,1-Trichloroethane	71-55-6	31		0.5	1
10335	1,1,2-Trichloroethane	79-00-5	20		0.5	1
10335	Trichloroethene	79-01-6	33		0.5	1
10335	1,2,3-Trichloropropane	96-18-4	20		1	1
10335	Vinyl Chloride	75-01-4	18		0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	
10137	1,4-dioxane	123-91-1	12	E	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**		**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	17,000		62	1000

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 12:03	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181041AA	04/14/2018 12:03	Nicole S Lamoreaux	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 09:36	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/19/2018 21:28	Richard A Shober	1000

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW28-02S/040418-MSD Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9543560
ELLE Group #: 1928174
Matrix: Groundwater

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018 17:00
SDG#: ARA34-43MSD

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Benzene	71-43-2	21		0.5	1
10335	Carbon Tetrachloride	56-23-5	19		0.5	1
10335	Chloroethane	75-00-3	19		0.5	1
10335	1,1-Dichloroethane	75-34-3	22		0.5	1
10335	1,2-Dichloroethane	107-06-2	18		0.5	1
10335	1,1-Dichloroethene	75-35-4	33		0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	33		0.5	1
10335	Methylene Chloride	75-09-2	22		0.5	1
10335	Tetrachloroethene	127-18-4	170		0.5	1
10335	1,1,1-Trichloroethane	71-55-6	32		0.5	1
10335	1,1,2-Trichloroethane	79-00-5	20		0.5	1
10335	Trichloroethene	79-01-6	33		0.5	1
10335	1,2,3-Trichloropropane	96-18-4	20		1	1
10335	Vinyl Chloride	75-01-4	18		0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**		**ug/l**	
10137	1,4-dioxane	123-91-1	13	E	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**		**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	8,900		62	1000

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 12:27	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181041AA	04/14/2018 12:27	Nicole S Lamoreaux	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 10:06	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/19/2018 21:40	Richard A Shober	1000

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **TB-02/040418 Water**
ARC-Gainesville, VA

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018
SDG#: ARA34-44TB

Sequa Corporation
ELLE Sample #: WW 9543561
ELLE Group #: 1928174
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 09:40	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181041AA	04/14/2018 09:40	Nicole S Lamoreaux	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DUP-02/040418 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/05/2018 10:10
Collection Date/Time: 04/04/2018
SDG#: ARA34-45FD

Sequa Corporation
ELLE Sample #: WW 9543562
ELLE Group #: 1928174
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	2	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	9	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	12	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	150	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	10	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	12	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	11	0.2	5
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2,900	62	1000

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181041AA	04/14/2018 12:50	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181041AA	04/14/2018 12:50	Nicole S Lamoreaux	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 18:29	Catherine E Bachman	5
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181040002A	04/18/2018 19:42	Richard A Shober	1000

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 4181031AA	Sample number(s): 9543523-9543527,9543533-9543536	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: N181022AA	Sample number(s): 9543516-9543519	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: N181031AA	Sample number(s): 9543520-9543522	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

Method Blank (continued)

Analysis Name	Result	MDL
	ug/l	ug/l
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: N181034AA	Sample number(s): 9543551-9543557	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: W181032AA	Sample number(s): 9543520,9543522,9543528-9543532,9543537,9543539-9543540,9543542-9543550	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: W181041AA	Sample number(s): 9543541,9543558-9543562	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

Method Blank (continued)

Analysis Name	Result ug/l	MDL ug/l
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: 18100WAL026	Sample number(s): 9543519-9543521,9543524,9543527,9543532,9543541,9543543,9543548,9543557-9543560,9543562	
1,4-dioxane	N.D.	0.05
Batch number: 181040002A	Sample number(s): 9543516-9543517,9543521-9543534,9543558-9543560,9543562	
Perchlorate in Water LC/MS/MS	N.D.	0.062
Batch number: 181040003A	Sample number(s): 9543538,9543540-9543546,9543548,9543550-9543557	
Perchlorate in Water LC/MS/MS	N.D.	0.062

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4181031AA	Sample number(s): 9543523-9543527,9543533-9543536								
Benzene	20	17.84	20	17.88	89	89	80-120	0	30
Carbon Tetrachloride	20	17.58	20	17.5	88	88	64-134	0	30
Chloroethane	20	15.5	20	14.48	77	72	61-123	7	30
1,1-Dichloroethane	20	18.23	20	18.42	91	92	80-120	1	30
1,2-Dichloroethane	20	18.58	20	18.81	93	94	73-124	1	30
1,1-Dichloroethene	20	18.37	20	18.42	92	92	80-131	0	30
cis-1,2-Dichloroethene	20	18.39	20	18.38	92	92	80-120	0	30
Methylene Chloride	20	18.55	20	18.39	93	92	80-120	1	30
Tetrachloroethene	20	17.01	20	17.15	85	86	80-120	1	30
1,1,1-Trichloroethane	20	17.54	20	17.38	88	87	67-126	1	30
1,1,2-Trichloroethane	20	18.89	20	19.07	94	95	80-120	1	30
Trichloroethene	20	17.31	20	17.28	87	86	80-120	0	30
1,2,3-Trichloropropane	20	19.27	20	20.03	96	100	80-120	4	30
Vinyl Chloride	20	15.17	20	14.56	76	73	68-120	4	30
Batch number: N181022AA	Sample number(s): 9543516-9543519								
Benzene	20	20.58	20	20.48	103	102	80-120	1	30
Carbon Tetrachloride	20	17.11	20	16.85	86	84	64-134	2	30
Chloroethane	20	15.57	20	15.19	78	76	61-123	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethane	20	19.66	20	19.53	98	98	80-120	1	30
1,2-Dichloroethane	20	17.68	20	17.7	88	89	73-124	0	30
1,1-Dichloroethene	20	22.34	20	22.12	112	111	80-131	1	30
cis-1,2-Dichloroethene	20	20.62	20	20.65	103	103	80-120	0	30
Methylene Chloride	20	20.71	20	21.18	104	106	80-120	2	30
Tetrachloroethene	20	19.99	20	19.84	100	99	80-120	1	30
1,1,1-Trichloroethane	20	16.85	20	16.82	84	84	67-126	0	30
1,1,2-Trichloroethane	20	20.16	20	19.74	101	99	80-120	2	30
Trichloroethene	20	19.02	20	19.14	95	96	80-120	1	30
1,2,3-Trichloropropane	20	19.63	20	18.8	98	94	80-120	4	30
Vinyl Chloride	20	18.22	20	18.01	91	90	68-120	1	30
Batch number: N181031AA	Sample number(s): 9543520-9543522								
Benzene	20	20.93	20	20.31	105	102	80-120	3	30
Carbon Tetrachloride	20	17.64	20	17.19	88	86	64-134	3	30
Chloroethane	20	15.96	20	15.1	80	75	61-123	6	30
1,1-Dichloroethane	20	19.8	20	19.2	99	96	80-120	3	30
1,2-Dichloroethane	20	17.85	20	17.38	89	87	73-124	3	30
1,1-Dichloroethene	20	22.11	20	22	111	110	80-131	1	30
cis-1,2-Dichloroethene	20	20.63	20	20.08	103	100	80-120	3	30
Methylene Chloride	20	20.92	20	20.72	105	104	80-120	1	30
Tetrachloroethene	20	20.96	20	20.76	105	104	80-120	1	30
1,1,1-Trichloroethane	20	17.07	20	16.96	85	85	67-126	1	30
1,1,2-Trichloroethane	20	20.63	20	20.59	103	103	80-120	0	30
Trichloroethene	20	19.53	20	18.74	98	94	80-120	4	30
1,2,3-Trichloropropane	20	19.77	20	19.65	99	98	80-120	1	30
Vinyl Chloride	20	19.15	20	18.46	96	92	68-120	4	30
Batch number: N181034AA	Sample number(s): 9543551-9543557								
Benzene	20	20.39	20	19.99	102	100	80-120	2	30
Carbon Tetrachloride	20	16.29	20	16.01	81	80	64-134	2	30
Chloroethane	20	18.04	20	14.43	90	72	61-123	22	30
1,1-Dichloroethane	20	19.21	20	18.68	96	93	80-120	3	30
1,2-Dichloroethane	20	17.65	20	17.22	88	86	73-124	2	30
1,1-Dichloroethene	20	21.12	20	20.35	106	102	80-131	4	30
cis-1,2-Dichloroethene	20	20.6	20	20.09	103	100	80-120	2	30
Methylene Chloride	20	20.86	20	20.38	104	102	80-120	2	30
Tetrachloroethene	20	19.42	20	19.19	97	96	80-120	1	30
1,1,1-Trichloroethane	20	16.19	20	15.91	81	80	67-126	2	30
1,1,2-Trichloroethane	20	20.35	20	19.75	102	99	80-120	3	30
Trichloroethene	20	18.98	20	18.33	95	92	80-120	3	30
1,2,3-Trichloropropane	20	19.72	20	19.44	99	97	80-120	1	30
Vinyl Chloride	20	17.49	20	16.68	87	83	68-120	5	30
Batch number: W181032AA	Sample number(s): 9543520,9543522,9543528-9543532,9543537,9543539-9543540,9543542-9543550								

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzene	20	18	20	18.28	90	91	80-120	2	30
Carbon Tetrachloride	20	15.35	20	15.75	77	79	64-134	3	30
Chloroethane	20	15.71	20	15.81	79	79	61-123	1	30
1,1-Dichloroethane	20	17.92	20	17.6	90	88	80-120	2	30
1,2-Dichloroethane	20	17.39	20	17.57	87	88	73-124	1	30
1,1-Dichloroethene	20	18.07	20	18.03	90	90	80-131	0	30
cis-1,2-Dichloroethene	20	18.72	20	18.63	94	93	80-120	0	30
Methylene Chloride	20	19.24	20	19.08	96	95	80-120	1	30
Tetrachloroethene	20	16.85	20	17.11	84	86	80-120	2	30
1,1,1-Trichloroethane	20	16.99	20	17.59	85	88	67-126	3	30
1,1,2-Trichloroethane	20	20.13	20	19.74	101	99	80-120	2	30
Trichloroethene	20	17.16	20	17.42	86	87	80-120	1	30
1,2,3-Trichloropropane	20	20.89	20	20.8	104	104	80-120	0	30
Vinyl Chloride	20	14.04	20	14.25	70	71	68-120	1	30
Batch number: W181041AA	Sample number(s): 9543541,9543558-9543562								
Benzene	20	19.74			99		80-120		
Carbon Tetrachloride	20	17.82			89		64-134		
Chloroethane	20	17.01			85		61-123		
1,1-Dichloroethane	20	18.52			93		80-120		
1,2-Dichloroethane	20	18.72			94		73-124		
1,1-Dichloroethene	20	21.43			107		80-131		
cis-1,2-Dichloroethene	20	19.97			100		80-120		
Methylene Chloride	20	20.64			103		80-120		
Tetrachloroethene	20	19.05			95		80-120		
1,1,1-Trichloroethane	20	18.42			92		67-126		
1,1,2-Trichloroethane	20	19.69			98		80-120		
Trichloroethene	20	18.84			94		80-120		
1,2,3-Trichloropropane	20	20.61			103		80-120		
Vinyl Chloride	20	16.48			82		68-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18100WAL026	Sample number(s): 9543519-9543521,9543524,9543527,9543532,9543541,9543543,9543548,9543557-9543560,9543562								
1,4-dioxane	1.00	0.540			54		33-74		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 181040002A	Sample number(s): 9543516-9543517,9543521-9543534,9543558-9543560,9543562								
Perchlorate in Water LC/MS/MS	5.00	4.45			89		80-120		
Batch number: 181040003A	Sample number(s): 9543538,9543540-9543546,9543548,9543550-9543557								
Perchlorate in Water LC/MS/MS	5.00	5.02			100		80-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: N181022AA	Sample number(s): 9543516-9543519 UNSPK: P538810									
Benzene	N.D.	400	455.58	400	452.03	114	113	80-120	1	30
Carbon Tetrachloride	N.D.	400	400.33	400	393.9	100	98	64-134	2	30
Chloroethane	N.D.	400	325.82	400	357.33	81	89	61-123	9	30
1,1-Dichloroethane	N.D.	400	427.58	400	427.91	107	107	80-120	0	30
1,2-Dichloroethane	N.D.	400	389.05	400	386	97	96	73-124	1	30
1,1-Dichloroethene	N.D.	400	508.08	400	508.84	127	127	80-131	0	30
cis-1,2-Dichloroethene	N.D.	400	440.01	400	443.16	110	111	80-120	1	30
Methylene Chloride	N.D.	400	457.44	400	456.26	114	114	80-120	0	30
Tetrachloroethene	N.D.	400	442.04	400	448.38	111	112	80-120	1	30
1,1,1-Trichloroethane	N.D.	400	392.74	400	389.91	98	97	67-126	1	30
1,1,2-Trichloroethane	N.D.	400	409.76	400	415.07	102	104	80-120	1	30
Trichloroethene	N.D.	400	429.09	400	426.33	107	107	80-120	1	30
1,2,3-Trichloropropane	N.D.	400	379.5	400	386.14	95	97	80-120	2	30
Vinyl Chloride	N.D.	400	381.99	400	426.84	95	107	68-120	11	30
Batch number: N181031AA	Sample number(s): 9543520-9543522 UNSPK: P541319									
Benzene	N.D.	400	409.51	400	409.67	102	102	80-120	0	30
Carbon Tetrachloride	N.D.	400	345.06	400	346.57	86	87	64-134	0	30
Chloroethane	N.D.	400	383.28	400	393.95	96	98	61-123	3	30
1,1-Dichloroethane	N.D.	400	382.9	400	384.35	96	96	80-120	0	30
1,2-Dichloroethane	N.D.	400	360.57	400	358.78	90	90	73-124	0	30
1,1-Dichloroethene	N.D.	400	442.5	400	433.7	111	108	80-131	2	30
cis-1,2-Dichloroethene	N.D.	400	396.69	400	395.74	99	99	80-120	0	30
Methylene Chloride	N.D.	400	414.97	400	419.38	104	105	80-120	1	30
Tetrachloroethene	N.D.	400	394.7	400	406.66	99	102	80-120	3	30
1,1,1-Trichloroethane	N.D.	400	342.59	400	338.96	86	85	67-126	1	30
1,1,2-Trichloroethane	N.D.	400	406.34	400	405.72	102	101	80-120	0	30
Trichloroethene	N.D.	400	378.01	400	377.91	95	94	80-120	0	30
1,2,3-Trichloropropane	N.D.	400	382.12	400	384.74	96	96	80-120	1	30
Vinyl Chloride	N.D.	400	380.89	400	396.79	95	99	68-120	4	30
Batch number: N181034AA	Sample number(s): 9543551-9543557 UNSPK: 9543552									
Benzene	N.D.	20	22.31	20	22.4	112	112	80-120	0	30
Carbon Tetrachloride	N.D.	20	19.21	20	19.35	96	97	64-134	1	30
Chloroethane	N.D.	20	17.73	20	19.67	89	98	61-123	10	30
1,1-Dichloroethane	4.39	20	24.95	20	25.3	103	105	80-120	1	30
1,2-Dichloroethane	N.D.	20	18.74	20	18.82	94	94	73-124	0	30
1,1-Dichloroethene	N.D.	20	27.02	20	26.6	135*	133*	80-131	2	30
cis-1,2-Dichloroethene	N.D.	20	22.81	20	23.39	114	117	80-120	3	30
Methylene Chloride	N.D.	20	22.48	20	22.28	112	111	80-120	1	30
Tetrachloroethene	2.78	20	24.35	20	24.89	108	111	80-120	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,1,1-Trichloroethane	N.D.	20	18.58	20	18.56	93	93	67-126	0	30
1,1,2-Trichloroethane	N.D.	20	20.39	20	20.97	102	105	80-120	3	30
Trichloroethene	N.D.	20	21.25	20	21.32	106	107	80-120	0	30
1,2,3-Trichloropropane	N.D.	20	19.09	20	19.18	95	96	80-120	0	30
Vinyl Chloride	N.D.	20	19.72	20	19.76	99	99	68-120	0	30
Batch number: W181041AA	Sample number(s): 9543541,9543558-9543562 UNSPK: 9543558									
Benzene	N.D.	20	20.9	20	21.04	104	105	80-120	1	30
Carbon Tetrachloride	N.D.	20	19.29	20	19.39	96	97	64-134	0	30
Chloroethane	N.D.	20	18.35	20	18.52	92	93	61-123	1	30
1,1-Dichloroethane	1.84	20	22.46	20	22.29	103	102	80-120	1	30
1,2-Dichloroethane	N.D.	20	18.27	20	18.14	91	91	73-124	1	30
1,1-Dichloroethene	9.00	20	33.37	20	33.1	122	120	80-131	1	30
cis-1,2-Dichloroethene	11.89	20	32.91	20	32.93	105	105	80-120	0	30
Methylene Chloride	N.D.	20	15.86	20	21.51	79*	108	80-120	30	30
Tetrachloroethene	147.83	20	173.74	20	174.04	130 (2)	131 (2)	80-120	0	30
1,1,1-Trichloroethane	9.63	20	31.41	20	31.83	109	111	67-126	1	30
1,1,2-Trichloroethane	N.D.	20	19.79	20	20.03	99	100	80-120	1	30
Trichloroethene	12.03	20	32.63	20	33.11	103	105	80-120	1	30
1,2,3-Trichloropropane	N.D.	20	19.82	20	19.6	99	98	80-120	1	30
Vinyl Chloride	N.D.	20	18.33	20	18.42	92	92	68-120	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18100WAL026	Sample number(s): 9543519-9543521,9543524,9543527,9543532,9543541,9543543,9543548,9543557-9543560,9543562 UNSPK: 9543558									
1,4-dioxane	9.46	0.992	12.28	0.942	13.15	285 (2)	392 (2)	33-74	7	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 181040002A	Sample number(s): 9543516-9543517,9543521-9543534,9543558-9543560,9543562 UNSPK: 9543558									
Perchlorate in Water LC/MS/MS	4694.12	5000	17110.16	5000	8923.6	248*	85	80-120	63*	15
Batch number: 181040003A	Sample number(s): 9543538,9543540-9543546,9543548,9543550-9543557 UNSPK: 9543552									
Perchlorate in Water LC/MS/MS	1622.1	500	2217.18	500	2139.05	119	103	80-120	4	15

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: 4181031AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9543523	104	102	106	98
9543524	104	103	105	96
9543525	104	102	106	97
9543526	104	102	104	97
9543527	105	103	106	98
9543533	105	103	105	97
9543534	104	102	105	96
9543535	103	103	106	98
9543536	103	103	105	98
Blank	102	101	106	99
LCS	102	99	105	103
LCSD	102	101	105	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: N181022AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9543516	97	95	91	90
9543517	98	96	91	89
9543518	98	93	91	89
9543519	99	96	93	90
Blank	96	94	92	91
LCS	94	96	100	97
LCSD	96	95	100	96
MS	98	102	99	98
MSD	96	104	99	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: N181031AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9543520	99	96	92	88
9543521	104	98	91	87
9543522	99	95	89	86
Blank	94	90	94	91
LCS	96	101	102	96
LCSD	95	97	101	98
MS	99	101	99	98
MSD	98	100	100	97

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: N181031AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: N181034AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9543551	97	99	91	90
9543552	101	96	91	89
9543553	97	101	99	97
9543554	96	100	100	97
9543555	101	99	90	88
9543556	100	96	89	88
9543557	100	97	91	87
Blank	96	94	93	90
LCS	95	104	99	96
LCSD	96	101	100	97
MS	97	101	99	97
MSD	96	100	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181032AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9543528	97	104	98	96
9543529	97	103	99	94
9543530	97	104	99	96
9543531	97	105	99	95
9543532	97	104	99	95
9543537	98	103	99	94
9543539	98	104	98	96
9543540	98	106	99	96
9543542	97	103	99	95
9543543	99	104	100	95
9543544	96	104	99	97
9543545	97	106	98	96
9543546	97	105	99	95
9543547	98	104	98	95
9543548	96	105	98	96
9543549	97	104	98	96
9543550	97	106	99	95
Blank	98	104	100	94
LCS	96	101	101	97
LCSD	93	97	100	97

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 11:07

Group Number: 1928174

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181032AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181041AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9543541	99	103	100	96
9543558	96	104	99	98
9543559	97	99	101	97
9543560	95	102	100	98
9543561	97	106	100	96
9543562	96	105	99	95
Blank	96	105	100	95
LCS	97	107	101	97
MS	97	99	101	97
MSD	95	102	100	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Selected SVOAs in water by SIM
Batch number: 18100WAL026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9543519	90	75	85
9543520	85	13*	83
9543521	83	74	79
9543524	82	45*	78
9543527	82	80	74
9543532	81	82	77
9543541	84	86	82
9543543	89	89	85
9543548	82	72	79
9543557	89	90	82
9543558	64	65	61
9543559	77	80	73
9543560	85	88	82
9543562	72	69	70
Blank	84	86	80
LCS	85	89	79
MS	77	80	73
MSD	85	88	82
Limits:	51-120	57-122	54-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 12502 Group # 1928174 Sample # 95435116-02

COC # 544146

Client Information

Client: TRC Environmental

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: JRL, KR, BG, RT

Quote #:

State where samples were collected: Virginia

For Compliance: Yes ☐ No ☑

For Lab Use Only

FSC:

SCR#: 221109

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Other: ____

Analysis Requested / Preservation Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOC 8260	Perchlorate	1,4 Dioxane
DW-30S/040318	4-3-18	1420	X		4	X	X	
SW42-02/040318		0950	X		4	X	X	
DW-15/040318		0930	X		3	X		
~~DW-32B~~ DW-72B/040318		1250	X		5	X		X
DW-32I/040318		1530	X		5	X		X
DW-28I/040318		1655	X		6	X	X	X
SW40-57/040318		1742	X		4	X	X	
STR-04/040318		1238	X		4	X	X	
DW-12/040318		1141	X		6	X	X	X
SW200-02/040318		1048	X		4	X	X	

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: Standard

E-mail address: GKing@trcsolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/14/18	14:00			
[signature]	~~4-3-18~~	~~1700~~			
	4-4-18	18:30			
			[signature]	4/5/18	10:0

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.5-2.1 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 12502 Group # 1928174 Sample # 9543516-62

COC # 544145

Client Information

Client: TRC Environmental
Acct. #:
Project Name/#: ARC Gainesville
PWSID #:
Project Manager: G. King
P.O. #:
Sampler: JRL, KR, BG, RT
Quote #:
State where samples were collected: Virginia
For Compliance: Yes ☐ No ☑

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water	Ground	Potable	Surface	NPDES	Other:	Total # of Containers	VOC 8260	Perchlorate	1,4-Dioxane									Remarks
DW 200-01/040318	4-3-18	1008	X					X						4	X	X										
DW SB-02/040318	↓	927	X					X						6	X	X	X									
SW 40-07A/040318	↓	1650	X					X						4	X	X										
BW 28-04D/040318	↓	1557	X					X						4	X	X										
SW 47-02/040318	↓	1526	X					X						4	X	X										
SW 28-41/040318	↓	1455	X					X						4	X	X										
SW SB-03/040318	↓	1343	X					X						6	X	X	X									
SW 222-02/040318	↓	1156	X					X						4	X	X										
SW 212-01/040318	↓	0930	X					X						4	X	X										
TB-01/040318	↓	—	X					X						2	X											

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD.

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[illegible]	4-3-18	1700			
	4-4-18	1830			
			[illegible]	4/5/18	1010

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____
Temperature upon receipt 0.5-2.1 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 12502 Group # 1928174 Sample # 9543516-02

COC # 544144

Client Information

Client: TRC Environmental
Acct. #:
Project Name/#: ARC Gainesville
PWSID #:
Project Manager: G. King
P.O. #:
Sampler: JRL, RT, BG, KR
Quote #:
State where samples were collected: Virginia
For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Other: ____
Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐

Analysis Requested / Preservation Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOC's	Perchlorate	1,4 Dioxane	Remarks
EB-01/040318	4-3-18	1610	X		3	X			
DW-16/040418	4-4-18	0820	X		8	X			
DW 213-01/040418	4-4-18	1340	X		1		X		
DW-18/040418	4-4-18	0955	X		3	X			
DW SB-01/040418	4-4-18	1145	X		4	X	X		
SW 5-04/040418	4-4-18	1535	X		6	X	X	X	
SW 74-07/040418	4-4-18	1305	X		4	X	X		
BW 74-02S/040418	4-4-18	~~1445~~ 1515	X		6	X	X	X	
SW TTU-03/040418	4-4-18	1045	X		4	X	X		
BW CM-02S/040418	4-4-18	0845	X		4	X	X		

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD.

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-4-18	1830			
			[signature]	4/5/18	1010

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 0.5, 2.1 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 12502 Group # 1928174 Sample # 9543516-62

COC # 544143

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: JRL, RT, BG, KR	Quote #:
State where samples were collected: Virginia	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation Codes

For Lab Use Only: FSC: ____ SCR#: ____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOCs	Perchlorate	1,4 Dioxane								Remarks
BW 21-04D/040418	4-4-18	1514	X			X		4	X	X									
DW-13 MID/040418		1231	X			X		3	X										
DW-13 INF/040418		1237	X			X		6	X	X	X								
FB-02/040418		1640	X			X		3	X										
BW TTU-03D/040418		1009	X			X		4	X	X									
West-01/040418		0900	X			X		4	X	X									
BW CG-01D/040418		840	X			X		12	X	X									MS/MSD
DUP-01/040418		—	X			X		4	X	X									
DW-26I/040418		1620	X			X		4	X	X									
EB-01/040418		1740	X			X		5	X	X	X								

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STP

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-4-18	1830			
			[signature]	4/5/18	1010

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.5-2.1 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0216

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 12502 Group # 1928174 Sample # 9543516-62

COC # 544142

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: JRL, BG, RT, KR	Quote #:
State where samples were collected: Virginia	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation Codes

For Lab Use Only: FSC: ____ SCR#: ____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	1,0 C's	Perchlorate	1,4 Dioxane	Remarks
BW 28-02S/040418	4-4-18	1700	X			X	18	~~24~~	X	X	X	
TB-02/040418	4-4-18	—	X			X	2	~~3~~	X			
DUP-02/040418	4-4-18	—	X			X		6	X	X	X	

[signature] 4-4-18

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-4-18	1830			
			[signature]	4/5/18	1010

EDD Required? Yes No
If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.5-2.1 °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 212948

Group Number(s): 1928174

Client: TRC Environmental

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	04/05/2018 10:10
Number of Packages:	5	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 17:35 on 04/05/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.7	DT	Wet	Y	Bagged	N
2	DT42-03	0.5	DT	Wet	Y	Bagged	N
3	DT42-03	2.1	DT	Wet	Y	Bagged	N
4	DT42-03	1.4	DT	Wet	Y	Bagged	N
5	DT42-03	0.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

eurofins
Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Sequa Corporation
300 Blaisdell Road
Orangeburg NY 10962

Report Date: April 20, 2018 10:27

Project: ARC - Gainesville, VA

Account #: 12502
Group Number: 1928773
SDG: ARA35
PO Number: 192457.0002.06
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	TRC Solutions	Attn: Geoff King
Electronic Copy To	TRC Solutions	Attn: John Lair

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
DW-23/040518 Grab Groundwater	04/05/2018 08:50	9546422
BW45-03S/040518 Grab Groundwater	04/05/2018 10:30	9546423
STR40-15/040518 Grab Groundwater	04/05/2018 10:00	9546424
DW76-01/040518 Grab Groundwater	04/05/2018 08:40	9546425
IW-6/040518 Grab Groundwater	04/05/2018 09:11	9546426
DW78-12D/040518 Grab Groundwater	04/05/2018 10:50	9546427
DW29S/040518 Grab Groundwater	04/05/2018 12:00	9546428
BW14-02S/040518 Grab Groundwater	04/05/2018 12:15	9546429
BW14-02S/040518-MS Grab Groundwater	04/05/2018 12:15	9546430
BW14-02S/040518-MSD Grab Groundwater	04/05/2018 12:15	9546431
DUP-03/040518 Grab Groundwater	04/05/2018	9546432
DW-28D/040518 Grab Groundwater	04/05/2018 13:00	9546433
FB-03/040518 Grab Water	04/05/2018 13:00	9546434
EB-02/040518 Grab Water	04/05/2018 13:15	9546435
TB-03/040518 Water	04/05/2018	9546436
DW-20/040518 Grab Groundwater	04/05/2018 14:30	9546437

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-23/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 08:50
SDG#: ARA35-01

Sequa Corporation
ELLE Sample #: WW 9546422
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	16	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	54	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	3	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	77	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	0.6 J	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	10	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	11	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 10:17	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 10:17	Nicole S Lamoreaux	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 16:15	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/11/2018 19:58	Richard A Shober	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW45-03S/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 10:30
SDG#: ARA35-02

Sequa Corporation
ELLE Sample #: WW 9546423
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	0.7 J	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	93	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	160	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	21	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	2	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.25 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 10:41	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 10:41	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/11/2018 20:11	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **STR40-15/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 10:00
SDG#: ARA35-03

Sequa Corporation
ELLE Sample #: WW 9546424
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	28	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	41	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	4	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	0.7 J	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	6.8	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 11:05	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 11:05	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/11/2018 20:23	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW76-01/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9546425
ELLE Group #: 1928773
Matrix: Groundwater

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 08:40
SDG#: ARA35-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	5	10
10335	Carbon Tetrachloride	56-23-5	N.D.	5	10
10335	Chloroethane	75-00-3	N.D.	5	10
10335	1,1-Dichloroethane	75-34-3	38	5	10
10335	1,2-Dichloroethane	107-06-2	N.D.	5	10
10335	1,1-Dichloroethene	75-35-4	5,400	50	100
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	5	10
10335	Methylene Chloride	75-09-2	N.D.	5	10
10335	Tetrachloroethene	127-18-4	N.D.	5	10
10335	1,1,1-Trichloroethane	71-55-6	3,700	50	100
10335	1,1,2-Trichloroethane	79-00-5	N.D.	5	10
10335	Trichloroethene	79-01-6	N.D.	5	10
10335	1,2,3-Trichloropropane	96-18-4	N.D.	10	10
10335	Vinyl Chloride	75-01-4	N.D.	5	10
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	10	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	2,000	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 13:51	Nicole S Lamoreaux	10
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 14:15	Nicole S Lamoreaux	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 13:51	Nicole S Lamoreaux	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W181031AA	04/13/2018 14:15	Nicole S Lamoreaux	100
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 16:46	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/14/2018 21:23	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **IW-6/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 09:11
SDG#: ARA35-05

Sequa Corporation
ELLE Sample #: WW 9546426
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	2	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,800	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 11:29	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 11:29	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/14/2018 21:36	Richard A Shober	100

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW78-12D/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 10:50
SDG#: ARA35-06

Sequa Corporation
ELLE Sample #: WW 9546427
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	32,000	620	10000

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/18/2018 15:15	Richard A Shober	10000

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW29S/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 12:00
SDG#: ARA35-07

Sequa Corporation
ELLE Sample #: WW 9546428
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	4	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	6	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	2	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	800,000	6,200	100000

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 12:40	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 12:40	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/14/2018 22:01	Richard A Shober	100000

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW14-02S/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 12:15
SDG#: ARA35-08BKG

Sequa Corporation
ELLE Sample #: WW 9546429
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	6	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	16	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	210	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	14	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	25	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,200	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181061AA	04/16/2018 15:27	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181061AA	04/16/2018 15:27	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/19/2018 20:24	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW14-02S/040518-MS Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 12:15
SDG#: ARA35-08MS

Sequa Corporation
ELLE Sample #: WW 9546430
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	21	0.5	1
10335	Carbon Tetrachloride	56-23-5	20	0.5	1
10335	Chloroethane	75-00-3	20	0.5	1
10335	1,1-Dichloroethane	75-34-3	22	0.5	1
10335	1,2-Dichloroethane	107-06-2	19	0.5	1
10335	1,1-Dichloroethene	75-35-4	30	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	37	0.5	1
10335	Methylene Chloride	75-09-2	21	0.5	1
10335	Tetrachloroethene	127-18-4	240	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	36	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	20	0.5	1
10335	Trichloroethene	79-01-6	46	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	20	1	1
10335	Vinyl Chloride	75-01-4	21	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,800	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181061AA	04/16/2018 15:50	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181061AA	04/16/2018 15:50	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/19/2018 20:37	Richard A Shober	100

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **BW14-02S/040518-MSD Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 12:15
SDG#: ARA35-08MSD

Sequa Corporation
ELLE Sample #: WW 9546431
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	21	0.5	1
10335	Carbon Tetrachloride	56-23-5	21	0.5	1
10335	Chloroethane	75-00-3	19	0.5	1
10335	1,1-Dichloroethane	75-34-3	22	0.5	1
10335	1,2-Dichloroethane	107-06-2	19	0.5	1
10335	1,1-Dichloroethene	75-35-4	31	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	38	0.5	1
10335	Methylene Chloride	75-09-2	21	0.5	1
10335	Tetrachloroethene	127-18-4	240	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	36	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	20	0.5	1
10335	Trichloroethene	79-01-6	47	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	20	1	1
10335	Vinyl Chloride	75-01-4	20	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,800	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181061AA	04/16/2018 16:14	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181061AA	04/16/2018 16:14	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/19/2018 20:50	Richard A Shober	100

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DUP-03/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018
SDG#: ARA35-09FD

Sequa Corporation
ELLE Sample #: WW 9546432
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	1	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	6	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	16	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	210	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	14	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	25	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	1,200	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 13:04	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 13:04	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/14/2018 22:52	Richard A Shober	100

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-28D/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 13:00
SDG#: ARA35-10

Sequa Corporation
ELLE Sample #: WW 9546433
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	27	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	14	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	2	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	2	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	12	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 11:52	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 11:52	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/11/2018 22:30	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **FB-03/040518 Grab Water ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 13:00
SDG#: ARA35-11FB

Sequa Corporation
ELLE Sample #: WW 9546434
ELLE Group #: 1928773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181031AA	04/13/2018 12:16	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181031AA	04/13/2018 12:16	Nicole S Lamoreaux	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **EB-02/040518 Grab Water ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 13:15
SDG#: ARA35-12EB

Sequa Corporation
ELLE Sample #: WW 9546435
ELLE Group #: 1928773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	N.D.	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.52 J	0.062	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181061AA	04/16/2018 15:03	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181061AA	04/16/2018 15:03	Nicole S Lamoreaux	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18100WAL026	04/11/2018 17:17	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18100WAL026	04/10/2018 16:18	Christine E Gleim	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/11/2018 22:43	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **TB-03/040518 Water**
ARC-Gainesville, VA

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018
SDG#: ARA35-13TB

Sequa Corporation
ELLE Sample #: **WW 9546436**
ELLE Group #: **1928773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	N.D.	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181061AA	04/16/2018 14:39	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181061AA	04/16/2018 14:39	Nicole S Lamoreaux	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-20/040518 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 04/06/2018 10:00
Collection Date/Time: 04/05/2018 14:30
SDG#: ARA35-14

Sequa Corporation
ELLE Sample #: WW 9546437
ELLE Group #: 1928773
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1
10335	Chloroethane	75-00-3	N.D.	0.5	1
10335	1,1-Dichloroethane	75-34-3	8	0.5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1
10335	1,1-Dichloroethene	75-35-4	4	0.5	1
10335	cis-1,2-Dichloroethene	156-59-2	3	0.5	1
10335	Methylene Chloride	75-09-2	N.D.	0.5	1
10335	Tetrachloroethene	127-18-4	12	0.5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1
10335	Trichloroethene	79-01-6	4	0.5	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	0.5	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	480	6.2	100

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181061AA	04/16/2018 17:49	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181061AA	04/16/2018 17:49	Nicole S Lamoreaux	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	181010029A	04/18/2018 16:06	Richard A Shober	100

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 10:27

Group Number: 1928773

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: W181031AA	Sample number(s): 9546422-9546426,9546428,9546432-9546434	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: W181061AA	Sample number(s): 9546429-9546431,9546435-9546437	
Benzene	N.D.	0.5
Carbon Tetrachloride	N.D.	0.5
Chloroethane	N.D.	0.5
1,1-Dichloroethane	N.D.	0.5
1,2-Dichloroethane	N.D.	0.5
1,1-Dichloroethene	N.D.	0.5
cis-1,2-Dichloroethene	N.D.	0.5
Methylene Chloride	N.D.	0.5
Tetrachloroethene	N.D.	0.5
1,1,1-Trichloroethane	N.D.	0.5
1,1,2-Trichloroethane	N.D.	0.5
Trichloroethene	N.D.	0.5
1,2,3-Trichloropropane	N.D.	1
Vinyl Chloride	N.D.	0.5
Batch number: 18100WAL026	Sample number(s): 9546422,9546425,9546435	
1,4-dioxane	N.D.	0.05
Batch number: 181010029A	Sample number(s): 9546422-9546433,9546435,9546437	
Perchlorate in Water LC/MS/MS	0.12 J	0.062

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 10:27

Group Number: 1928773

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W181031AA	Sample number(s): 9546422-9546426,9546428,9546432-9546434								
Benzene	20	19.13	20	19.27	96	96	80-120	1	30
Carbon Tetrachloride	20	16.7	20	16.62	83	83	64-134	0	30
Chloroethane	20	17.77	20	17.56	89	88	61-123	1	30
1,1-Dichloroethane	20	18.97	20	18.62	95	93	80-120	2	30
1,2-Dichloroethane	20	17.62	20	17.21	88	86	73-124	2	30
1,1-Dichloroethene	20	19.78	20	19.49	99	97	80-131	2	30
cis-1,2-Dichloroethene	20	19.31	20	19.76	97	99	80-120	2	30
Methylene Chloride	20	18.55	20	18.74	93	94	80-120	1	30
Tetrachloroethene	20	19.02	20	18.92	95	95	80-120	1	30
1,1,1-Trichloroethane	20	19.22	20	19.52	96	98	67-126	2	30
1,1,2-Trichloroethane	20	20.28	20	19.87	101	99	80-120	2	30
Trichloroethene	20	18.83	20	18.8	94	94	80-120	0	30
1,2,3-Trichloropropane	20	21.17	20	19.82	106	99	80-120	7	30
Vinyl Chloride	20	16.83	20	16.53	84	83	68-120	2	30
Batch number: W181061AA	Sample number(s): 9546429-9546431,9546435-9546437								
Benzene	20	19.8	20	20.02	99	100	80-120	1	30
Carbon Tetrachloride	20	18.7	20	18.44	93	92	64-134	1	30
Chloroethane	20	17.55	20	17.9	88	89	61-123	2	30
1,1-Dichloroethane	20	19.67	20	19.71	98	99	80-120	0	30
1,2-Dichloroethane	20	18.46	20	18.63	92	93	73-124	1	30
1,1-Dichloroethene	20	21.01	20	21.24	105	106	80-131	1	30
cis-1,2-Dichloroethene	20	20.33	20	20.25	102	101	80-120	0	30
Methylene Chloride	20	19.72	20	19.94	99	100	80-120	1	30
Tetrachloroethene	20	18.63	20	18.62	93	93	80-120	0	30
1,1,1-Trichloroethane	20	19.5	20	19.21	97	96	67-126	1	30
1,1,2-Trichloroethane	20	19.6	20	19.75	98	99	80-120	1	30
Trichloroethene	20	19.18	20	19.06	96	95	80-120	1	30
1,2,3-Trichloropropane	20	20.34	20	20	102	100	80-120	2	30
Vinyl Chloride	20	17.67	20	17.41	88	87	68-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18100WAL026	Sample number(s): 9546422,9546425,9546435								
1,4-dioxane	1.00	0.540			54		33-74		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 181010029A	Sample number(s): 9546422-9546433,9546435,9546437								
Perchlorate in Water LC/MS/MS	5.00	4.84			97		80-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 10:27

Group Number: 1928773

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W181061AA	Sample number(s): 9546429-9546431,9546435-9546437 UNSPK: 9546429									
Benzene	N.D.	20	21.34	20	21.3	107	107	80-120	0	30
Carbon Tetrachloride	N.D.	20	20.03	20	20.79	100	104	64-134	4	30
Chloroethane	N.D.	20	19.85	20	19.46	99	97	61-123	2	30
1,1-Dichloroethane	1.04	20	21.77	20	22.32	104	106	80-120	3	30
1,2-Dichloroethane	N.D.	20	18.6	20	18.73	93	94	73-124	1	30
1,1-Dichloroethene	6.28	20	30.35	20	30.72	120	122	80-131	1	30
cis-1,2-Dichloroethene	16.1	20	37.27	20	38.44	106	112	80-120	3	30
Methylene Chloride	N.D.	20	20.78	20	20.89	104	104	80-120	1	30
Tetrachloroethene	212.88	20	236.35	20	241.63	117 (2)	144 (2)	80-120	2	30
1,1,1-Trichloroethane	13.75	20	36	20	36.39	111	113	67-126	1	30
1,1,2-Trichloroethane	N.D.	20	19.9	20	20.03	100	100	80-120	1	30
Trichloroethene	25.07	20	46.24	20	46.6	106	108	80-120	1	30
1,2,3-Trichloropropane	N.D.	20	20.04	20	19.87	100	99	80-120	1	30
Vinyl Chloride	N.D.	20	20.56	20	20.24	103	101	68-120	2	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18100WAL026	Sample number(s): 9546422,9546425,9546435 UNSPK: P543558									
1,4-dioxane	9.46	0.992	12.28	0.942	13.15	285 (2)	392 (2)	33-74	7	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 181010029A	Sample number(s): 9546422-9546433,9546435,9546437 UNSPK: 9546429									
Perchlorate in Water LC/MS/MS	1238.94	500	1828.22	500	1842.01	118	121*	80-120	1	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181031AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9546422	98	103	100	95
9546423	98	105	99	95
9546424	97	104	99	94
9546425	99	102	99	96
9546426	98	104	99	95
9546428	97	103	100	95
9546432	97	103	99	95
9546433	98	103	99	97

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 04/20/2018 10:27

Group Number: 1928773

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181031AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9546434	98	106	100	95
Blank	95	102	99	96
LCS	96	103	102	97
LCSD	96	102	100	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181061AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9546429	97	105	98	95
9546430	97	99	100	96
9546431	98	101	100	97
9546435	97	106	100	95
9546436	97	103	99	94
9546437	97	105	99	97
Blank	96	103	100	97
LCS	98	105	100	98
LCSD	99	105	100	98
MS	97	99	100	96
MSD	98	101	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Selected SVOAs in water by SIM
Batch number: 18100WAL026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9546422	79	69	73
9546425	87	72	82
9546435	83	84	77
Blank	84	86	80
LCS	85	89	79
MS	77	80	73
MSD	85	88	82
Limits:	51-120	57-122	54-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 12502 Group # 1948773 Sample # 9546422-37

COC # 544137

Client Information

Client: TRC Environmental
Acct. #:
Project Name/#: ARC Gainesville
PWSID #:
Project Manager: G. King
P.O. #:
Sampler: JRL, BG, RT, KR
Quote #:
State where samples were collected: Virginia
For Compliance: Yes ☐ No ☒

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Other: ____

Analysis Requested / Preservation Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs	Perchlorate	1,4D-oxane	Remarks
DW-23/040518	4-5-18	0850	X		6	X	X	X	
BW 45-03S/040518		1030	X		4	X	X		
STR40-15/040518		1000	X		4	X	X		
DW 76-01/040518		0840	X		6	X	X	X	
IW-6/040518		0911	X		4	X	X		
~~DW76-01/040518~~		~~0~~							
DW 78-12D/040518		1050	X		1		X		
DW 29S/040518		1200	X		4	X	X		
BW 14-02S/040518		1215	X		12	X	X		MS/MSD
DUP-03/040518		—	X		4	X	X		

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD.

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-5-18	1600			
			[signature]	4/6/18	1000

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 0.4 / 0.5°C

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 12502 Group # 1928773 Sample # 9SUCU22-37

COC # 544141

Client Information

Client: TRC Environmental

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: JRL, BG, RT, KR

Quote #:

State where samples were collected: Virginia

For Compliance: Yes ☐ No ☒

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Potable	Ground	Surface	NPDES	Water	Other:	Total # of Containers	VOCs	Perchlorate	1,4 Dioxane	Remarks
DW-28D/040518	4-5-18	1300	X						X			X		4	X	X		
EB-03/040518	4-5-18	1300	X						X			X		3	X			
EB-02/040518	4-5-18	1315	X						X			X		6	X	X	X	
TB-03/040518	4-5-18	—	X						X			X		3	X			
DW-20/040518	4-5-18	1430	X						X			X		4	X	X		

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-5-18	1600			
			[signature]	4/6/18	1000

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx X Other ____

Temperature upon receipt 0.4 / 0.8°C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0216

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 213050

Group Number(s): 1928773

Client: TRC Enviromental

ARC Gainesville

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	04/06/2018 10:00
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Nicole Reiff (25684) at 13:33 on 04/06/2018

Samples Chilled Details: ARC Gainesville

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.4	DT	Wet	Y	Loose	N
2	DT146	0.5	DT	Wet	Y	Loose	N

Container Quantity Discrepancy Details: ARC Gainesville

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
TB-03/040518	2	3	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

eurofins
Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Sequa Corporation
300 Blaisdell Road
Orangeburg NY 10962

Report Date: October 19, 2018 19:35

Project: ARC - Gainesville, VA

Account #: 12502
Group Number: 1996980
SDG: ARA36
PO Number: 192457.0002.06
State of Sample Origin: VA

Electronic Copy To	TRC Solutions	Attn: John Lair
Electronic Copy To	TRC Solutions	Attn: Geoff King

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

eurofins
Lancaster Laboratories
Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
SW200-02/100918 Grab Groundwater	10/09/2018 09:40	9845713
SW212-01/100918 Grab Groundwater	10/09/2018 10:55	9845714
SWSB-03/100918 Grab Groundwater	10/09/2018 14:27	9845715
SWSB-03/100918-MS Grab Groundwater	10/09/2018 14:27	9845716
SWSB-03/100918-MSD Grab Groundwater	10/09/2018 14:27	9845717
DUP-01/100918 Grab Groundwater	10/09/2018	9845718
DW200-01/100918 Grab Groundwater	10/09/2018 09:55	9845719
DWSB-01/100918 Grab Groundwater	10/09/2018 14:49	9845720
DWSB-02/100918 Grab Groundwater	10/09/2018 11:10	9845721
DW-12/100918 Grab Groundwater	10/09/2018 11:52	9845722
STR-04/100918 Grab Groundwater	10/09/2018 13:35	9845723
FB-01/100918 Grab Water	10/09/2018 11:05	9845724
RIN-01/100918 Grab Water	10/09/2018 15:45	9845725
TB-01/100918 Water	10/09/2018	9845726

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW200-02/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 09:40
SDG#: ARA36-01

Sequa Corporation
ELLE Sample #: WW 9845713
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	0.9 J	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	0.8 J	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	1	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	0.5 J	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 03:59	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 03:59	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 11:49	Timothy J Trees	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW212-01/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 10:55
SDG#: ARA36-02

Sequa Corporation
ELLE Sample #: WW 9845714
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 04:21	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 04:21	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 12:00	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SWSB-03/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:27
SDG#: ARA36-03BKG

Sequa Corporation
ELLE Sample #: WW 9845715
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	0.7 J	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	0.9 J	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	1	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	0.6 J	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.64 J	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 01:21	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 01:21	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 11:17	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SWSB-03/100918-MS Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9845716
ELLE Group #: 1996980
Matrix: Groundwater

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:27
SDG#: ARA36-03MS

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	20	0.2	1
10335	Carbon Tetrachloride	56-23-5	26	0.2	1
10335	Chloroethane	75-00-3	20	0.3	1
10335	1,1-Dichloroethane	75-34-3	20	0.2	1
10335	1,2-Dichloroethane	107-06-2	22	2	1
10335	1,1-Dichloroethene	75-35-4	25	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	23	0.2	1
10335	Methylene Chloride	75-09-2	20	0.2	1
10335	Tetrachloroethene	127-18-4	22	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	25	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	20	0.2	1
10335	Trichloroethene	79-01-6	22	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	19	0.2	1
10335	Vinyl Chloride	75-01-4	21	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	5.6	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 01:43	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 01:43	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 11:28	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SWSB-03/100918-MSD Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Sequa Corporation
ELLE Sample #: WW 9845717
ELLE Group #: 1996980
Matrix: Groundwater

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:27
SDG#: ARA36-03MSD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	21	0.2	1
10335	Carbon Tetrachloride	56-23-5	25	0.2	1
10335	Chloroethane	75-00-3	20	0.3	1
10335	1,1-Dichloroethane	75-34-3	21	0.2	1
10335	1,2-Dichloroethane	107-06-2	22	2	1
10335	1,1-Dichloroethene	75-35-4	25	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	24	0.2	1
10335	Methylene Chloride	75-09-2	21	0.2	1
10335	Tetrachloroethene	127-18-4	21	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	25	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	20	0.2	1
10335	Trichloroethene	79-01-6	23	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	19	0.2	1
10335	Vinyl Chloride	75-01-4	22	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	5.0	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 02:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 02:06	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 11:38	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DUP-01/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018
SDG#: ARA36-04FD

Sequa Corporation
ELLE Sample #: WW 9845718
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	0.6 J	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	0.9 J	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	1	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	0.5 J	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.60 J	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 04:43	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 04:43	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 12:11	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW200-01/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 09:55
SDG#: ARA36-05

Sequa Corporation
ELLE Sample #: WW 9845719
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	3	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	5	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 05:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 05:06	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 12:22	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DWSB-01/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:49
SDG#: ARA36-06

Sequa Corporation
ELLE Sample #: WW 9845720
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	0.4 J	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	0.4 J	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	0.2 J	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 05:29	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 05:29	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 12:33	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DWSB-02/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 11:10
SDG#: ARA36-07

Sequa Corporation
ELLE Sample #: WW 9845721
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Benzene	71-43-2	N.D.		0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.		0.2	1
10335	Chloroethane	75-00-3	N.D.		0.3	1
10335	1,1-Dichloroethane	75-34-3	10		0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.		2	1
10335	1,1-Dichloroethene	75-35-4	14		0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.2	1
10335	Methylene Chloride	75-09-2	N.D.		0.2	1
10335	Tetrachloroethene	127-18-4	0.4	J	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.2	1
10335	Trichloroethene	79-01-6	0.9	J	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.		0.2	1
10335	Vinyl Chloride	75-01-4	0.7	J	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**		**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.		0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 05:51	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 05:51	Kevin D Kelly	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 12:54	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-12/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 11:52
SDG#: ARA36-08

Sequa Corporation
ELLE Sample #: WW 9845722
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	2	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	6	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	0.6 J	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	0.3 J	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	0.08 J	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 06:14	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 06:14	Kevin D Kelly	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18289WAO026	10/17/2018 07:59	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	18289WAO026	10/16/2018 19:00	Ryan J Dowdy	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 13:05	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **STR-04/100918 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:35
SDG#: ARA36-09

Sequa Corporation
ELLE Sample #: WW 9845723
ELLE Group #: 1996980
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	0.5 J	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	1	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	8.3	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182911AA	10/18/2018 17:58	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182911AA	10/18/2018 17:58	Corie Mellinger	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 13:16	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **FB-01/100918 Grab Water ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 11:05
SDG#: ARA36-10FB

Sequa Corporation
ELLE Sample #: WW 9845724
ELLE Group #: 1996980
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/17/2018 23:50	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/17/2018 23:50	Kevin D Kelly	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **RIN-01/100918 Grab Water ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 15:45
SDG#: ARA36-11RB

Sequa Corporation
ELLE Sample #: WW 9845725
ELLE Group #: 1996980
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	N.D.	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	N.D.	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 00:13	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 00:13	Kevin D Kelly	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18289WAO026	10/17/2018 08:29	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	18289WAO026	10/16/2018 19:00	Ryan J Dowdy	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	182890045A	10/17/2018 13:27	Timothy J Trees	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **TB-01/100918 Water**
ARC-Gainesville, VA

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018
SDG#: ARA36-12TB

Sequa Corporation
ELLE Sample #: WW 9845726
ELLE Group #: 1996980
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	4182902AA	10/18/2018 00:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182902AA	10/18/2018 00:35	Kevin D Kelly	1

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 10/19/2018 19:35

Group Number: 1996980

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 4182902AA	Sample number(s): 9845713-9845722,9845724-9845726	
Benzene	N.D.	0.2
Carbon Tetrachloride	N.D.	0.2
Chloroethane	N.D.	0.3
1,1-Dichloroethane	N.D.	0.2
1,2-Dichloroethane	N.D.	2
1,1-Dichloroethene	N.D.	0.2
cis-1,2-Dichloroethene	N.D.	0.2
Methylene Chloride	N.D.	0.2
Tetrachloroethene	N.D.	0.2
1,1,1-Trichloroethane	N.D.	0.2
1,1,2-Trichloroethane	N.D.	0.2
Trichloroethene	N.D.	0.2
1,2,3-Trichloropropane	N.D.	0.2
Vinyl Chloride	N.D.	0.4
Batch number: 4182911AA	Sample number(s): 9845723	
Benzene	N.D.	0.2
Carbon Tetrachloride	N.D.	0.2
Chloroethane	N.D.	0.3
1,1-Dichloroethane	N.D.	0.2
1,2-Dichloroethane	N.D.	2
1,1-Dichloroethene	N.D.	0.2
cis-1,2-Dichloroethene	N.D.	0.2
Methylene Chloride	N.D.	0.2
Tetrachloroethene	N.D.	0.2
1,1,1-Trichloroethane	N.D.	0.2
1,1,2-Trichloroethane	N.D.	0.2
Trichloroethene	N.D.	0.2
1,2,3-Trichloropropane	N.D.	0.2
Vinyl Chloride	N.D.	0.4
Batch number: 18289WAO026	Sample number(s): 9845722,9845725	
1,4-dioxane	N.D.	0.05
Batch number: 182890045A	Sample number(s): 9845713-9845723,9845725	
Perchlorate in Water LC/MS/MS	N.D.	0.20

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 10/19/2018 19:35

Group Number: 1996980

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4182902AA	Sample number(s): 9845713-9845722,9845724-9845726								
Benzene	20	20.58			103		80-120		
Carbon Tetrachloride	20	22.76			114		64-134		
Chloroethane	20	20.91			105		55-123		
1,1-Dichloroethane	20	19.59			98		80-120		
1,2-Dichloroethane	20	21.86			109		73-124		
1,1-Dichloroethene	20	24.09			120		80-131		
cis-1,2-Dichloroethene	20	22.84			114		80-120		
Methylene Chloride	20	22.75			114		80-120		
Tetrachloroethene	20	20.26			101		80-120		
1,1,1-Trichloroethane	20	23.13			116		67-126		
1,1,2-Trichloroethane	20	21.13			106		80-120		
Trichloroethene	20	22.24			111		80-120		
1,2,3-Trichloropropane	20	20.39			102		75-124		
Vinyl Chloride	20	20.41			102		56-120		
Batch number: 4182911AA	Sample number(s): 9845723								
Benzene	20	20.93			105		80-120		
Carbon Tetrachloride	20	25.58			128		64-134		
Chloroethane	20	20.18			101		55-123		
1,1-Dichloroethane	20	20.76			104		80-120		
1,2-Dichloroethane	20	24.26			121		73-124		
1,1-Dichloroethene	20	23.27			116		80-131		
cis-1,2-Dichloroethene	20	23.13			116		80-120		
Methylene Chloride	20	21.25			106		80-120		
Tetrachloroethene	20	19.92			100		80-120		
1,1,1-Trichloroethane	20	25.24			126		67-126		
1,1,2-Trichloroethane	20	21.17			106		80-120		
Trichloroethene	20	22.42			112		80-120		
1,2,3-Trichloropropane	20	21.01			105		75-124		
Vinyl Chloride	20	18.61			93		56-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18289WAO026	Sample number(s): 9845722,9845725								
1,4-dioxane	1.00	0.326	1.00	0.327	33	33	33-74	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182890045A	Sample number(s): 9845713-9845723,9845725								
Perchlorate in Water LC/MS/MS	5.00	4.77			95		80-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 10/19/2018 19:35

Group Number: 1996980

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 4182902AA	Sample number(s): 9845713-9845722,9845724-9845726 UNSPK: 9845715									
Benzene	N.D.	20	20.32	20	20.68	102	103	80-120	2	30
Carbon Tetrachloride	N.D.	20	25.75	20	25.17	129	126	64-134	2	30
Chloroethane	N.D.	20	20.21	20	20.19	101	101	55-123	0	30
1,1-Dichloroethane	0.446	20	20.16	20	20.64	99	101	80-120	2	30
1,2-Dichloroethane	N.D.	20	21.86	20	21.79	109	109	73-124	0	30
1,1-Dichloroethene	0.676	20	25.26	20	25.18	123	123	80-131	0	30
cis-1,2-Dichloroethene	0.880	20	23.1	20	23.77	111	114	80-120	3	30
Methylene Chloride	N.D.	20	20.28	20	20.74	101	104	80-120	2	30
Tetrachloroethene	1.06	20	21.53	20	21.49	102	102	80-120	0	30
1,1,1-Trichloroethane	N.D.	20	24.67	20	24.6	123	123	67-126	0	30
1,1,2-Trichloroethane	N.D.	20	19.51	20	19.62	98	98	80-120	1	30
Trichloroethene	0.632	20	22.46	20	22.72	109	110	80-120	1	30
1,2,3-Trichloropropane	N.D.	20	18.97	20	19.08	95	95	75-124	1	30
Vinyl Chloride	N.D.	20	21.4	20	21.75	107	109	56-120	2	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 182890045A	Sample number(s): 9845713-9845723,9845725 UNSPK: 9845715									
Perchlorate in Water LC/MS/MS	0.637	5.00	5.57	5.00	5.04	99	88	80-120	10	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: 4182902AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9845713	116	107	95	92
9845714	114	103	95	91
9845715	112	109	93	90
9845716	107	107	96	101
9845717	107	104	97	101
9845718	116	105	94	92
9845719	116	109	96	92
9845720	116	101	96	93
9845721	115	107	94	91
9845722	115	111	95	91
9845724	112	106	94	91
9845725	112	103	93	92

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 10/19/2018 19:35

Group Number: 1996980

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: 4182902AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9845726	113	109	95	91
Blank	110	104	95	92
LCS	105	103	96	101
MS	107	107	96	101
MSD	107	104	97	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: 4182911AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9845723	110	106	95	91
Blank	110	105	96	95
LCS	108	103	97	103
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Selected SVOAs in water by SIM
Batch number: 18289WAO026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9845722	92	81	82
9845725	75	74	72
Blank	92	77	71
LCS	94	82	84
LCSD	72	67	71
Limits:	51-120	44-120	42-123

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 12502 Group # 1996980 Sample # 9845713-26

1 of 2

COC # 567064

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: J. Lair / A. Cann	Quote #:
State where samples were collected: VA	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC: ____
SCR#: 231986

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOC	ClO4	1,4 Dioxane	Remarks
SW 200-02/100918	10-9-18	0940	X			X		4	X	X		
SW 212-01/100918	10/9/18	1055	X			X		4	X	X		
SW SB-03/100918	10/9/18	1427	X			X		18	X	X	X	MS/MSD
DUP-01/100918	10/9/18	—	X			X		6	X	X	X	
DW 200-01/100918	10/9/18	955	X			X		4	X	X		
DW SB-01/100918	10/9/18	1449	X			X		4	X	X		
DW SB-02/100918	10/9/18	1110	X			X		6	X	X	X	
DW-12/100918	10/9/18	1152	X			X		6	X	X	X	
STR-04/100918	10/9/18	1335	X			X		4	X	X		
FB-01/100918	10/9/18	1105	X					3	X			

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: STD

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Richard Ratter	9-28-18	8:30			
[signature]	10-9-18	1740			
			[signature]	10-10-18	1040

EDD Required? Yes No
If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 4.9 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • FOR HELP COMPLETING FORM CHECK OUT https://www.eurofinsus.com/coc
The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0718

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 12502 Group # 1996980 Sample # 9845713-26

2 of 2

COC # 567063

Client Information	
Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: J. Lair / A. Cann	Quote #:
State where samples were collected: VA	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ Water ☒ Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only: FSC: ____ SCR#: ____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, P=H_3PO_4, F=Field Filtered, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOC	Cl04	1,4 Dioxane								Remarks
RIN-011100918	10/9/18	1545	X			X		6	X	X	X								
TB-011100918	10/9/18	—	X			X		3	X										

[signature] 10-9-18

Turnaround Time (TAT) Requested (please circle): Standard (circled) Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: STD

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) — Type VI (Raw Data Only)

Type III (Reduced non-CLP) (circled) — NJ DKQP — TX TRRP-13

NYSDEC Category A or B — MA MCP — CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10-9-18	1740			
~~1740~~					
			[signature]	10-10-18	1040

EDD Required? Yes (circled) No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No (circled)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 4.9 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • FOR HELP COMPLETING FORM CHECK OUT https://www.eurofinsus.com/coc

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0718

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 229647

Group Number(s): 1996980

Client: TRC Environmental

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/10/2018 10:40
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	No	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Melvin Sanchez (8943) at 18:54 on 10/10/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	4.9	DT	Wet	Y	Loose/Bag	N

Samples Not Intact Details

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
RIN-01100918	1000 ml round amber glass - None	1	N	

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
SWSB-03/ 100918	12	18	
Dup-01/ 100918	4	6	
DW SB-02/ 100918	4	6	
RIN-01/ 100918	5	6	
TB-011100918	3	2	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

eurofins
Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Sequa Corporation
300 Blaisdell Road
Orangeburg NY 10962

Report Date: January 15, 2019 17:21

Project: ARC - Gainesville, VA

Account #: 12502
Group Number: 2020437
SDG: ARA37
PO Number: 192457.0002.06
State of Sample Origin: VA

Electronic Copy To	TRC Solutions	Attn: John Lair
Electronic Copy To	TRC Solutions	Attn: Geoff King

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
SW222-02/121818 Grab Groundwater	12/18/2018 09:00	9948958
DWSB-02/121818 Grab Groundwater	12/18/2018 09:15	9948959
SWSB-03/121818 Grab Groundwater	12/18/2018 11:05	9948960
DW-13/121818 Grab Groundwater	12/18/2018 10:00	9948961
DW-13 mid/121818 Grab Groundwater	12/18/2018 10:05	9948962
Dup-01/121818 Grab Groundwater	12/18/2018	9948963
TB-01/121818 Grab Water	12/18/2018	9948964

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SW222-02/121818 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 09:00
SDG#: ARA37-01

Sequa Corporation
ELLE Sample #: WW 9948958
ELLE Group #: 2020437
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	0.38 J	0.20	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N183651AA	12/31/2018 15:07	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N183651AA	12/31/2018 15:06	Corie Mellinger	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	190030017A	01/03/2019 16:00	Richard A Shober	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DWSB-02/121818 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 09:15
SDG#: ARA37-02

Sequa Corporation
ELLE Sample #: WW 9948959
ELLE Group #: 2020437
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C SIM**	**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	0.5	0.05	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18355WAL026	12/31/2018 08:45	Joseph M Gambler	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18355WAL026	12/24/2018 08:30	Logan M Brosemer	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **SWSB-03/121818 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 11:05
SDG#: ARA37-03

Sequa Corporation
ELLE Sample #: WW 9948960
ELLE Group #: 2020437
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C SIM**	**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	0.5	0.05	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18355WAL026	12/31/2018 09:15	Joseph M Gambler	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18355WAL026	12/24/2018 08:30	Logan M Brosemer	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-13/121818 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 10:00
SDG#: ARA37-04

Sequa Corporation
ELLE Sample #: WW 9948961
ELLE Group #: 2020437
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	28	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	85	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	1	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	8	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	32	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	2	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	1	0.4	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	3	0.05	1
Perchlorate	**SW-846 6850 1/2007**		**ug/l**	**ug/l**	
06386	Perchlorate in Water LC/MS/MS	14797-73-0	880	20	100

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N183651AA	12/31/2018 15:30	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N183651AA	12/31/2018 15:29	Corie Mellinger	1
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18355WAL026	12/31/2018 09:44	Joseph M Gambler	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18355WAL026	12/24/2018 08:30	Logan M Brosemer	1
06386	Perchlorate in Water LC/MS/MS	SW-846 6850 1/2007	1	190030017A	01/15/2019 11:15	Richard A Shober	100

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **DW-13 mid/121818 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 10:05
SDG#: ARA37-05

Sequa Corporation
ELLE Sample #: WW 9948962
ELLE Group #: 2020437
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	1	0.3	1
10335	1,1-Dichloroethane	75-34-3	28	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	90	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	1	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	22	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	38	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	1	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	1	0.4	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N183651AA	12/31/2018 15:54	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N183651AA	12/31/2018 15:53	Corie Mellinger	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **Dup-01/121818 Grab Groundwater ARC-Gainesville, VA**

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018
SDG#: ARA37-06FD

Sequa Corporation
ELLE Sample #: WW 9948963
ELLE Group #: 2020437
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C SIM**	**ug/l**	**ug/l**	
10137	1,4-dioxane	123-91-1	0.3	0.05	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10137	Selected SVOAs in water by SIM	SW-846 8270C SIM	1	18355WAL026	12/31/2018 10:14	Joseph M Gambler	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18355WAL026	12/24/2018 08:30	Logan M Brosemer	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Analysis Report

Sample Description: **TB-01/121818 Grab Water**
ARC-Gainesville, VA

Project Name: **ARC - Gainesville, VA**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018
SDG#: ARA37-07TB

Sequa Corporation
ELLE Sample #: WW 9948964
ELLE Group #: 2020437
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**	**ug/l**	**ug/l**	
10335	Benzene	71-43-2	N.D.	0.2	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.2	1
10335	Chloroethane	75-00-3	N.D.	0.3	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.2	1
10335	1,2-Dichloroethane	107-06-2	N.D.	2	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.2	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.2	1
10335	Methylene Chloride	75-09-2	N.D.	0.2	1
10335	Tetrachloroethene	127-18-4	N.D.	0.2	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1
10335	Trichloroethene	79-01-6	N.D.	0.2	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	1
10335	Vinyl Chloride	75-01-4	N.D.	0.4	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	N183651AA	12/31/2018 11:36	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N183651AA	12/31/2018 11:35	Corie Mellinger	1

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 01/15/2019 17:21

Group Number: 2020437

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	MDL ug/l
Batch number: N183651AA	Sample number(s): 9948958,9948961-9948962,9948964	
Benzene	N.D.	0.2
Carbon Tetrachloride	N.D.	0.2
Chloroethane	N.D.	0.3
1,1-Dichloroethane	N.D.	0.2
1,2-Dichloroethane	N.D.	2
1,1-Dichloroethene	N.D.	0.2
cis-1,2-Dichloroethene	N.D.	0.2
Methylene Chloride	N.D.	0.2
Tetrachloroethene	N.D.	0.2
1,1,1-Trichloroethane	N.D.	0.2
1,1,2-Trichloroethane	N.D.	0.2
Trichloroethene	N.D.	0.2
1,2,3-Trichloropropane	N.D.	0.2
Vinyl Chloride	N.D.	0.4
Batch number: 18355WAL026	Sample number(s): 9948959-9948961,9948963	
1,4-dioxane	N.D.	0.05
Batch number: 190030017A	Sample number(s): 9948958,9948961	
Perchlorate in Water LC/MS/MS	N.D.	0.20

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: N183651AA	Sample number(s): 9948958,9948961-9948962,9948964								
Benzene	20	21.68	20	21.67	108	108	80-120	0	30
Carbon Tetrachloride	20	18.15	20	17.81	91	89	64-134	2	30
Chloroethane	20	12.54	20	13.76	63	69	55-123	9	30
1,1-Dichloroethane	20	22.06	20	21.74	110	109	80-120	1	30
1,2-Dichloroethane	20	20.58	20	20.68	103	103	73-124	0	30
1,1-Dichloroethene	20	20.8	20	20.06	104	100	80-131	4	30
cis-1,2-Dichloroethene	20	21.14	20	20.88	106	104	80-120	1	30
Methylene Chloride	20	21.91	20	21.48	110	107	80-120	2	30
Tetrachloroethene	20	20.22	20	20.1	101	101	80-120	1	30
1,1,1-Trichloroethane	20	18.7	20	18.24	93	91	67-126	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 01/15/2019 17:21

Group Number: 2020437

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,2-Trichloroethane	20	22.65	20	22.98	113	115	80-120	1	30
Trichloroethene	20	19.59	20	19.39	98	97	80-120	1	30
1,2,3-Trichloropropane	20	22.31	20	22.7	112	113	75-124	2	30
Vinyl Chloride	20	14.83	20	14.36	74	72	56-120	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18355WAL026	Sample number(s): 9948959-9948961,9948963								
1,4-dioxane	1.00	0.588	1.00	0.418	59	42	33-74	34*	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190030017A	Sample number(s): 9948958,9948961								
Perchlorate in Water LC/MS/MS	5.00	4.42	5.00	4.69	88	94	80-120	6	15

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: N183651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9948958	99	104	102	89
9948961	100	106	103	90
9948962	101	104	102	89
9948964	96	103	102	91
Blank	95	102	103	91
LCS	94	99	105	97
LCSD	93	99	106	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Selected SVOAs in water by SIM
Batch number: 18355WAL026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9948959	86	73	80
9948960	85	78	84
9948961	87	70	86
9948963	85	76	79
Blank	85	75	65
LCS	88	82	69
LCSD	80	77	65

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: Sequa Corporation
Reported: 01/15/2019 17:21

Group Number: 2020437

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Selected SVOAs in water by SIM
Batch number: 18355WAL026

Limits:	51-120	44-120	42-123

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 12502 Group # 2020432 Sample # 9948958-64

COC # 575951

Client Information

Client: TRC Environmental Corp
Acct. #:
Project Name/#: ARC Gainesville
PWSID #:
Project Manager: G. King
P.O. #:
Sampler: J. Lair
Quote #:
State where samples were collected: VA
For Compliance: Yes ☐ No ☑

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water: Ground	Water: Potable	Water: Surface	Water: NPDES	Other:	Total # of Containers	VOC's	Perchlorate	1,4 Dioxane	Remarks
SW 222-02/121818	12-18-18	900	X					X					4	X	X		
DWSB-02/121818		915	X					X					2			X	
SWSB-03/121818		1105	X					X					2			X	
DW-13/121818		1000	X					X					6	X	X	X	
DW-13 mid/121818		1005	X					X					3	X			
DUP-01/121818		–	X					X					2			X	
TB-01/121818		–	X					X					2	X			
	12-18-18																

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: Std

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12-18-18	1420	Fedex		
			[signature]	12-19-18	1115

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx X Other

Temperature upon receipt 4.7 °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 236766

Group Number(s): 2020437

Client: TRC Environmental

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/19/2018 11:15
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Cory Jeremiah (10469) at 22:43 on 12/19/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	4.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

eurofins | Lancaster Laboratories Environmental

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

APPENDIX C

DATA QUALITY VALIDATION REPORTS

MEMORANDUM

TRC Environmental Corporation
11231 Cornell Park Drive
Cincinnati, Ohio 45242
513-489-2255 Fax: 513-489-2533

TO: Geoffrey S. King, Senior Project Manager

FROM: Curtis S. Kugler, Data Validation Coordinator

DATE: May 29, 2018

SUBJECT: Sequa Corporation
Atlantic Research Corporation, Gainesville, Virginia
Spring 2018 Ground Water Sampling Event – SOW #16
Eurofins/Lancaster Laboratories Group Numbers: ARA34 and ARA35

PROJECT NO.: 229931.0000.0003

The following details an analytical data validation for ground water collected during April 2018 at the Atlantic Research Corporation located in Gainesville, Virginia. This sampling event was associated with the Sequa Corporation, Statement of Work (SOW) #16 – *Spring 2018 ground water sampling event* dated February 7, 2018. The environmental samples are identified in Table 1 and were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (U.S. EPA) Method SW846-8260B, perchlorate by U.S. EPA Method SW846-6850, and semi-volatiles (SVOC 1,4-dioxane only) by U.S. EPA Method SW846-8270C. Eurofins/Lancaster Laboratories (Lancaster) located in Lancaster, Pennsylvania performed all analyses.

This data quality assessment and validation process followed the procedures presented in Section 7.2 of the Quality Assurance Project Plan (QAPP) for the Atlantic Research Corporation. This process included the completion of a Data Validation Checklist, which is summarized below.

The analytical quality assessment and validation process included the completion of a Data Validation Checklist, which is attached and summarized below. The United States Environmental Protection Agency, *U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* and the *U.S. EPA Contract Laboratory Program, National Functional Guidelines for Superfund Inorganic Data Review* was utilized as guidance to complete the validation of this data set.

Overall Assessment

The data that were collected during implementation of SOW #16 exhibited acceptable levels of precision and accuracy and are usable for intended purposes with the exceptions noted herein. The following discussion and attached checklist support this conclusion.

1.0 Sample Report Completeness

Eurofins provided all necessary components of the sample report included in a Type I Data Package (level III) for data validation purposes. The components included the following.

- Date of issuance
- Laboratory analysis performed
- Any deviations from intended analytical strategy
- Laboratory batch number
- Numbers of samples and respective matrices
- QC procedures utilized and also references to the acceptance criteria
- Laboratory report contents
- Project name and number
- Condition of samples "as-received"
- Discussion of whether or not sample holding times were met
- Discussion of technical problems or other observations which may have created analytical difficulties
- Discussion of any laboratory QC checks which failed to meet project criteria
- Signature of laboratory QA Manager
- Case narrative for each analyzed batch of samples
- Summary page indicating dates of analyses for samples and laboratory QC checks
- Cross referencing of laboratory sample to project sample identification numbers
- Description of data qualifiers to be used
- Sample preparation and analyses for samples
- Sample results
- MS/MSD recoveries, laboratory control samples, method blank results, calibration check compounds, and system performance check compound results
- Chain-of-custody

2.0 Holding Time Periods

As indicated by the sample collection and analysis dates on the chain-of-custody forms and the analytical report provided by Eurofins, all samples were prepared and analyzed within the required holding time period.

3.0 Quality Assurance

<u>System Monitoring Compounds/Surrogate Spikes</u>
Laboratory performance on individual samples for organic analysis was monitored by using percent recoveries of system monitoring compounds/surrogate spikes. The surrogate recoveries for the environmental and quality assurance/quality control (QA/QC) samples met the acceptance criteria.

<u>Matrix Spike/Matrix Spike Duplicate (MS/MSD Results)</u>
To assess long-term accuracy and precision of the analytical methods on sample matrices, MS/MSD percent recoveries and the relative percent difference (RPD) of the recoveries were determined by Lancaster. The MS/MSD samples met the acceptance criteria.

Laboratory Control Sample (LCS)
The laboratory control samples percent recoveries were examined to assess the overall performance and the accuracy of laboratory procedures. The LCS samples met the acceptance criteria.

Method Blank Samples
Contamination of the environmental samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of method blank samples. The reported method blank results for the environmental and quality assurance/quality control (QA/QC) samples met the acceptance criteria with the exception of perchlorate in report ARA35 detected above the method detection limit. Results that are 5X the method blank result are qualified as "u" (non-detect) by TRC.

4.0 Field Quality Assurance/Quality Control (QA/QC)

Field QA/QC
The field QA/QC samples collected consisted of one trip blank sample per cooler, two equipment blank samples, three field blank samples and three duplicate samples collected at BW CG-01D, BW 28-02S, and BW 14-02S. The relative percent difference (RPD) for cis-1,2-dichloroethene in parent sample BW CG-01D and DUP-01 and perchlorate in parent sample BW 28-02S and DUP-02 does not meet the acceptance criteria and is flagged "j" (estimated) by TRC. The RPD between the parent sample BW 14-02S and duplicate sample DUP-03 met the acceptance criteria. QA/QC samples are summarized in Table 1.

General Comments

Samples that contained results between the Lancaster method detection limit (MDL) and the reporting limit (RL) were qualified "J" (estimated) by Eurofins. Results between the MDL and/or below the RL indicate the possibility for false-positive or misidentification. All "J" qualified results were reviewed with no action taken.

The data that was collected during this April 2018 – SOW #16 ground water sampling event exhibited acceptable levels of precision and accuracy and are usable for intended purposes with the exceptions noted herein.

Table 1: Sample Identification (April 2018 – SOW #16)

Lab Report	Sample ID	Sample Date	Analysis Date	Method	Qualifier	Qualifier Summary
ARA34	BW 21-04D_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	BW 21-04D_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	BW 28-02S_20180404	2018/04/04	2018/04/11	SW8270C SIM	j (estimated)	Exceeds laboratory calibration range
ARA34	BW 28-02S_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	BW 28-02S_20180404	2018/04/04	2018/04/19	SW6850	j (estimated)	RPD between parent and duplicate sample outside criteria
ARA34	BW 28-04D_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	BW 28-04D_20180403	2018/04/03	2018/04/18	SW6850		

Table 1: Sample Identification (April 2018 – SOW #16) (cont.)

Lab Report	Sample ID	Sample Date	Analysis Date	Method	Qualifier	Qualifier Summary
ARA34	BW 79-02S_20180404	2018/04/04	2018/04/11	SW8270C SIM		
ARA34	BW 79-02S_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	BW 79-02S_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	BW CG-01D_20180404	2018/04/04	2018/04/14	SW8260B	j (estimated) - cis-1,2-DCE	Result detected in duplicate sample
ARA34	BW CG-01D_20180404	2018/04/04	2018/04/19	SW6850		
ARA34	BW CM-01S_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	BW CM-01S_20180404	2018/04/04	2018/04/19	SW6850		
ARA34	BW TTU-03D_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	BW TTU-03D_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	DUP-01_20180404	2018/04/04	2018/04/14	SW8260B	j (estimated) - cis-1,2-DCE	Result not detected in parent sample
ARA34	DUP-01_20180404	2018/04/04	2018/04/19	SW6850		
ARA34	DUP-02_20180404	2018/04/04	2018/04/11	SW8270C SIM		
ARA34	DUP-02_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	DUP-02_20180404	2018/04/04	2018/04/18	SW6850	j (estimated)	RPD between parent and duplicate sample outside criteria
ARA34	DW 200-01_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	DW 200-01_20180403	2018/04/03	2018/04/15	SW6850		
ARA34	DW 213-01_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	DW SB-01_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	DW SB-01_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	DW SB-02_20180403	2018/04/03	2018/04/11	SW8270C SIM		
ARA34	DW SB-02_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	DW SB-02_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	DW-12_20180403	2018/04/03	2018/04/11	SW8270C SIM		
ARA34	DW-12_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	DW-12_20180403	2018/04/03	2018/04/15	SW6850		
ARA34	DW-13 MID_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	DW-13_20180404	2018/04/04	2018/04/11	SW8270C SIM		
ARA34	DW-13_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	DW-13_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	DW-15_20180403	2018/04/03	2018/04/12	SW8260B		
ARA34	DW-16_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	DW-18_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	DW-26I_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	DW-26I_20180404	2018/04/04	2018/04/19	SW6850		
ARA34	DW-28I_20180403	2018/04/03	2018/04/11	SW8270C SIM		
ARA34	DW-28I_20180403	2018/04/03	2018/04/13	SW8260B		

Table 1: Sample Identification (April 2018 – SOW #16) (cont.)

Lab Report	Sample ID	Sample Date	Analysis Date	Method	Qualifier	Qualifier Summary
ARA34	DW-28I_20180403	2018/04/03	2018/04/19	SW6850		
ARA34	DW-30S_20180403	2018/04/03	2018/04/12	SW8260B		
ARA34	DW-30S_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	DW-32I_20180403	2018/04/03	2018/04/11	SW8270C SIM		
ARA34	DW-32I_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	DW-72B_20180403	2018/04/03	2018/04/11	SW8270C SIM		
ARA34	DW-72B_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	EB-01_20180404	2018/04/04	2018/04/11	SW8270C SIM		
ARA34	EB-01_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	EB-01_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	FB-01_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	FB-02_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	STR 04_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	STR 04_20180403	2018/04/03	2018/04/15	SW6850		
ARA34	SW 200-02_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW 200-02_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	SW 212-01_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW 212-01_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	SW 222-02_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW 222-02_20180403	2018/04/03	2018/04/15	SW6850		
ARA34	SW 28-41_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW 28-41_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	SW 40-07A_20180403	2018/04/03	2018/04/14	SW8260B		
ARA34	SW 40-07A_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	SW 40-57_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW 40-57_20180403	2018/04/03	2018/04/15	SW6850		
ARA34	SW 42-02_20180403	2018/04/03	2018/04/12	SW8260B		
ARA34	SW 42-02_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	SW 47-02_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW 47-02_20180403	2018/04/03	2018/04/18	SW6850		
ARA34	SW 5-04_20180404	2018/04/04	2018/04/11	SW8270C SIM		
ARA34	SW 5-04_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	SW 5-04_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	SW 74-07_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	SW 74-07_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	SW SB-03_20180403	2018/04/03	2018/04/11	SW8270C SIM		
ARA34	SW SB-03_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	SW SB-03_20180403	2018/04/03	2018/04/15	SW6850		
ARA34	SW TTU-03_20180404	2018/04/04	2018/04/13	SW8260B		
ARA34	SW TTU-03_20180404	2018/04/04	2018/04/18	SW6850		
ARA34	TB-01_20180403	2018/04/03	2018/04/13	SW8260B		
ARA34	TB-02_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	WEST 01_20180404	2018/04/04	2018/04/14	SW8260B		
ARA34	WEST 01_20180404	2018/04/04	2018/04/18	SW6850		
ARA35	BW 14-02S_20180405	2018/04/05	2018/04/16	SW8260B		
ARA35	BW 14-02S_20180405	2018/04/05	2018/04/19	SW6850		

Table 1: Sample Identification (April 2018 – SOW #16) (cont.)

Lab Report	Sample ID	Sample Date	Analysis Date	Method	Qualifier	Qualifier Summary
ARA35	BW 45-03S_20180405	2018/04/05	2018/04/11	SW6850	u (non-detect)	Method blank detection
ARA35	BW 45-03S_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	BW 78-12D_20180405	2018/04/05	2018/04/18	SW6850		
ARA35	DUP-03_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	DUP-03_20180405	2018/04/05	2018/04/14	SW6850		
ARA35	DW 76-01_20180405	2018/04/05	2018/04/11	SW8270C SIM		
ARA35	DW 76-01_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	DW 76-01_20180405	2018/04/05	2018/04/14	SW6850		
ARA35	DW-20_20180405	2018/04/05	2018/04/16	SW8260B		
ARA35	DW-20_20180405	2018/04/05	2018/04/18	SW6850		
ARA35	DW-23_20180405	2018/04/05	2018/04/11	SW6850		
ARA35	DW-23_20180405	2018/04/05	2018/04/11	SW8270C SIM		
ARA35	DW-23_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	DW-28D_20180405	2018/04/05	2018/04/11	SW6850		
ARA35	DW-28D_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	DW-29S_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	DW-29S_20180405	2018/04/05	2018/04/14	SW6850		
ARA35	EB-02_20180405	2018/04/05	2018/04/11	SW6850	u (non-detect)	Method blank detection
ARA35	EB-02_20180405	2018/04/05	2018/04/11	SW8270C SIM		
ARA35	EB-02_20180405	2018/04/05	2018/04/16	SW8260B		
ARA35	FB-03_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	IW-6_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	IW-6_20180405	2018/04/05	2018/04/14	SW6850		
ARA35	STR 40-15_20180405	2018/04/05	2018/04/11	SW6850		
ARA35	STR 40-15_20180405	2018/04/05	2018/04/13	SW8260B		
ARA35	TB-03_20180405	2018/04/05	2018/04/16	SW8260B		

DUP = duplicate sample
FB = field blank sample
EB = equipment blank sample
TB = trip blank sample

TRC Environmental Corporation
Data Validation Checklist

Project: Sequa Corporation, Gainesville, Virginia
Sampling Event Description: April 2018 - SOW #16
Reviewer: Curtis S. Kugler, Data Validation Coordinator
Sample Delivery Groups: ARA34 and ARA35
Laboratory Name: Lancaster – Lancaster, PA
Checklist Completion Date: May 29, 2018

Note: "X" – Applies; "--" – Does Not Apply

1.0	**Sample Report Completeness**	
This Section provides a checklist of important components of data reports. If the report is incomplete, it may be necessary to halt data validation procedures until all missing information is provided.		
1.1	Review any discrepancies between the chain-of-custody (COC) and submitted sampling data.	X
1.2	Presence of signed laboratory statement that attests to the validity of the data.	X
1.3	Presence of case narrative that summarizes QA/QC discrepancies and/or other problems.	X
1.4	Are COC forms present for all samples?	X
1.5	Review the COC forms, Sample Receipt form, or the Case Narrative for any problems with the sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data.	X
1.6	Were Custody Seals present and intact?	X
1.7	Is a Sample receipt form present?	X
2.0	**Holding Times**	
Technical holding times are an important component of assuring that data is valid and not biased from inappropriate handling procedures.		
2.1	**Holding Times – Volatile Organic Compounds**	
2.1.1	Are samples properly preserved? Check preservation requirements, chain-of-custody, and sample receipt form for discrepancies.	X
2.1.2	If samples were improperly preserved, or unpreserved, and the technical holding times were exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	X
2.1.3	If samples were properly preserved, but technical holding times were exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	X
2.1.4	If technical holding times are greatly exceeded (>2x the time requirement) upon analysis or re-analysis then the reviewer may use professional judgment to qualify all non-detected compounds as "R" rejected and all positive results as "J" estimated.	X

2.2	**Holding Times – Semi-Volatile Organic Compounds**	
2.2.1	If technical holding times are exceeded, qualify all positive results for affected samples as “J” estimated and all non-detected results as “UJ” estimated undetected.	X
2.2.2	If holding times are greatly exceeded (>2x the time requirement), the reviewer may use professional judgment to qualify all non-detected compounds as “R” rejected and all positive results as “J” estimated.	X
2.3	**Holding Times Inorganic Compounds**	
2.3.1	Review whether samples were properly preserved (4 degrees Celsius for solids: acid preservation for aqueous).	-
2.3.2	If samples were improperly preserved and the holding times were exceeded, qualify all positive results for affected samples as “J” estimated and all non-detected results as “UJ” estimated undetected.	-
2.3.3	If samples were properly preserved, but technical holding times were exceeded, qualify all positive results for affected samples as “J” estimated and all non-detected results as “UJ” estimated undetected.	-
2.3.4	If holding times are greatly exceeded (>2x requirement), the reviewer may use professional judgment to qualify all non-detect compounds as “R” rejected and all positive results as “J” estimated.	-
2.4	**Holding Times – pH**	
2.4.1	If technical holding times are exceeded the reviewer may use professional judgment to qualify data as “R” rejected or “J” estimated.	X
3.0	**Quality Assurance Summary Data Review**	
VOC Surrogate Compound Recovery – Surrogate compounds are spiked compounds of known composition that are added to samples and blanks. The recovery of surrogate compounds allows an assessment interference. VOC surrogate recoveries are used with other QA/QC data to qualify sample results and to justify laboratory re-analysis.		
3.1.1	Were surrogate recoveries present for each batch?	X
3.1.2	Were any outliers marked correctly (based upon the laboratory’s criteria)?	X
3.1.3	If any surrogate compound was out of compliance was re-analysis performed to confirm matrix interference?	X
3.2	**SVOC Surrogate Compound Recovery – Surrogate compounds are spiked compounds of known composition that are added to samples and blanks. The recovery of surrogate compounds allows an assessment of matrix interference. SVOC analyses include compounds that can be divided into two classes: acid compounds and base/neutral compounds. Each class has a specific assigned set of surrogate compounds.**	
3.2.1	Are the surrogate recovery data present for each batch (method and matrix), including TCLP?	X
3.2.2	Were any outliers marked correctly?	X
3.2.3	If any two surrogate compounds in either the acid or base/neutral classes were out of compliance, was re-analysis performed to confirm a matrix interference? Note: Check the report narrative for an indication of re-analysis.	X
3.2.4	If any one surrogate compound has a recovery of less than 10% in either the acid or base/neutral classes, check for indications that re-analysis was performed to confirm a matrix interference?	X

3.2.5	Based on the findings, qualify data in either the acid or base/neutral classes with the following criteria: Note: Qualification may not be appropriate for TCLP data. Best professional judgment may be used to qualify data. Action: If two surrogates in a particular class are above the upper control limit, all positive results, for that fraction, in that class should be qualified as "J." If any two surrogates in a particular class have recoveries less than the lower criteria, but the recovery is greater than or equal to 10%, all detected compounds, for that fraction, should be qualified as "J." If any surrogate in a particular class has recoveries less than 10%, all detected compounds, for that fraction, should be qualified as "J" estimated and all non detected compounds as "R" rejected.	X
3.3	**Quality Assurance Summary Review – Matrix Spike/Matrix Spike Duplicates**	
Matrix spike and matrix spike duplicates are performed to assess method precision for VOC and SVOC analyses. Matrix spikes and duplicates are required for every batch of samples (every 20 - 30 samples). The reviewer should be aware that MS/MSD are batch specific not sample specific.		
3.3.1	Is matrix spike/matrix spike duplicate recovery data present?	X
3.3.2	Were any VOC spike recoveries are outside the QC limits?	X
3.3.3	Check RPDs for matrix spike and matrix spike duplicate recoveries.	X
3.4	**Matrix Spike/Matrix Spike Duplicates, SVOC**	
3.4.1	Is matrix spike/matrix spike duplicate recovery data present?	X
3.4.2	Were any SVOC spike recoveries are outside the QC limits?	X
3.4.3	Check RPDs for matrix spike and matrix spike duplicate recoveries.	X
3.5	**Sample Specific**	
Metal Spike Recovery – Spikes are elements of known composition that are added to blanks and to samples that measure accuracy and precision of the analyses. At least one spike should be included for each batch of samples. Spike recovery criteria listed in this section are determined from U.S. EPA's National Functional Guidelines for Inorganic Data Review. The criteria applied by an individual laboratory may vary. The laboratory should be consulted and its QA/QC criteria supplied to the reviewer.		
3.5.1	Confirm that at least one spike sample was analyzed per batch and per matrix type.	-
3.5.2	Are all spike recoveries (except Hg and Ag) within control limits?	-
3.5.3	Based on the results of 3.5.2, if the sample results were <4x the spike amount and spike recoveries were out of criteria, a post-digestion spike should be analyzed. Note: Post-digestion spikes are not required for Ag or Hg. The post digestion spike confirms a matrix interference and should not be used for qualification.	-
3.5.4	Are any Aqueous spike recoveries (pre and post digestion): 1. Less than 30%? 2. Between 30% and 74%? 3. Between 126% and 150%? 4. Greater than 150%?	-
3.5.5	Are any soil/solid/waste spike recoveries (pre and post digestion): 1. Less than 10%? 2. Between 10% and 74%? 3. Between 126% and 200%? 4. Greater than 200%?	-
3.5.6	If the pre-digestion spike was outside the QC limits for Atomic Adsorption furnace analysis (e.g. SW-846 methods in the 7000 series), was a post-digestion spike performed?	-

3.5.7	Based on the results from 3.5.6, were the post-digestion spike recoveries within the quality control range (75% to 125%)?	-
4.0	**Blank Data Review**	
Blank Data – Laboratory blanks are used to assess whether contamination from the laboratory, reagents or other samples exists and whether this contamination can bias sample results. The qualification of sample results will depend upon the magnitude of blank contamination.		
4.1	**Blank Summary Review – VOC**	
4.1.1	Is the method blank summary data present for each batch (method and matrix), including TCLP?	X
4.1.2	Is there an indication that the samples associated with that blank were diluted?	X
4.1.3	Check field/trip/rinsate blanks for any positive results for volatile target analytes.	X
4.1.4	Check method blanks for VOCs.	X
4.2	**Blank Summary Review – SVOC**	
4.2.1	Is the method blank summary data present for each batch (method and matrix), including TCLP?	X
4.2.2	Check for dilution associated with that blank.	X
4.2.3	Check field/trip/rinsate blanks for any positive results for semi-volatile target analytes.	X
4.2.4	Check method blanks for SVOCs.	X
4.3	**Blank Summary Review – Metals**	
4.3.1	Were the method blank summary data present for each batch (method and matrix), including TCLP?	-
4.3.2	Check for detections in blank.	-

MEMORANDUM

TRC Environmental Corporation
11231 Cornell Park Drive
Cincinnati, Ohio 45242
513-489-2255 Fax: 513-489-2533

TO: Geoffrey S. King, Senior Project Manager

FROM: Curtis S. Kugler, Data Validation Coordinator

DATE: November 5, 2018

SUBJECT: Sequa Corporation
Atlantic Research Corporation, Gainesville, Virginia
Fall 2018 Ground Water Sampling and Re-Sampling Events – SOW #17
Eurofins/Lancaster Laboratories Group Numbers: ARA36 and ARA 37

PROJECT NO.: 229931.0000.0003

The following details an analytical data validation for ground water collected during October and December 2018 at the Atlantic Research Corporation located in Gainesville, Virginia. This sampling event was associated with the Atlantic Research Corporation, *Groundwater Monitoring and Well Reduction Plan*, dated July 18, 2017. The environmental samples are identified in Tables 1 and 2 and were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (U.S. EPA) Method SW846-8260B, perchlorate by U.S. EPA Method SW846-6850, and semi-volatiles (SVOC 1,4-dioxane only) by U.S. EPA Method SW846-8270C. Eurofins/Lancaster Laboratories (Lancaster) located in Lancaster, Pennsylvania performed all analyses. During the October sampling event, one cooler of samples was lost in shipment. A re-sampling event was conducted in December due to the loss of the cooler and sample containers.

This data quality assessment and validation process followed the procedures presented in Section 7.2 of the Quality Assurance Project Plan (QAPP) for the Atlantic Research Corporation. This process included the completion of a Data Validation Checklist, which is summarized below.

The analytical quality assessment and validation process included the completion of a Data Validation Checklist, which is attached and summarized below. The United States Environmental Protection Agency, *U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* and the *U.S. EPA Contract Laboratory Program, National Functional Guidelines for Superfund Inorganic Data Review* was utilized as guidance to complete the validation of this data set.

Overall Assessment

The data that were collected during implementation of SOW #17 exhibited acceptable levels of precision and accuracy and are usable for intended purposes with the exceptions noted herein. The following discussion and attached checklist support this conclusion.

1.0 Sample Report Completeness

Eurofins provided all necessary components of the sample report included in a Type I Data Package (level III) for data validation purposes. The components included the following.

- Date of issuance
- Laboratory analysis performed
- Any deviations from intended analytical strategy
- Laboratory batch number
- Numbers of samples and respective matrices
- QC procedures utilized and also references to the acceptance criteria
- Laboratory report contents
- Project name and number
- Condition of samples "as-received"
- Discussion of whether or not sample holding times were met
- Discussion of technical problems or other observations which may have created analytical difficulties
- Discussion of any laboratory QC checks which failed to meet project criteria
- Signature of laboratory QA Manager
- Case narrative for each analyzed batch of samples
- Summary page indicating dates of analyses for samples and laboratory QC checks
- Cross referencing of laboratory sample to project sample identification numbers
- Description of data qualifiers to be used
- Sample preparation and analyses for samples
- Sample results
- MS/MSD recoveries, laboratory control samples, method blank results, calibration check compounds, and system performance check compound results
- Chain-of-custody

2.0 Holding Time Periods

As indicated by the sample collection and analysis dates on the chain-of-custody forms and the analytical report provided by Eurofins, all samples were prepared and analyzed within the required holding time period.

3.0 Quality Assurance

System Monitoring Compounds/Surrogate Spikes
Laboratory performance on individual samples for organic analysis was monitored by using percent recoveries of system monitoring compounds/surrogate spikes. The surrogate recoveries for the environmental and quality assurance/quality control (QA/QC) samples met the acceptance criteria.

Matrix Spike/Matrix Spike Duplicate (MS/MSD Results)
To assess long-term accuracy and precision of the analytical methods on sample matrices, MS/MSD percent recoveries and the relative percent difference (RPD) of the recoveries were determined by Lancaster. The MS/MSD samples met the acceptance criteria.

Laboratory Control Sample (LCS)
The laboratory control samples percent recoveries were examined to assess the overall performance and the accuracy of laboratory procedures. The LCS samples met the acceptance criteria in report ARA 36. The relative percent difference (RPD) of the LCS/LCSD for 1,4-dioxane is outside of specification in report ARA-37. The calculated RPD of 34% exceeds the laboratory RPD maximum of 30%. 1,4-dioxane is samples DW SB-02 and DC-13 is qualified "j" (estimated) by TRC based on the RPD outside of specification.

Method Blank Samples
Contamination of the environmental samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of method blank samples. The reported method blank results for the environmental and quality assurance/quality control (QA/QC) samples met the acceptance criteria.

4.0 Field Quality Assurance/Quality Control (QA/QC)

Field QA/QC
The field QA/QC samples collected consisted of one trip blank, one equipment blank sample, one field blank sample and one duplicate sample collected at SWSB-03/100918 for report ARA 36. The field QA/QC samples met the acceptance criteria in report ARA 37.

The field QA/QC samples collected consisted of one trip blank and one duplicate sample collected at SWSB-03 for report ARA 37. The calculated RPD for 1,4-dioxane between the parent sample and duplicate sample is 50% which exceeds the criteria. 1,4-dioxane is qualified "j" (estimated) in both samples by TRC.

General Comments

Samples that contained results between the Lancaster method detection limit (MDL) and the reporting limit (RL) were qualified "J" (estimated) by Eurofins. Results between the MDL and/or below the RL indicate the possibility for false-positive or misidentification. All "J" qualified results were reviewed with no action taken.

The data that was collected during this Fall 2018 – SOW #17 ground water sampling event exhibited acceptable levels of precision and accuracy and are usable for intended purposes with the exceptions noted herein.

Samples were collected in October for 1,4-dioxane for each sampling location but only reported for two sampling locations due to the cooler being lost in transit by Fed-Ex.

Table 1: Sample Identification (October 2018 – SOW #17)

SAMPLE_DATE	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**
SYS_SAMPLE_CODE	DUP-01/100918	TB-01/100918	SW200-02/100918	DW200-01/100918	SW212-01/100918	FB-01/100918
LAB_SAMPLE_ID	9845718	9845726	9845713	9845719	9845714	9845724
SAMPLE_TYPE_CODE	FD	TB	N	N	N	FB
MATRIX_CODE	WG	WQ	WG	WG	WG	WQ
CHEMICAL_NAME	**TRC Qualifier**					
Perchlorate	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--
Benzene	--	--	--	--	--	--

Table 1: Sample Identification (October 2018 – SOW #17) (cont.)

SAMPLE_DATE	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**
SYS_SAMPLE_CODE	DUP-01/100918	TB-01/100918	SW200-02/100918	DW200-01/100918	SW212-01/100918	FB-01/100918
LAB_SAMPLE_ID	9845718	9845726	9845713	9845719	9845714	9845724
SAMPLE_TYPE_CODE	FD	TB	N	N	N	FB
MATRIX_CODE	WG	WQ	WG	WG	WG	WQ
CHEMICAL_NAME	**TRC Qualifier**					
Carbon tetrachloride	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--
1,4-Dioxane	--	--	--	--	--	--
SAMPLE_DATE	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**	**10/9/2018**
SYS_SAMPLE_CODE	DWSB-02/100918	DW-12/100918	STR-04/100918	SWSB-03/100918	DWSB-01/100918	RIN-01/100918
LAB_SAMPLE_ID	9845721	9845722	9845723	9845715	9845720	9845725
SAMPLE_TYPE_CODE	N	N	N	N	N	EB
MATRIX_CODE	WG	WG	WG	WG	WG	WQ
CHEMICAL_NAME	**TRC Qualifier**					
Perchlorate	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--
Benzene	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--
1,4-Dioxane	--	--	--	--	--	--

Table 1: Sample Identification (December 2018 – SOW #17)

SYS_LOC_CODE	DW SB-02	DW-13	DW-13 MID	SW 222-02	SW SB-03	SW SB-03	TRIP BLANK
SAMPLE_DATE	12/18/2018	12/18/2018	12/18/2018	12/18/2018	12/18/2018	12/18/2018	12/18/2018
SYS_SAMPLE_CODE	DWSB-02_121818	DW-13_121818	DW-13 MID_121818	SW222-02_121818	DUP-01_121818	SWSB-03_121818	TB-01_121818
PARENT_SAMPLE_CODE					DUP-01_121818		
SAMPLE_TYPE_CODE	N	N	N	N	FD	N	TB
MATRIX_CODE	WG	WG	WG	WG	WG	WG	WQ
CHEMICAL_NAME	**TRC Qualifier**						
Perchlorate	na	--	na	--	na	na	na
1,1,1-Trichloroethane	na	--	--	--	na	na	--
1,1,2-Trichloroethane	na	--	--	--	na	na	--
1,1-Dichloroethane	na	--	--	--	na	na	--
1,1-Dichloroethene	na	--	--	--	na	na	--
1,2,3-Trichloropropane	na	--	--	--	na	na	--
1,2-Dichloroethane	na	--	--	--	na	na	--
Benzene	na	--	--	--	na	na	--
Carbon tetrachloride	na	--	--	--	na	na	--
Chloroethane	na	--	--	--	na	na	--
cis-1,2-Dichloroethene	na	--	--	--	na	na	--
Methylene chloride	na	--	--	--	na	na	--
Tetrachloroethene	na	--	--	--	na	na	--
Trichloroethene	na	--	--	--	na	na	--
Vinyl chloride	na	--	--	--	na	na	--
1,4-Dioxane	j	j	na	na	j	j	na

j - estimated value
na - not analyzed

TRC Environmental Corporation
Data Validation Checklist

Project: Sequa Corporation, Gainesville, Virginia
Sampling Event Description: Fall 2018 - SOW #17
Reviewer: Curtis S. Kugler, Data Validation Coordinator
Sample Delivery Groups: ARA36 and ARA 37
Laboratory Name: Lancaster – Lancaster, PA
Checklist Completion Date: November 5, 2018 and January 29, 2019

Note: "X" – Applies; "--" – Does Not Apply

1.0	**Sample Report Completeness**	
This Section provides a checklist of important components of data reports. If the report is incomplete, it may be necessary to halt data validation procedures until all missing information is provided.		
1.1	Review any discrepancies between the chain-of-custody (COC) and submitted sampling data.	X
1.2	Presence of signed laboratory statement that attests to the validity of the data.	X
1.3	Presence of case narrative that summarizes QA/QC discrepancies and/or other problems.	X
1.4	Are COC forms present for all samples?	X
1.5	Review the COC forms, Sample Receipt form, or the Case Narrative for any problems with the sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data.	X
1.6	Were Custody Seals present and intact?	X
1.7	Is a Sample receipt form present?	X
2.0	**Holding Times**	
Technical holding times are an important component of assuring that data is valid and not biased from inappropriate handling procedures.		
2.1	**Holding Times – Volatile Organic Compounds**	
2.1.1	Are samples properly preserved? Check preservation requirements, chain-of-custody, and sample receipt form for discrepancies.	X
2.1.2	If samples were improperly preserved, or unpreserved, and the technical holding times were exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	X
2.1.3	If samples were properly preserved, but technical holding times were exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	X
2.1.4	If technical holding times are greatly exceeded (>2x the time requirement) upon analysis or re-analysis then the reviewer may use professional judgment to qualify all non-detected compounds as "R" rejected and all positive results as "J" estimated.	X

2.2	**Holding Times – Semi-Volatile Organic Compounds**	
2.2.1	If technical holding times are exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	X
2.2.2	If holding times are greatly exceeded (>2x the time requirement), the reviewer may use professional judgment to qualify all non-detected compounds as "R" rejected and all positive results as "J" estimated.	X
2.3	**Holding Times Inorganic Compounds**	
2.3.1	Review whether samples were properly preserved (4 degrees Celsius for solids: acid preservation for aqueous).	-
2.3.2	If samples were improperly preserved and the holding times were exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	-
2.3.3	If samples were properly preserved, but technical holding times were exceeded, qualify all positive results for affected samples as "J" estimated and all non-detected results as "UJ" estimated undetected.	-
2.3.4	If holding times are greatly exceeded (>2x requirement), the reviewer may use professional judgment to qualify all non-detect compounds as "R" rejected and all positive results as "J" estimated.	-
2.4	**Holding Times – pH**	
2.4.1	If technical holding times are exceeded the reviewer may use professional judgment to qualify data as "R" rejected or "J" estimated.	X
3.0	**Quality Assurance Summary Data Review**	
VOC Surrogate Compound Recovery – Surrogate compounds are spiked compounds of known composition that are added to samples and blanks. The recovery of surrogate compounds allows an assessment interference. VOC surrogate recoveries are used with other QA/QC data to qualify sample results and to justify laboratory re-analysis.		
3.1.1	Were surrogate recoveries present for each batch?	X
3.1.2	Were any outliers marked correctly (based upon the laboratory's criteria)?	X
3.1.3	If any surrogate compound was out of compliance was re-analysis performed to confirm matrix interference?	X
3.2	**SVOC Surrogate Compound Recovery – Surrogate compounds are spiked compounds of known composition that are added to samples and blanks. The recovery of surrogate compounds allows an assessment of matrix interference. SVOC analyses include compounds that can be divided into two classes: acid compounds and base/neutral compounds. Each class has a specific assigned set of surrogate compounds.**	
3.2.1	Are the surrogate recovery data present for each batch (method and matrix), including TCLP?	X
3.2.2	Were any outliers marked correctly?	X
3.2.3	If any two surrogate compounds in either the acid or base/neutral classes were out of compliance, was re-analysis performed to confirm a matrix interference? Note: Check the report narrative for an indication of re-analysis.	X
3.2.4	If any one surrogate compound has a recovery of less than 10% in either the acid or base/neutral classes, check for indications that re-analysis was performed to confirm a matrix interference?	X

3.2.5	Based on the findings, qualify data in either the acid or base/neutral classes with the following criteria: Note: Qualification may not be appropriate for TCLP data. Best professional judgment may be used to qualify data. Action: If two surrogates in a particular class are above the upper control limit, all positive results, for that fraction, in that class should be qualified as "J." If any two surrogates in a particular class have recoveries less than the lower criteria, but the recovery is greater than or equal to 10%, all detected compounds, for that fraction, should be qualified as "J." If any surrogate in a particular class has recoveries less than 10%, all detected compounds, for that fraction, should be qualified as "J" estimated and all non detected compounds as "R" rejected.	X
3.3	**Quality Assurance Summary Review – Matrix Spike/Matrix Spike Duplicates**	
Matrix spike and matrix spike duplicates are performed to assess method precision for VOC and SVOC analyses. Matrix spikes and duplicates are required for every batch of samples (every 20 - 30 samples). The reviewer should be aware that MS/MSD are batch specific not sample specific.		
3.3.1	Is matrix spike/matrix spike duplicate recovery data present?	X
3.3.2	Were any VOC spike recoveries are outside the QC limits?	X
3.3.3	Check RPDs for matrix spike and matrix spike duplicate recoveries.	X
3.4	**Matrix Spike/Matrix Spike Duplicates, SVOC**	
3.4.1	Is matrix spike/matrix spike duplicate recovery data present?	X
3.4.2	Were any SVOC spike recoveries are outside the QC limits?	X
3.4.3	Check RPDs for matrix spike and matrix spike duplicate recoveries.	X
3.5	**Sample Specific**	
Metal Spike Recovery – Spikes are elements of known composition that are added to blanks and to samples that measure accuracy and precision of the analyses. At least one spike should be included for each batch of samples. Spike recovery criteria listed in this section are determined from U.S. EPA's National Functional Guidelines for Inorganic Data Review. The criteria applied by an individual laboratory may vary. The laboratory should be consulted and its QA/QC criteria supplied to the reviewer.		
3.5.1	Confirm that at least one spike sample was analyzed per batch and per matrix type.	-
3.5.2	Are all spike recoveries (except Hg and Ag) within control limits?	-
3.5.3	Based on the results of 3.5.2, if the sample results were <4x the spike amount and spike recoveries were out of criteria, a post-digestion spike should be analyzed. Note: Post-digestion spikes are not required for Ag or Hg. The post digestion spike confirms a matrix interference and should not be used for qualification.	-
3.5.4	Are any Aqueous spike recoveries (pre and post digestion): 1. Less than 30%? 2. Between 30% and 74%? 3. Between 126% and 150%? 4. Greater than 150%?	-
3.5.5	Are any soil/solid/waste spike recoveries (pre and post digestion): 1. Less than 10%? 2. Between 10% and 74%? 3. Between 126% and 200%? 4. Greater than 200%?	-
3.5.6	If the pre-digestion spike was outside the QC limits for Atomic Adsorption furnace analysis (e.g. SW-846 methods in the 7000 series), was a post-digestion spike performed?	-

3.5.7	Based on the results from 3.5.6, were the post-digestion spike recoveries within the quality control range (75% to 125%)?	-
4.0	**Blank Data Review**	
Blank Data – Laboratory blanks are used to assess whether contamination from the laboratory, reagents or other samples exists and whether this contamination can bias sample results. The qualification of sample results will depend upon the magnitude of blank contamination.		
4.1	**Blank Summary Review – VOC**	
4.1.1	Is the method blank summary data present for each batch (method and matrix), including TCLP?	X
4.1.2	Is there an indication that the samples associated with that blank were diluted?	X
4.1.3	Check field/trip/rinsate blanks for any positive results for volatile target analytes.	X
4.1.4	Check method blanks for VOCs.	X
4.2	**Blank Summary Review – SVOC**	
4.2.1	Is the method blank summary data present for each batch (method and matrix), including TCLP?	X
4.2.2	Check for dilution associated with that blank.	X
4.2.3	Check field/trip/rinsate blanks for any positive results for semi-volatile target analytes.	X
4.2.4	Check method blanks for SVOCs.	X
4.3	**Blank Summary Review – Metals**	
4.3.1	Were the method blank summary data present for each batch (method and matrix), including TCLP?	-
4.3.2	Check for detections in blank.	-

APPENDIX D

OTHER LABORATORY INFORMATION – VELAP CERTIFICATES (ON CD)

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460182
Eurofins Lancaster Laboratories Environmental, LLC

2425 New Holland Pike
Lancaster, PA 17601

Owner: EUROFINS SCIENTIFIC
Responsible Official: DUANE LUCKENBILL

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **June 15, 2018**
Expiration Date: **June 14, 2019**
Certificate # 9756

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460182
Eurofins Lancaster Laboratories Environmental, LLC

2425 New Holland Pike
Lancaster, PA 17601

Owner: EUROFINS SCIENTIFIC
Responsible Official: DUANE LUCKENBILL

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **September 5, 2017**
Expiration Date: **June 14, 2018**
Certificate # 9388

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

AIR

METHOD	ANALYTE	PRIMARY
EPA 18	TOTAL GASEOUS ORGANIC COMPOUNDS	LA DEQ
EPA TO-14A 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-14A 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	BENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-14A 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-14A 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-14A 2nd Ed.	VINYL CHLORIDE (CHLOROETHANE)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	BROMODICHLOROMETHANE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ

METHOD	ANALYTE	PRIMARY
EPA 25	TOTAL GASEOUS NONMETHANE ORGANIC COMPOUNDS (TGNMO)	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-14A 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	STYRENE	LA DEQ
EPA TO-14A 2nd Ed.	TOLUENE	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	CARBON DISULFIDE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

AIR

METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-15 2nd Ed.	VINYL CHLORIDE (CHLOROETHANE)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ

METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed.	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	PROPYLENE (PROPENE)	LA DEQ
EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	VINYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	LA DEQ			

DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CALCIUM	PA	EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA	EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA	EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA	EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	SODIUM	PA	EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA	EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA	EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA	EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	LEAD	PA	EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SELENIUM	PA	EPA 200.8 REV 5.4	THALLIUM	PA
EPA 245.1 REV 3	MERCURY	PA	EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA	EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 335.4 REV 1.0	CYANIDE	PA	EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA	EPA 353.2 REV 2	NITRITE AS N	PA
EPA 504.1 REV 1.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 504.1 REV 1.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 507 REV 2.1	ALACHLOR	PA	EPA 507 REV 2.1	ATRAZINE	PA
EPA 507 REV 2.1	SIMAZINE	PA	EPA 515.1 REV 4	2,4-D	PA
EPA 515.1 REV 4	DALAPON	PA	EPA 515.1 REV 4	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 515.1 REV 4	PENTACHLOROPHENOL	PA	EPA 515.1 REV 4	PICLORAM	PA
EPA 515.1 REV 4	SILVEX (2,4,5-TP)	PA	EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA	EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA	EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA
EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA	EPA 524.2 REV 4.1	BENZENE	PA
EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA	EPA 524.2 REV 4.1	BROMOFORM	PA
EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA	EPA 524.2 REV 4.1	CHLOROBENZENE	PA
EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA	EPA 524.2 REV 4.1	CHLOROFORM	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 524.2 REV 4.1	TOTAL TRIHALOMETHANES (TTHMS)	PA
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA
EPA 525.2 REV 2	ATRAZINE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 525.2 REV 2	ENDRIN	PA
EPA 525.2 REV 2	HEPTACHLOR	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA
SM 2130 B-2001	TURBIDITY	PA
SM 2510 B-1997	CONDUCTIVITY	PA
SM 4500-F⁻ C-1997	FLUORIDE	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 9215 B-1994	HETEROTROPHIC PLATE COUNT	PA
SM 9223 COLILERT P/A	TOTAL COLIFORMS	PA

METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	ETHYLBENZENE	PA
EPA 524.2 REV 4.1	STYRENE	PA
EPA 524.2 REV 4.1	TOLUENE	PA
EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA
EPA 524.2 REV 4.1	VINYL CHLORIDE (CHLOROETHANE)	PA
EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	SIMAZINE	PA
EPA 531.1 REV 3.1	OXAMYL	PA
SM 2320 B-1997	ALKALINITY AS CACO3	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-H+ B-2000	PH	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA
SM 9223 COLILERT P/A	ESCHERICHIA COLI	PA

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 160.4	RESIDUE-VOLATILE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 1664 A	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
EPA 1666 A	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 1666 A	ETHYL ACETATE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA
EPA 1666 A	METHYL FORMATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA
EPA 1666 A	N-HEPTANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 1666 A	XYLENE (TOTAL)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1631 E	MERCURY	PA
EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA
EPA 1666 A	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA
EPA 1671 A	2-METHOXYETHANOL (METHYL CELLOSOLVE)	PA
EPA 1671 A	DIETHYLAMINE	PA
EPA 1671 A	ETHANOL	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA
EPA 180.1 REV 2	TURBIDITY	PA
EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	ARSENIC	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA
EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	LEAD	PA
EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SELENIUM	PA
EPA 200.7 REV 4.4	SODIUM	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1671 A	ACETONITRILE	PA
EPA 1671 A	DIMETHYL SULFOXIDE	PA
EPA 1671 A	METHANOL	PA
EPA 1671 A	TRIETHYLAMINE	PA
EPA 200.2 REV 2.8	PREP: SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS	PA
EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	POTASSIUM	PA
EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	THALLIUM	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	TIN	PA
EPA 200.7 REV 4.4	VANADIUM	PA
EPA 200.8 REV 5.4	ALUMINUM	PA
EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	MANGANESE	PA
EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SILVER	PA
EPA 200.8 REV 5.4	VANADIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	BORON	PA
EPA 200.8 REV 5.4 - EXTENDED	IRON	PA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TIN	PA
EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 335.4 REV 1.0	CYANIDE	PA
EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA
EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	PA
EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA
EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND (COD)	PA
EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 B	ANTIMONY	PA
EPA 6010 B	BARIUM	PA
EPA 6010 B	BORON	PA

METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	COBALT	PA
EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	MOLYBDENUM	PA
EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	THALLIUM	PA
EPA 200.8 REV 5.4	ZINC	PA
EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA
EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA
EPA 3020 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL (TKN)	PA
EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA
EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRITE AS N	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 365.3	ORTHOPHOSPHATE AS P	PA
EPA 420.4 REV 1	TOTAL PHENOLICS	PA
EPA 6010 B	ALUMINUM	PA
EPA 6010 B	ARSENIC	PA
EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	CADMIUM	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6010 B	CALCIUM	PA
EPA 6010 B	COBALT	PA
EPA 6010 B	IRON	PA
EPA 6010 B	LITHIUM	PA
EPA 6010 B	MANGANESE	PA
EPA 6010 B	NICKEL	PA
EPA 6010 B	SELENIUM	PA
EPA 6010 B	SODIUM	PA
EPA 6010 B	THALLIUM	PA
EPA 6010 B	TITANIUM	PA
EPA 6010 B	ZINC	PA
EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ARSENIC	PA
EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	CADMIUM	PA
EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COPPER	PA
EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA
EPA 6010 C	MOLYBDENUM	PA
EPA 6010 C	POTASSIUM	PA
EPA 6010 C	SILVER	PA
EPA 6010 C	STRONTIUM	PA
EPA 6010 C	TIN	PA
EPA 6010 C	VANADIUM	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 602	ETHYLBENZENE	PA
EPA 602	XYLENE (TOTAL)	PA
EPA 6020 A	ANTIMONY	PA
EPA 6020 A	BARIUM	PA
EPA 6020 A	CADMIUM	PA
EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COPPER	PA
EPA 6020 A	LEAD	PA
EPA 6020 A	MANGANESE	PA
EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SILVER	PA
EPA 6020 A	THALLIUM	PA

METHOD	ANALYTE	PRIMARY
EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COPPER	PA
EPA 6010 B	LEAD	PA
EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	POTASSIUM	PA
EPA 6010 B	SILVER	PA
EPA 6010 B	STRONTIUM	PA
EPA 6010 B	TIN	PA
EPA 6010 B	VANADIUM	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	PA
EPA 6010 C	ANTIMONY	PA
EPA 6010 C	BARIUM	PA
EPA 6010 C	BORON	PA
EPA 6010 C	CALCIUM	PA
EPA 6010 C	COBALT	PA
EPA 6010 C	IRON	PA
EPA 6010 C	LITHIUM	PA
EPA 6010 C	MANGANESE	PA
EPA 6010 C	NICKEL	PA
EPA 6010 C	SELENIUM	PA
EPA 6010 C	SODIUM	PA
EPA 6010 C	THALLIUM	PA
EPA 6010 C	TITANIUM	PA
EPA 6010 C	ZINC	PA
EPA 602	BENZENE	PA
EPA 602	TOLUENE	PA
EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ARSENIC	PA
EPA 6020 A	BERYLLIUM	PA
EPA 6020 A	CALCIUM	PA
EPA 6020 A	COBALT	PA
EPA 6020 A	IRON	PA
EPA 6020 A	MAGNESIUM	PA
EPA 6020 A	NICKEL	PA
EPA 6020 A	SELENIUM	PA
EPA 6020 A	SODIUM	PA
EPA 6020 A	VANADIUM	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6020 A	ZINC	PA	EPA 6020 A - EXTENDED	BORON	PA
EPA 6020 A - EXTENDED	MOLYBDENUM	PA	EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TIN	PA	EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 608	4,4'-DDD	PA	EPA 608	4,4'-DDE	PA
EPA 608	4,4'-DDT	PA	EPA 608	ALDRIN	PA
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 608	AROCLOR-1016 (PCB-1016)	PA
EPA 608	AROCLOR-1221 (PCB-1221)	PA	EPA 608	AROCLOR-1232 (PCB-1232)	PA
EPA 608	AROCLOR-1242 (PCB-1242)	PA	EPA 608	AROCLOR-1248 (PCB-1248)	PA
EPA 608	AROCLOR-1254 (PCB-1254)	PA	EPA 608	AROCLOR-1260 (PCB-1260)	PA
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 608	CHLORDANE (TECH.)	PA
EPA 608	DELTA-BHC	PA	EPA 608	DIELDRIN	PA
EPA 608	ENDOSULFAN I	PA	EPA 608	ENDOSULFAN II	PA
EPA 608	ENDOSULFAN SULFATE	PA	EPA 608	ENDRIN	PA
EPA 608	ENDRIN ALDEHYDE	PA	EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608	HEPTACHLOR	PA	EPA 608	HEPTACHLOR EPOXIDE	PA
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	PA	EPA 622	AZINPHOS-METHYL (GUTHION)	PA
EPA 622	BOLSTAR (SULPROFOS)	PA	EPA 622	CHLORPYRIFOS	PA
EPA 622	DEMETON-O	PA	EPA 622	DEMETON-S	PA
EPA 622	DIAZINON	PA	EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 622	DISULFOTON	PA	EPA 622	ETHOPROP	PA
EPA 622	FENSULFOTHION	PA	EPA 622	FENTHION	PA
EPA 622	MERPHOS	PA	EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 622	MEVINPHOS	PA	EPA 622	NALED	PA
EPA 622	PHORATE	PA	EPA 622	STIROFOS (TETRACHLORVINPOS, GARDONA) (MIXED ISOMERS)	PA
EPA 624	1,1,1-TRICHLOROETHANE	PA	EPA 624	1,1,2,2-TETRACHLOROETHANE	PA
EPA 624	1,1,2-TRICHLOROETHANE	PA	EPA 624	1,1-DICHLOROETHANE	PA
EPA 624	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA	EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 624	1,2-DICHLOROPROPANE	PA	EPA 624	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 624	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA	EPA 624	2-CHLOROETHYL VINYL ETHER	PA
EPA 624	ACROLEIN (PROPENAL)	PA	EPA 624	ACRYLONITRILE	PA
EPA 624	BENZENE	PA	EPA 624	BROMODICHLOROMETHANE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624	BROMOFORM	PA
EPA 624	CHLOROBENZENE	PA
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624	CIS-1,3-DICHLOROPROPENE	PA
EPA 624	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 624	TOLUENE	PA
EPA 624	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	PA
EPA 625	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 625	2,4-DICHLOROPHENOL	PA
EPA 625	2,4-DINITROPHENOL	PA
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 625	2-CHLOROPHENOL	PA
EPA 625	2-METHYLPHENOL (O-CRESOL)	PA
EPA 625	3,3'-DICHLOROBENZIDINE	PA
EPA 625	4-CHLORO-3-METHYLPHENOL	PA
EPA 625	4-NITROPHENOL	PA
EPA 625	ACENAPHTHYLENE	PA
EPA 625	BENZIDINE	PA
EPA 625	BENZO(A)PYRENE	PA
EPA 625	BENZO(G,H,I)PERYLENE	PA
EPA 625	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 625	CHRYSENE	PA
EPA 625	DI-N-OCTYL PHTHALATE	PA
EPA 625	DIETHYL PHTHALATE	PA
EPA 625	FLUORANTHENE	PA
EPA 625	HEXACHLOROBENZENE	PA
EPA 625	HEXACHLOROCYCLOPENTADIENE	PA
EPA 625	INDENO(1,2,3-CD) PYRENE	PA

METHOD	ANALYTE	PRIMARY
EPA 624	CARBON TETRACHLORIDE	PA
EPA 624	CHLORODIBROMOMETHANE	PA
EPA 624	CHLOROFORM	PA
EPA 624	ETHYLBENZENE	PA
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 624	TRANS-1,2-DICHLOROETHENE	PA
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 624	VINYL CHLORIDE (CHLOROETHANE)	PA
EPA 625	1,2,4-TRICHLOROBENZENE	PA
EPA 625	2,4,6-TRICHLOROPHENOL	PA
EPA 625	2,4-DIMETHYLPHENOL	PA
EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625	2-CHLORONAPHTHALENE	PA
EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625	2-NITROPHENOL	PA
EPA 625	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 625	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625	ACENAPHTHENE	PA
EPA 625	ANTHRACENE	PA
EPA 625	BENZO(A)ANTHRACENE	PA
EPA 625	BENZO(B)FLUORANTHENE	PA
EPA 625	BENZO(K)FLUORANTHENE	PA
EPA 625	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625	BUTYL BENZYL PHTHALATE	PA
EPA 625	DI-N-BUTYL PHTHALATE	PA
EPA 625	DIBENZO(A,H) ANTHRACENE	PA
EPA 625	DIMETHYL PHTHALATE	PA
EPA 625	FLUORENE	PA
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 625	HEXACHLOROETHANE	PA
EPA 625	ISOPHORONE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 625	N-NITROSODI-N-PROPYLAMINE	PA
EPA 625	N-NITROSODIPHENYLAMINE	PA
EPA 625	NITROBENZENE	PA
EPA 625	PHENANTHRENE	PA
EPA 625	PYRENE	PA
EPA 625 - EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA
EPA 625 - EXTENDED	ANILINE	PA
EPA 625 - EXTENDED	N-DECANE	PA
EPA 625 - EXTENDED	PYRIDINE	PA
EPA 7196 A	CHROMIUM VI	PA
EPA 7470 A	MERCURY	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8015 B	ETHANOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	METHANOL	PA
EPA 8015 C	ETHANOL	PA
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 C	METHANOL	PA
EPA 8021 B	BENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA
EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	TOLUENE	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA
EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN KETONE	PA

METHOD	ANALYTE	PRIMARY
EPA 625	N-NITROSODIMETHYLAMINE	PA
EPA 625	NAPHTHALENE	PA
EPA 625	PENTACHLOROPHENOL	PA
EPA 625	PHENOL	PA
EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	PA
EPA 625 - EXTENDED	ACETOPHENONE	PA
EPA 625 - EXTENDED	CARBAZOLE	PA
EPA 625 - EXTENDED	N-OCTADECANE	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	O-XYLENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8141 A	ATRAZINE	PA
EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DIAZINON	PA
EPA 8141 A	DISULFOTON	PA
EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	MALATHION	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	NALED	PA
EPA 8141 A	PHORATE	PA
EPA 8141 A	SIMAZINE	PA

METHOD	ANALYTE	PRIMARY
EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 A - EXTENDED	KEPONE	PA
EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA
EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	ETHION	PA
EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENTHION	PA
EPA 8141 A	MERPHOS	PA
EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	RONNEL	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	ATRAZINE	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DISULFOTON	PA
EPA 8141 B	ETHION	PA
EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENTHION	PA
EPA 8141 B	MERPHOS	PA
EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	RONNEL	PA
EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4-D	PA
EPA 8151 A	DALAPON	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	MCPA	PA
EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA

METHOD	ANALYTE	PRIMARY
EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA
EPA 8141 B	CHLORPYRIFOS	PA
EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 B	ETHOPROP	PA
EPA 8141 B	FENSULFOTHION	PA
EPA 8141 B	MALATHION	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 B	NALED	PA
EPA 8141 B	PHORATE	PA
EPA 8141 B	SIMAZINE	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA
EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-DB	PA
EPA 8151 A	DICAMBA	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPP	PA
EPA 8151 A	PICLORAM	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	2,2-DICHLOROPROPANE	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 B	2-HEXANONE	PA
EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	BENZENE	PA
EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYLBENZENE	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 B	M+P-XYLENE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-PROPYLAMINE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-NITROPROPANE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA
EPA 8260 B	ACETONE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	DIETHYL ETHER	PA
EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE (CHLOROETHANE)	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	2-NITROPROPANE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA
EPA 8260 C	ACETONE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	N-HEXANE	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACRYLONITRILE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA
EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 C	BENZENE	PA
EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROETHANE	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL CHLORIDE (CHLOROETHANE)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	N-HEPTANE	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4-AMINOBIPHENYL	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROPHENOL	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NITROANILINE	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ANILINE	PA
EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHRYSENE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZOFURAN	PA
EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PHENACETIN	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACETOPHENONE	PA
EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DISULFOTON	PA
EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	KEPONE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENANTHRENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 C	PHENOL	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PYRENE	PA
EPA 8270 C	SAFROLE	PA
EPA 8270 C	THIOPHENOL (BENZENETHIOL)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PYRENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 C	PHORATE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRIDINE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4-AMINOBIPHENYL	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ANILINE	PA
EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 D	DISULFOTON	PA
EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	KEPONE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENOL	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PYRENE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	DIBENZO(A,H) PYRENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ OFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ OFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P -DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P -DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P -DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOF URAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8315 A	ACETALDEHYDE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHORATE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	SAFROLE	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZ O-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZ O-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZ OFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOF URAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOF URAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOF URAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOF URAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOF URAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFUR AN (2,3,7,8-TCDF)	PA
EPA 8315 A	BENZALDEHYDE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 A	NITROGLYCERIN	PA
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	3-NITROTOLUENE	PA
EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9012 B	TOTAL CYANIDE	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	CHLORIDE	PA
EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	SULFATE	PA
OIA-1677-09	AMENABLE CYANIDE	PA
RSK-175	ETHANE	PA
RSK-175	METHANE	PA
SM 2310 B-1997	ACIDITY, AS CACO3	PA

METHOD	ANALYTE	PRIMARY
EPA 8315 A	CROTONALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA
EPA 9012 A	TOTAL CYANIDE	PA
EPA 9040 C	PH	PA
EPA 9056 A	BROMIDE	PA
EPA 9056 A	FLUORIDE	PA
EPA 9056 A	NITRITE AS N	PA
EPA 9066	TOTAL PHENOLICS	PA
OIA-1677-09	FREE CYANIDE	PA
RSK-175	ETHENE (ETHYLENE)	PA
SM 2120 B-2001	COLOR	PA
SM 2320 B-1997	ALKALINITY AS CACO3	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
SM 2340 C-1997	TOTAL HARDNESS AS CACO3	PA
SM 2540 B-1997	RESIDUE-TOTAL (TS)	PA
SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	PA
SM 3500-CR B-2009	CHROMIUM VI	PA
SM 4500-F⁻ C-1997	FLUORIDE	PA
SM 4500-NH3 D-1997	AMMONIA AS N	PA
SM 4500-P F-1999	PHOSPHORUS, TOTAL	PA
SM 4500-SIO2 C-1997	SILICA AS SIO2	PA
SM 5210 B-2001	CARBONACEOUS BOD (CBOD)	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA

METHOD	ANALYTE	PRIMARY
SM 2510 B-1997	CONDUCTIVITY	PA
SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 F-1997	RESIDUE-SETTLEABLE	PA
SM 4500-F⁻ B-1997	FLUORIDE	PA
SM 4500-NH3 B-1997	AMMONIA AS N	PA
SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 4500-S2⁻ D-2000	SULFIDE	PA
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND (BOD)	PA
SM 5310 C-2000	TOTAL ORGANIC CARBON (TOC)	PA
SM 9222 D-1997	FECAL COLIFORMS	PA

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA
EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA
EPA 6010 B	ANTIMONY	PA
EPA 6010 B	BARIUM	PA
EPA 6010 B	BORON	PA
EPA 6010 B	CALCIUM	PA
EPA 6010 B	COBALT	PA
EPA 6010 B	IRON	PA
EPA 6010 B	LITHIUM	PA
EPA 6010 B	MANGANESE	PA
EPA 6010 B	NICKEL	PA
EPA 6010 B	SELENIUM	PA
EPA 6010 B	SODIUM	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 3540 C	PREP: SOXHLET EXTRACTION	PA
EPA 3550 B	PREP: ULTRASONIC EXTRACTION	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 B	ALUMINUM	PA
EPA 6010 B	ARSENIC	PA
EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	CADMIUM	PA
EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COPPER	PA
EPA 6010 B	LEAD	PA
EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	POTASSIUM	PA
EPA 6010 B	SILVER	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 6010 B	STRONTIUM	PA
EPA 6010 B	TIN	PA
EPA 6010 B	VANADIUM	PA
EPA 6010 B - EXTENDED	SULFUR	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	PA
EPA 6010 C	ANTIMONY	PA
EPA 6010 C	BARIUM	PA
EPA 6010 C	BORON	PA
EPA 6010 C	CALCIUM	PA
EPA 6010 C	COBALT	PA
EPA 6010 C	IRON	PA
EPA 6010 C	LITHIUM	PA
EPA 6010 C	MANGANESE	PA
EPA 6010 C	NICKEL	PA
EPA 6010 C	SELENIUM	PA
EPA 6010 C	SODIUM	PA
EPA 6010 C	THALLIUM	PA
EPA 6010 C	TITANIUM	PA
EPA 6010 C	ZINC	PA
EPA 6010 C - EXTENDED	THORIUM	PA
EPA 6020	BARIUM	PA
EPA 6020 - EXTENDED	URANIUM	PA
EPA 6020 A	ANTIMONY	PA
EPA 6020 A	BARIUM	PA
EPA 6020 A	CADMIUM	PA
EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COPPER	PA
EPA 6020 A	LEAD	PA
EPA 6020 A	MANGANESE	PA
EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SILVER	PA
EPA 6020 A	THALLIUM	PA
EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	URANIUM	PA
EPA 7196 A	CHROMIUM VI	PA
EPA 7471 A	MERCURY	PA
EPA 6010 B	THALLIUM	PA
EPA 6010 B	TITANIUM	PA
EPA 6010 B	ZINC	PA
EPA 6010 B - EXTENDED	THORIUM	PA
EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ARSENIC	PA
EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	CADMIUM	PA
EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COPPER	PA
EPA 6010 C	LEAD	PA
EPA 6010 C	MAGNESIUM	PA
EPA 6010 C	MOLYBDENUM	PA
EPA 6010 C	POTASSIUM	PA
EPA 6010 C	SILVER	PA
EPA 6010 C	STRONTIUM	PA
EPA 6010 C	TIN	PA
EPA 6010 C	VANADIUM	PA
EPA 6010 C - EXTENDED	SULFUR	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 6020 - EXTENDED	MOLYBDENUM	PA
EPA 6020 A	ALUMINUM	PA
EPA 6020 A	ARSENIC	PA
EPA 6020 A	BERYLLIUM	PA
EPA 6020 A	CALCIUM	PA
EPA 6020 A	COBALT	PA
EPA 6020 A	IRON	PA
EPA 6020 A	MAGNESIUM	PA
EPA 6020 A	NICKEL	PA
EPA 6020 A	SELENIUM	PA
EPA 6020 A	SODIUM	PA
EPA 6020 A	VANADIUM	PA
EPA 6020 A - EXTENDED	BORON	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA
EPA 6020 A - EXTENDED	TITANIUM	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 7471 B	MERCURY	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	ETHANOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8021 B	BENZENE	PA
EPA 8021 B	ISOPROPYLBENZENE	PA
EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	TOLUENE	PA
EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 A	CHLORDANE (TECH.)	PA
EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN KETONE	PA
EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	CHLORDANE (TECH.)	PA
EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDRIN	PA

METHOD	ANALYTE	PRIMARY
EPA 8015 B	ETHANOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 B	METHANOL	PA
EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	METHANOL	PA
EPA 8021 B	ETHYLBENZENE	PA
EPA 8021 B	M+P-XYLENE	PA
EPA 8021 B	O-XYLENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA
EPA 8081 A	4,4'-DDD	PA
EPA 8081 A	4,4'-DDT	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	DELTA-BHC	PA
EPA 8081 A	ENDOSULFAN I	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 A	HEPTACHLOR	PA
EPA 8081 A	METHOXYCHLOR	PA
EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	MIREX	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - OIL	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A - OIL	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A - OIL	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A - OIL	AROCLOR-1260 (PCB-1260)	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA
EPA 8141 A	ETHOPROP	PA
EPA 8141 A	FENSULFOTHION	PA
EPA 8141 A	MALATHION	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8141 A	NALED	PA
EPA 8141 A	PHORATE	PA
EPA 8141 A	SIMAZINE	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA
EPA 8141 B	ATRAZINE	PA
EPA 8141 B	COUMAPHOS	PA
EPA 8141 B	DEMETON-S	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA

METHOD	ANALYTE	PRIMARY
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8082 A - OIL	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A - OIL	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A - OIL	AROCLOR-1254 (PCB-1254)	PA
EPA 8141 A	ATRAZINE	PA
EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DIAZINON	PA
EPA 8141 A	DISULFOTON	PA
EPA 8141 A	ETHION	PA
EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENTHION	PA
EPA 8141 A	MERPHOS	PA
EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	RONNEL	PA
EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DIAZINON	PA
EPA 8141 B	DISULFOTON	PA
EPA 8141 B	ETHION	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA	EPA 8151 A	2,4-D	PA
EPA 8151 A	2,4-DB	PA	EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8151 A	MCPA	PA
EPA 8151 A	MCPP	PA	EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA	EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA	EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA	EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA	EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONE	PA	EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA	EPA 8260 B	ACRYLONITRILE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA
EPA 8260 B	ETHYL ACETATE	PA
EPA 8260 B	ETHYLBENZENE	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 B	M+P-XYLENE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B	BENZENE	PA
EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL CHLORIDE (CHLOROETHANE)	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA

This Scope of Accreditation must accompany the Certificate issued by Virginia DCLS with the same Certificate Number indicated above.

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 B - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA
EPA 8260 C	ACETONE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	BENZENE	PA
EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL CHLORIDE (CHLOROETHANE)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DINITROBENZENE (1,2-DNB)	PA
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACETOPHENONE	PA
EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 C	2-NITROANILINE	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4-AMINOBIPHENYL	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROPHENOL	PA
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ANILINE	PA
EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHRYSENE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZOFURAN	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DISULFOTON	PA
EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	KEPONE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHORATE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRIDINE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PYRENE	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENOL	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PYRENE	PA
EPA 8270 C	SAFROLE	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 C SIM	ACENAPHTHENE	PA
EPA 8270 C SIM	ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C SIM	CHRYSENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,2-DINITROBENZENE (1,2-DNB)	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ANILINE	PA
EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DISULFOTON	PA
EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	KEPONE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHORATE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	SAFROLE	PA
EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENOL	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PYRENE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8315 A	2,5-DIMETHYLBENZALDEHYDE	PA
EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA
EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA
EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA
EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA
EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA
EPA 8330	NITROGLYCERIN	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 A	NITROBENZENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9388

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: September 05, 2017
Expiration Date: June 14, 2018

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA
EPA 8330 B	3-NITROTOLUENE	PA
EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9045 C	PH	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9066	TOTAL PHENOLICS	PA
EPA 9081	CATION EXCHANGE CAPACITY	PA

METHOD	ANALYTE	PRIMARY
EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	3,5-DINITROANILINE	PA
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA
EPA 9012 A	CYANIDE	PA
EPA 9045 D	PH	PA
EPA 9060	TOTAL ORGANIC CARBON (TOC)	PA
EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
EPA 9095 B	FREE LIQUID	PA

APPENDIX E

FIELD SAMPLING FORMS (ON CD)

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4/3/18	BY: JRL	DATE: 4-2-18

SAMPLE ID: SW40-57 | WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME:	DATE: 4/3/18	SAMPLE	TIME: 1742	DATE: 4/3/18

PURGE METHOD: [X] PUMP monsoon [ ] BAILER	PH: 6.36 SU; CONDUCTIVITY: 0.426 umhos/cm; ORP: 108 mV; DO: 0.26 mg/L
DEPTH TO WATER: 7.00 T/ PVC	TURBIDITY: 165 NTU
DEPTH TO BOTTOM: 20.92 T/ PVC	[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY
WELL VOLUME: ____ [ ] LITERS [ ] GALLONS	TEMPERATURE: 11.57 °C; OTHER:
VOLUME REMOVED: 5.0 [ ] LITERS [ ] GALLONS	COLOR: Clear; ODOR: no
COLOR: Cloudy tan; ODOR: no	FILTRATE (0.45 um) [ ] YES [ ] NO
TURBIDITY [ ] NONE [ ] SLIGHT [ ] MODERATE [X] VERY	FILTRATE COLOR: ____; FILTRATE ODOR: ____
DISPOSAL METHOD: [ ] GROUND [ ] DRUM [ ] OTHER	QC SAMPLE: [ ] MS/MSD [ ] DUP- ____
	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1650	200	6.89	0.420	84	4.69	>1,000	12.29	7.10	INITIAL
1655	150	6.56	0.430	82	0.54	>1,000	12.15	7.10	0.5
1700	150	6.61	0.430	00	2.13	>1,000	12.42	7.10	1.0
1705	150	6.53	0.430	94	0.49	750	12.34	7.10	1.5
1710	150	6.51	0.429	95	0.53	292	12.22	7.10	2.0
1715	150	6.46	0.426	98	0.36	74.4	11.96	7.10	2.5
1720	150	6.44	0.426	98	0.29	35.5	11.90	7.10	3.0
1725	150	6.41	0.426	102	0.53	24.4	11.75	7.15	3.5
1730	150	6.40	0.426	102	0.42	19.3	11.67	7.16	4.0
1733	150	6.39	0.425	103	0.40	25.4	11.66	7.16	4.25

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
1	40mL	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: JRC	DATE: 4/3/18	BY:	DATE:

SAMPLE ID: SW 40 57

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1736	150	6.36	0.425	108	0.28	19.9	11.61	7.15	4.5
1739	150	6.36	0.425	108	0.28	16.2	11.59	7.15	4.75
1742	150	6.36	0.426	108	0.26	16.5	11.57	7.15	5.0

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: BG	DATE 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: OW-28I WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1555	DATE 4/3/18	SAMPLE	TIME: 1655	DATE: 4/3/18
PURGE METHOD:	☒ PUMP Grundfos ☐ BAILER		PH: 8.07 SU	CONDUCTIVITY: 0.360 umhos/cm	
			ORP: 250 mV	DO: 2.41 mg/L	
DEPTH TO WATER: 47.32 T/ PVC			TURBIDITY: 0.0 NTU		
DEPTH TO BOTTOM: 119.5 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 18.95 °C	OTHER:	
VOLUME REMOVED: 4 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: No	
COLOR: Clear	ODOR: No		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1555	—	—	—	—	—	—	—	47.32	INITIAL
1600	150	8.47	0.339	339	4.27	0.0	16.90	48.37	<1
1605	150	8.11	0.342	336	4.19	0.0	17.07	48.43	<1
1610	150	8.04	0.343	310	3.29	0.0	17.53	48.50	1
1615	150	8.03	0.344	293	2.81	0.0	17.77	48.53	<2
1620	150	8.03	0.345	287	2.84	0.0	17.87	48.54	<2
1625	150	8.03	0.347	278	3.06	0.0	18.01	48.53	2
1630	150	8.04	0.348	269	2.99	0.0	18.11	48.54	<3
1635	150	8.05	0.350	264	2.71	0.0	18.15	48.54	<3
1640	250	8.05	0.355	258	2.50	0.0	18.33	48.70	3

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
2	L	AG	A	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: BG	DATE: 4/3/18	BY:	DATE:

SAMPLE ID: DW-28F

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1645	250	8.06	0.358	254	2.38	0.0	18.74	48.95	3
1650	250	8.07	0.360	252	2.39	0.0	18.92	48.95	<4
1655	250	8.07	0.360	250	2.41	0.0	18.95	48.95	4

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: BC	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-327 WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME:	DATE: 4/3/18	SAMPLE	TIME: 1530	DATE: 4/3/18

PURGE METHOD: ☒ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 45.23 T/ PVC

DEPTH TO BOTTOM: 54 T/ PVC

WELL VOLUME: ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 11 ☐ LITERS ☒ GALLONS

COLOR: Cloudy ODOR: No

TURBIDITY: ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER

PH: 7.87 SU CONDUCTIVITY: 0.427 umhos/cm

ORP: 335 mV DO: 3.95 mg/L

TURBIDITY: 0.0 NTU

☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 20.18 °C OTHER:

COLOR: clear ODOR:

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS: lowest setting pump will flow at

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1430	–	–	–	–	–	–	–	45.23	INITIAL
1435	250	9.20	0.190	28	5.47	165	17.09	46.09	1
1440	250	8.25	0.470	314	3.15	46.6	19.56	48.00	2
1445	250	8.00	0.476	327	3.21	19.8	19.50	48.40	2
1450	250	8.03	0.483	328	3.16	28.8	19.48	48.63	3
1455	450	7.88	0.470	324	3.05	56.2	19.99	49.73	4
1500	400	7.94	0.461	317	2.66	85.1	19.38	50.55	5
1505	400	7.94	0.464	317	2.97	113	19.39	51.25	6
1510	400	7.89	0.451	319	3.59	20.2	20.05	51.25	Top of pump 7 gal
1515	400	7.90	0.440	322	3.72	0.0	20.16	51.25	" " 8 gal

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
2	L	AG	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARL Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: BG	DATE: 4/3/18	BY:	DATE:

SAMPLE ID: DW-32I

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1520	400	7.90	0.433	327	3.73	0.0	20.14	51.25	9
1525	400	7.86	0.430	331	3.92	0.0	20.16	51.25	10
1530	400	7.87	0.427	335	3.95	0.0	20.18	51.25	11

SIGNATURE: [signature]

DATE SIGNED: 4/3/18

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229971	BY: BG	DATE 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: OW-72B — WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☒ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1155	DATE: 4/3/18	SAMPLE	TIME: 1250	DATE: 4/3/18
PURGE METHOD:	☒ PUMP Grundfos ☐ BAILER		PH: 5.55 SU	CONDUCTIVITY: 0.158 umhos/cm	
			ORP: 145 mV	DO: 5.52 mg/L	
DEPTH TO WATER: 42.37 T/ PVC			TURBIDITY: 75.3 NTU		
DEPTH TO BOTTOM: >300 T/ PVC			☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 11.66 °C	OTHER:	
VOLUME REMOVED: 5 ☐ LITERS ☒ GALLONS			COLOR: cloudy	ODOR: No	
COLOR: lt. brown - cloudy	ODOR: No		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD	☐ DUP-	
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1155	–	–	–	–	–	–	–	42.37	INITIAL
1200	300	5.77	0.159	123	6.82	26.5	10.86	42.55	<1
1205	300	5.49	0.161	144	5.89	44.7	11.38	42.72	1
1210	300	5.48	0.160	146	5.79	30.8	11.44	42.80	<2
1215	300	5.48	0.159	147	5.71	27.8	11.50	42.86	<2
1220	300	5.49	0.159	148	5.65	30.8	11.57	42.90	<2.5
1225	300	5.50	0.158	149	5.61	31.7	11.59	42.95	<3
1230	300	5.50	0.158	151	5.58	28.5	11.61	42.96	3
1235	300	5.52	0.158	145	5.55	38.8	11.65	42.96	4
1240	300	5.53	0.158	141	5.53	72.0	11.68	42.99	4

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40L	VOA	E	☐ Y ☐ N					☐ Y ☐ N
2	L	AG	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARL Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: BG	DATE: 4/3/18	BY:	DATE:

SAMPLE ID: DW-72B

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1245	300	5.54	0.158	143	5.52	72.6	11.66	43.0	25
1250	300	5.55	0.158	145	5.52	75.3	11.66	43.0	5

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: BG	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-15 WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☒ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: Start 835	DATE: 4/3/18	SAMPLE	TIME: 930	DATE: 4/3/18

PURGE METHOD: ☒ PUMP Grundfos ☐ BAILER

DEPTH TO WATER: 21.72 T/ PVC

DEPTH TO BOTTOM: >250 T/ PVC

WELL VOLUME: ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 5 ☐ LITERS ☒ GALLONS

COLOR: Clear ODOR: No

TURBIDITY: ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 7.10 SU CONDUCTIVITY: 0.459 umhos/cm

ORP: -102 mV DO: 5.55 mg/L

TURBIDITY: 0.0 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 11.78 °C OTHER:

COLOR: Clear ODOR: No

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
835	-	-	-	-	-	-	-	21.72	INITIAL
840	300	6.09	0.460	93	8.88	0.0	10.50	21.75	<1
845	300	6.81	0.474	21	6.86	0.0	11.09	21.75	<1
850	300	6.55	0.471	-29	6.07	0.0	11.34	21.75	1
855	300	6.69	0.469	-50	5.97	0.0	11.35	21.75	<2
900	300	6.81	0.466	-67	5.92	0.0	11.33	21.75	2
905	300	6.82	0.463	-69	5.90	0.0	11.30	21.75	<3
910	300	6.91	0.462	-77	5.78	0.0	11.52	21.75	3
915	300	6.99	0.462	-88	5.65	0.0	11.62	21.75	<4
920	300	7.03	0.461	-94	5.63	0.0	11.58	21.75	4

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	HCl = E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: BG	DATE 4/3/18	BY:	DATE:

SAMPLE ID: DW-15

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
925	300	7.07	0.460	-99	5.58	0.0	11.75	21.75	<5
930	300	7.10	0.459	-102	5.55	0.0	11.78	21.75	5

SIGNATURE: [signature]

DATE SIGNED: 4/3/18

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KR	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW42-02 WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 08:40	DATE: 4/3/18	SAMPLE	TIME: 09:50	DATE: 4/3/18

PURGE METHOD: [X] PUMP Monsoon [ ] BAILER	PH: 6.71 SU; CONDUCTIVITY: 0.554 umhos/cm; ORP: 149 mV; DO: 0.33 mg/L
DEPTH TO WATER: 4.02 T/ PVC	TURBIDITY: 20 NTU
DEPTH TO BOTTOM: 11.25 T/ PVC	[ ] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY
WELL VOLUME: ____ [ ] LITERS [ ] GALLONS	TEMPERATURE: 10.68 °C; OTHER:
VOLUME REMOVED: 5 [ ] LITERS [X] GALLONS	COLOR: Yellow; ODOR: None
COLOR: Yellow; ODOR: None	FILTRATE (0.45 um) [ ] YES [X] NO
TURBIDITY [ ] NONE [ ] SLIGHT [X] MODERATE [ ] VERY	FILTRATE COLOR: ____; FILTRATE ODOR: ____
DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER	QC SAMPLE: [ ] MS/MSD [ ] DUP- ____
	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0845	250	6.64	0.555	179	2.08	0.0	9.96	4.62	INITIAL
0850	250	6.69	0.554	174	0.84	0.0	10.05	4.55	
0855	250	6.72	0.554	171	0.67	912	10.10	4.52	
0900	250	6.74	0.554	168	0.59	554	10.15	4.50	
0905	250	6.74	0.554	165	0.81	316	10.20	4.50	
0910	250	6.77	0.554	163	0.49	190	10.24	4.45	
0915	250	6.76	0.554	162	0.52	103	10.31	4.45	
0920	250	6.76	0.553	160	0.46	90.6	10.41	4.45	
0925	250	6.76	0.553	157	0.43	55.4	10.51	4.40	
0930	250	6.75	0.553	154	0.51	43.4	10.63	4.37	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml		HCL	[ ] Y [X] N					[ ] Y [ ] N
1	40ml		None	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME:	PREPARED		CHECKED	
PROJECT NUMBER:	BY: KA	DATE: 4/3/18	BY:	DATE:

SAMPLE ID: SW42-02

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0935		6.75	0.554	150	0.36	33.6	10.66	4.32	
0940		6.72	0.554	151	0.39	28.1	10.65	4.35	
0945		6.71	0.554	149	0.33	20.0	10.68	4.32	

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KA.	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-30S

WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1310	DATE: 4/3/18	SAMPLE	TIME: 1420	DATE: 4/3/18

PURGE METHOD: [X] PUMP Monsoon [ ] BAILER

DEPTH TO WATER: 42.57 T/ PVC

DEPTH TO BOTTOM: 53.75 T/ PVC

WELL VOLUME: [ ] LITERS [ ] GALLONS

VOLUME REMOVED: 7 [ ] LITERS [X] GALLONS

COLOR: Cloudy ODOR: None

TURBIDITY [ ] NONE [ ] SLIGHT [ ] MODERATE [X] VERY

DISPOSAL METHOD: [ ] GROUND [ ] DRUM [ ] OTHER

PH: 7.58 SU CONDUCTIVITY: 0.345 umhos/cm

ORP: 160 mV DO: 8.51 mg/L

TURBIDITY: 35.0 NTU

[ ] NONE [ ] SLIGHT [X] MODERATE [ ] VERY

TEMPERATURE: 15.87 °C OTHER:

COLOR: Clear ODOR: None

FILTRATE (0.45 um) [ ] YES [X] NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: [ ] MS/MSD [ ] DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1315	400	7.12	0.364	117	8.92	86.6	14.73	46.35	INITIAL
1320	↓	7.25	0.364	119	9.42	65.1	14.75	48.41	
1325	↓	7.35	0.366	123	8.85	54.4	14.59	52.35	
1330	↓	7.43	0.363	125	8.64	53.9	15.07	53.42	
1335	250	7.47	0.359	133	8.94	57.6	14.84	53.47	
1340	↓	7.49	0.355	143	8.77	46.3	15.35	53.42	
1345	↓	7.48	0.353	149	8.78	40.0	15.59	53.30	
1350	↓	7.51	0.351	148	8.40	41.9	15.94	53.42	
1355	↓	7.52	0.349	142	8.45	48.2	15.97	53.42	
1400	↓	7.54	0.348	140	8.39	35.0	15.95	53.42	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOC	E	[ ] Y [X] N					[ ] Y [ ] N
1	40ml	Perc	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: 166	DATE: 4/3/18	BY:	DATE:

SAMPLE ID: DW-305

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1405	250	7.55	0.347	147	8.36	32.8	16.02	53.42	
1410	↓	7.56	0.346	155	8.46	29.1	15.97	53.42	
1415	↓	7.58	0.345	160	8.51	35.0	15.87	53.41	

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-12 WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER Artesian

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☒ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1123	DATE: 4-3-18	SAMPLE	TIME: 1141	DATE: 4-3-18

PURGE METHOD: ☐ PUMP Artesian ☐ BAILER

DEPTH TO WATER: _____ T/ PVC Surface

DEPTH TO BOTTOM: _____ T/ PVC

WELL VOLUME: _____ ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 3.0 ☐ LITERS ☒ GALLONS

COLOR: Clear ODOR: no

TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 8.78 SU CONDUCTIVITY: 0.254 umhos/cm

ORP: -13 mV DO: 3.27 mg/L

TURBIDITY: 0.0 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 14.50 °C OTHER: _____

COLOR: Clear ODOR: _____

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: _____ FILTRATE ODOR: _____

QC SAMPLE: ☐ MS/MSD ☐ DUP- _____

COMMENTS: 6.3 psi, flowing

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1123	200	9.12	0.255	51	4.14	0.0	14.50	–	INITIAL
1128	200	8.41	0.255	19	3.39	0.0	14.53	–	1.0
1135	200	8.67	0.254	2	3.30	0.0	14.52	–	2.0
1141	200	8.78	0.254	-13	3.27	0.0	14.50	–	3.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOA	E	☐ Y ☐ N					☐ Y ☐ N
1	40ml	VOA	A	☐ Y ☐ N					☐ Y ☐ N
2	1L	Amb	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-3-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: STR-04/040318 WELL DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ OTHER Stream

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME:	DATE: 4-3-18	SAMPLE	TIME: 1238	DATE: 4-3-18
PURGE METHOD: ☐ PUMP ☐ BAILER			PH: 9.48 SU	CONDUCTIVITY: 0.549 umhos/cm	
			ORP: 234 mV	DO: 9.96 mg/L	
DEPTH TO WATER: / T/ PVC			TURBIDITY: 0.0 NTU		
DEPTH TO BOTTOM: / T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: / ☐ LITERS ☐ GALLONS			TEMPERATURE: 13.45 °C	OTHER:	
VOLUME REMOVED: / ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR:	
COLOR: Cloudy	ODOR: No		FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			FILTRATE COLOR:	FILTRATE ODOR:	
			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1238	-	9.48	0.549	234	9.96	0.0	13.45	—	~~INITIAL~~
Grab sample									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-3-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW 200-02 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME:	DATE: 4-3-18	SAMPLE	TIME: 1048	DATE: 4-3-18

PURGE METHOD: ☒ PUMP monsoon ☐ BAILER

DEPTH TO WATER: 8.99 T/ PVC

DEPTH TO BOTTOM: 16.21 T/ PVC

WELL VOLUME: 4.7 ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 4.0 ☐ LITERS ☒ GALLONS

COLOR: L. Brown ODOR: no

TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 7.15 SU CONDUCTIVITY: 0.199 umhos/cm

ORP: 314 mV DO: 3.94 mg/L

TURBIDITY: 0 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 15.27 °C OTHER:

COLOR: Clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1010	150	10.73	0.191	75	5.17	71,000	14.57	9.14	INITIAL
1015	150	8.63	0.182	188	4.95	800	14.79	9.22	0.5
1020	150	7.44	0.177	254	4.81	692	15.33	9.44	1.0
1025	150	7.22	0.178	284	4.75	359	15.36	9.58	1.5
1030	150	7.15	0.181	299	4.59	178	15.28	9.64	2.0
1035	150	7.12	0.185	308	4.45	123	15.39	9.70	2.5
1040	150	7.10	0.191	315	4.19	58.9	15.49	9.90	3.0
1045	150	7.11	0.195	316	4.06	11.4	15.34	10.20	3.5
1048	150	7.15	0.199	314	3.94	0	15.27	10.21	4.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-3-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW 200-01 WELL DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☒ GALVANIZED STEEL ☐ OTHER Artesian

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 950	DATE:	SAMPLE	TIME: 1008	DATE: 4-3-18

PURGE METHOD: ☐ PUMP ☐ BAILER Artesian

DEPTH TO WATER: _____ T/ PVC Surface

DEPTH TO BOTTOM: _____ T/ PVC >300

WELL VOLUME: _____ ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 3.0 ☐ LITERS ☐ GALLONS

COLOR: Clear ODOR: no

TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 8.78 SU CONDUCTIVITY: 0.556 umhos/cm

ORP: -15 mV DO: 6.52 mg/L

TURBIDITY: 0 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 12.86 °C OTHER: _____

COLOR: Clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: _____ FILTRATE ODOR: _____

QC SAMPLE: ☐ MS/MSD ☐ DUP- _____

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0950	200	10.74	0.561	-17	8.94	0	13.17	N/A	INITIAL
0956	200	8.81	0.562	-4	8.02	0	12.89	N/A	1
1002	200	8.73	0.559	-8	7.18	0	12.88	N/A	2
1008	200	8.78	0.556	-15	6.52	0	12.86	N/A	3

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☐ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-3-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DWSB-02 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☒ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☒ GALVANIZED STEEL ☒ OTHER Artesian

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 855	DATE:	SAMPLE	TIME: 927	DATE: 4-3-18
PURGE METHOD: ☐ PUMP Artesian ☐ BAILER			PH: 7.88 SU	CONDUCTIVITY: 0.391 umhos/cm	
			ORP: 198 mV	DO: 3.40 mg/L	
DEPTH TO WATER: 0.0 T/ PVC			TURBIDITY: 0.0 NTU		
DEPTH TO BOTTOM: ____ T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 15.25 °C	OTHER:	
VOLUME REMOVED: 3.0 ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR:	
COLOR: Clear ODOR:			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER			COMMENTS: Artesian well @ 0.8 psi		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
858	150	7.88	0.381	361	4.05	0.0	14.46	-	INITIAL
911	200	7.64	0.391	240	3.35	0.0	14.99	-	1.0
919	200	7.79	0.391	213	3.42	0.0	15.18	-	2.0
927	200	7.88	0.391	198	3.40	0.0	15.25	-	3.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40ml	VOA	A	☐ Y ☐ N					☐ Y ☐ N
2	1 L	Amb	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW 40-07 A — WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1600	DATE: 4/3/18	SAMPLE	TIME: 1650	DATE: 4-3-18

PURGE METHOD: ☒ PUMP monsoon ☐ BAILER

DEPTH TO WATER: 4.23 T/ PVC

DEPTH TO BOTTOM: 16.75 T/ PVC

WELL VOLUME: ____ ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 4.5 ☐ LITERS ☒ GALLONS

COLOR: L. Brown ODOR: no

TURBIDITY: ☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 6.69 SU CONDUCTIVITY: 0.300 umhos/cm

ORP: 182 mV DO: 6.63 mg/L

TURBIDITY: 7.8 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 8.79 °C OTHER: ____

COLOR: Clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: ____ FILTRATE ODOR: ____

QC SAMPLE: ☐ MS/MSD ☐ DUP- ____

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1605	200	7.13	0.329	179	14.24	>1,000	9.19	4.68	INITIAL
1610	150	6.71	0.336	182	12.78	>1,000	9.20	4.58	0.5
1615	150	6.79	0.337	186	7.48	616	9.15	4.60	1.0
1620	150	6.69	0.332	184	6.90	140	8.96	4.65	1.5
1625	150	6.68	0.326	183	6.80	39.8	8.91	4.71	2.0
1630	150	6.68	0.324	183	6.76	38.4	8.91	4.79	2.5
1635	150	6.68	0.322	183	6.77	26.3	8.85	4.90	3.0
1640	150	6.69	0.310	182	6.69	16.8	8.78	4.90	3.5
1645	150	6.69	0.306	182	6.65	14.2	8.84	4.90	4.0
1650	150	6.69	0.300	182	6.63	7.8	8.79	4.92	4.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4/3/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW 47-02 | WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME:	DATE:	SAMPLE	TIME: 1526	DATE: 4-3-18

PURGE METHOD: [X] PUMP Monsoon [ ] BAILER	PH: 7.01 SU; CONDUCTIVITY: 0.359 umhos/cm; ORP: 108 mV; DO: 7.44 mg/L
DEPTH TO WATER: 4.35 T/ PVC	TURBIDITY: 0 NTU
DEPTH TO BOTTOM: 9.20 T/ PVC	[X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY
WELL VOLUME: 0.78 [ ] LITERS [X] GALLONS	TEMPERATURE: 7.24 °C; OTHER:
VOLUME REMOVED: 4.0 [ ] LITERS [X] GALLONS	COLOR: clear; ODOR: no
COLOR: L. tan; ODOR: no	FILTRATE (0.45 um) [ ] YES [X] NO
TURBIDITY [ ] NONE [ ] SLIGHT [X] MODERATE [ ] VERY	FILTRATE COLOR: ; FILTRATE ODOR:
	QC SAMPLE: [ ] MS/MSD [ ] DUP-
DISPOSAL METHOD: [ ] GROUND [ ] DRUM [X] OTHER	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1450	200	7.63	.239	192	11.79	235	8.74	4.40	INITIAL
1455	150	7.19	.297	184	8.89	62.4	8.64	4.40	0.5
1500	150	7.06	.306	169	8.93	23.5	9.01	4.4	1.0
1505	150	7.01	0.315	154	7.47	14.8	9.38	4.40	1.5
1510	150	6.97	0.352	145	8.33	3.5	8.13	4.44	2.0
1515	150	6.98	0.351	131	7.93	4.6	7.48	4.58	2.5
1520	150	7.00	0.360	120	7.65	0	7.38	4.64	3.0
1523 ~~1525~~	150	7.01	0.360	112	7.49	0	7.29	4.71	3.5
1526	150	7.01	0.359	108	7.44	0	7.24	4.76	4.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
1	40mL	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-3-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW-28-41 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1425	DATE: 4-3-18	6.23 SAMPLE	TIME: 1455	DATE: 4-3-18

PURGE METHOD: ☒ PUMP Monsoon ☐ BAILER	PH: ~~6.95~~ SU; CONDUCTIVITY: 0.456 umhos/cm; ORP: 167 mV; DO: 3.76 mg/L
DEPTH TO WATER: 2.21 T/ PVC	TURBIDITY: 0 NTU
DEPTH TO BOTTOM: 10.18 T/ PVC	☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY
WELL VOLUME: ~~Ø~~5.20 ☐ LITERS ☒ GALLONS	TEMPERATURE: 9.62 °C; OTHER:
VOLUME REMOVED: 3.0 ☐ LITERS ☒ GALLONS	COLOR: Clear; ODOR: no
COLOR: Clear; ODOR: no	FILTRATE (0.45 um) ☐ YES ☒ NO
TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY	FILTRATE COLOR: ; FILTRATE ODOR:
	QC SAMPLE: ☐ MS/MSD ☐ DUP-
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1425	150	6.93	0.465	140	3.39	76.5	9.68	2.74	INITIAL
1430	150	6.40	0.455	162	3.00	2.2	9.40	3.17	0.5
1435	150	6.34	0.455	166	4.76	0	9.54	3.20	1.0
1440	150	6.26	0.455	169	4.14	0	9.54	3.31	1.5
1445	150	6.23	0.455	169	3.79	0	9.55	3.35	2.0
1450	150	6.24	0.456	165	3.77	0	9.62	3.41	2.5
1455	150	6.23	0.456	167	3.76	0	9.62	3.48	3.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☒ N					☐ Y ☐ N
3	40ml	VOA	E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: 4-3-18	DATE: RT	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW SB - 03 | WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1240	DATE: 4-3-18	SAMPLE	TIME: 1343	DATE: 4-3-18

PURGE METHOD: [X] PUMP Monsoon [ ] BAILER

DEPTH TO WATER: 5.20 T/ PVC

DEPTH TO BOTTOM: 18.13 T/ PVC

WELL VOLUME: 1.99 [ ] LITERS [X] GALLONS

VOLUME REMOVED: 7.0 [ ] LITERS [ ] GALLONS

COLOR: clear ODOR: no

TURBIDITY [X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY

DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER

PH: 6.75 SU CONDUCTIVITY: 1.38 umhos/cm

ORP: 76 mV DO: 3.72 mg/L

TURBIDITY: 0 NTU

[X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY

TEMPERATURE: 11.93 °C OTHER:

COLOR: clear ODOR:

FILTRATE (0.45 um) [ ] YES [X] NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: [ ] MS/MSD [ ] DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1240	150	6.45	1.30	190	6.46	135	11.70	6.23	INITIAL
1245	150	6.74	1.34	179	4.30	38.7	11.69	7.34	0.5
1250	150	6.77	1.35	176	4.84	19.1	11.70	7.87	1.0
1255	150	6.78	1.35	172	4.78	6.5	11.69	8.29	1.5
1300	150	6.79	1.36	169	4.69	4.7	11.65	8.29	2.0
1305	150	6.77	1.36	165	4.84	2.4	11.69	8.29	2.5
1310	150	6.76	1.35	95	4.79	0	11.63	8.58	3.0
1315	150	6.72	1.36	28	3.60	0	11.71	8.93	3.5
1318	150	6.71	1.37	14	3.63	0	11.67	9.22	4.0
1321	150	6.72	1.37	8	4.97	0	11.60	9.84	4.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
3	40ml	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
2	1L	Amber	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: RT	DATE: 4-3-18	BY: J	DATE:

SAMPLE ID: SW SB-03

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1323	150	6.75	1.37	15	4.86	0	11.60	~~550~~	5.0
1328	150	6.76	1.38	34	3.98	0	11.68	10.76	5.5
1333	150	6.75	1.38	63	3.38	0	11.76	11.08	6.0
1338	150	6.76	1.38	77	3.20	0	11.82	11.25	6.5
1343	150	6.75	1.38	76	3.72	0	11.93	11.77	7.0

10.28 DTW

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-3-18 ~~4-2-18~~	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW 222-02 WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME:	DATE: 4-3-18	SAMPLE	TIME: 1156	DATE: 4-3-18

PURGE METHOD: [X] PUMP Monsoon [ ] BAILER

DEPTH TO WATER: 7.15 T/ PVC

DEPTH TO BOTTOM: 8.70 T/ PVC

WELL VOLUME: 0.93 [ ] LITERS [ ] GALLONS

VOLUME REMOVED: 4.0 [ ] LITERS [ ] GALLONS

COLOR: Clear ODOR: no

TURBIDITY [X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY

DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER

PH: 6.16 SU CONDUCTIVITY: 0.312 umhos/cm

ORP: 140 mV DO: 4.09 mg/L

TURBIDITY: 0 NTU

[X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY

TEMPERATURE: 10.55 °C OTHER:

COLOR: clear ODOR: no

FILTRATE (0.45 um) [ ] YES [X] NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: [ ] MS/MSD [ ] DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1120	150	6.83	0.187	176	6.44	160	10.47	7.36	INITIAL
1125	150	6.29	0.183	197	6.01	56.5	10.25	7.58	0.5
1130	150	6.16	0.183	200	4.79	30.9	10.32	7.68	1.0
1135	150	6.11	0.186	200	4.55	22.8	10.39	7.75	1.5
1140	150	6.08	0.198	199	4.96	11.1	10.40	7.90	2.0
1145	150	6.08	0.218	196	4.46	1.5	10.48	7.99	2.5
1150	150	6.12	0.298	144	4.47	9.5	10.56	8.06	3.0
1153	150	6.15	0.311	140	4.23	0	10.55	8.09	3.5
1156	150	6.16	0.312	140	4.09	0	10.55	8.11	4.0
1159									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
3	↓	↓	E	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

.653

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: SW212-01	BY: RT	DATE: 4-3-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW212-01 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0820	DATE: 4-3-18	SAMPLE	TIME: 0930	DATE:

PURGE METHOD: ☒ PUMP Mon 5009 ☐ BAILER

DEPTH TO WATER: 14.39 T/ PVC

DEPTH TO BOTTOM: 14.74 T/ PVC

WELL VOLUME: 0.22 ☐ LITERS ☒ GALLONS

VOLUME REMOVED: 0.25 ☐ LITERS ☐ GALLONS

COLOR: Clear ODOR:

TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 5.21 SU CONDUCTIVITY: 0.265 umhos/cm

ORP: 522 mV DO: 6.55 mg/L

TURBIDITY: 14.7 NTU

☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 14.7 °C OTHER:

COLOR: clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0823	150	5.21	0.265	522	6.55	14.7	15.49	Dry	INITIAL
	Well Dry - Allowed to recharge								
0930	Sampled - well dry not able to collect parameters								

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☐ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4/3/18	BY: JRL	DATE: 4-5-18

SAMPLE ID: BW 28-04D WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1524	DATE: 4-3-18	SAMPLE	TIME: 1557	DATE: 4/3/18
PURGE METHOD: [X] PUMP Monsoon [ ] BAILER			PH: 7.03 SU	CONDUCTIVITY: 0.252 umhos/cm	
			ORP: 133 mV	DO: 4.50 mg/L	
DEPTH TO WATER: 8.72 T/ PVC			TURBIDITY: 0 NTU		
DEPTH TO BOTTOM: 28.33 T/ PVC			[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY		
WELL VOLUME: 3.19 [ ] LITERS [X] GALLONS			TEMPERATURE: 13.88 °C	OTHER:	
VOLUME REMOVED: 3.5 [ ] LITERS [X] GALLONS			COLOR: Clear	ODOR: no	
COLOR: Clear	ODOR: no		FILTRATE (0.45 um) [ ] YES [X] NO		
TURBIDITY [ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY			FILTRATE COLOR:	FILTRATE ODOR:	
			QC SAMPLE: [ ] MS/MSD	[ ] DUP-	
DISPOSAL METHOD: [ ] GROUND [ ] DRUM [X] OTHER			COMMENTS: FB-01 collected @ 1610		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1524	250	6.94	0.261	154	6.76	202	12.56	8.75	INITIAL
1529	200	7.07	0.257	152	4.43	81.7	12.92	8.75	0.5
1534	200	7.09	0.255	148	4.63	43.6	13.20	8.75	1.0
1539	150	7.09	0.255	143	3.95	14.7	13.32	8.78	1.5
1544	150	7.09	0.255	140	3.57	1.2	13.35	8.79	2.0
1549	150	7.04	0.254	139	4.34	1.3	13.45	8.87	2.5
1554	150	7.02	0.254	135	4.55	0	13.83	8.94	3.0
1557	150	7.03	0.252	133	4.50	0	13.88	8.98	3.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
1	40mL	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KR	DATE: 4/4/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-26I

WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1515	DATE: 4/4/18	SAMPLE	TIME: 1620	DATE: 4/4/18

PURGE METHOD: [X] PUMP Grundfos [ ] BAILER

DEPTH TO WATER: 38.25 T/ PVC

DEPTH TO BOTTOM: 102.4 T/ PVC

WELL VOLUME: ____ [ ] LITERS [ ] GALLONS

VOLUME REMOVED: 6 [ ] LITERS [X] GALLONS

COLOR: Ochre ODOR: ____

TURBIDITY [ ] NONE [ ] SLIGHT [ ] MODERATE [X] VERY

DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER

PH: 7.27 SU CONDUCTIVITY: 0.484 umhos/cm

ORP: -36 mV DO: 4.43 mg/L

TURBIDITY: 53.2 NTU

[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY

TEMPERATURE: 14.70 °C OTHER: ____

COLOR: Clear ODOR: None

FILTRATE (0.45 um) [ ] YES [X] NO

FILTRATE COLOR: ____ FILTRATE ODOR: ____

QC SAMPLE: [ ] MS/MSD [ ] DUP- ____

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1520	250	7.17	0.473	107	7.69	too high	14.24	40.35	INITIAL
1525	↓	7.18	0.482	17	5.94	" "	14.22	40.52	
1530		7.19	0.483	-9	5.45	" "	14.44	40.81	
1535		7.18	0.484	-22	5.18	800	14.53	40.80	
1540		7.20	0.484	-29	5.00	521	14.59	40.58	
1545		7.25	0.483	-37	4.81	262	14.69	40.56	
1550		7.33	0.484	-41	4.69	139	14.68	40.56	
1555		7.39	0.484	-44	4.61	116	14.72	40.56	
1600		7.40	0.484	-43	4.54	91.2	14.71	40.56	
1605	↓	7.37	0.485	-41	4.51	76.7	14.65	40.56	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOC	E	[ ] Y [X] N					[ ] Y [ ] N
1	40ml	Perc	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: KA	DATE: 4/4/18	BY:	DATE:

SAMPLE ID: DW-26I

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1610	250	7.32	0.484	-39	4.45	64.0	14.69	40.56	
1615	↓	7.27	0.484	-36	4.43	53.2	14.70	40.55	

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: 4-4-18	DATE: RT	BY: JRL	DATE: 4-5-18

SAMPLE ID: BW CM-015 WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0800	DATE: 4-4-18	SAMPLE	TIME: 0845	DATE: 4-4-18

PURGE METHOD: ☒ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 15.66 T/ PVC

DEPTH TO BOTTOM: 24.22 T/ PVC

WELL VOLUME: 1.37 ☐ LITERS ☒ GALLONS

VOLUME REMOVED: 4.5 ☐ LITERS ☐ GALLONS

COLOR: brown ODOR: no

TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 6.70 SU CONDUCTIVITY: 0.241 umhos/cm

ORP: 320 mV DO: 4.26 mg/L

TURBIDITY: 8.1 NTU

☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 18.09 °C OTHER:

COLOR: ODOR: no

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0800	150	6.53	0.227	275	5.32	0	17.66	15.75	INITIAL
0805	150	6.50	0.223	267	5.55	800	17.78	15.79	0.5
0810	150	6.59	0.224	275	5.26	272	17.88	15.80	1.0
0815	150	6.64	0.230	282	5.08	126	17.93	15.80	1.5
0820	150	6.67	0.235	292	4.92	81.9	18.13	15.79	2.0
0825	150	6.65	0.240	304	4.68	28.7	18.13	15.80	2.5
0830	150	6.73	0.242	304	4.60	26.3	18.06	15.80	3.0
0835	150	6.78	0.244	310	4.57	14.1	18.11	15.80	3.5
0840	150	6.90	0.241	314	4.52	10.2	18.16	15.84	4.0
0845	150	6.70	0.241	320	4.26	8.1	18.09	15.88	4.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☒ N					☐ Y ☐ N
3	↓	↓	E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW TTU-03 WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0920	DATE: 4-4-18	SAMPLE	TIME: 1045	DATE: 4-4-18
PURGE METHOD: ☑ PUMP Monsoon ☐ BAILER			PH: 6.44 SU	CONDUCTIVITY: 0.050 umhos/cm	
			ORP: 443 mV	DO: 6.46 mg/L	
DEPTH TO WATER: 3.99 T/ PVC			TURBIDITY: 227 NTU		
DEPTH TO BOTTOM: 7.22 T/ PVC			☐ NONE ☐ SLIGHT ☒ MODERATE ☑ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 16.10 °C	OTHER:	
VOLUME REMOVED: 2.25 ☐ LITERS ☐ GALLONS			COLOR: tan	ODOR: no	
COLOR: tan ODOR: ____			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR: ____	FILTRATE ODOR: ____	
☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP- ____		
DISPOSAL METHOD: ☐ GROUND ☑ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0920	150	8.03	0.047	334	9.44	438	14.33	4.64	INITIAL
0925	150	6.79	0.048	397	8.42	47.2	14.59	5.22	0.5
0930	150	6.62	0.049	410	8.36	37.9	14.57	5.51	1.0
0935	150	6.64	0.048	419	8.01	43.0	14.48	6.09	1.5
0940	150	6.56	0.050	432	7.13	73.9	14.45	6.15	2.0
0945	100	6.44	0.050	443	6.46	227	16.10	6.85	2.25
~~0950~~	Well Dry @ 0945								
1045	Sample collected - No water for parameters								

Top of pump DTW

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☐ N					☐ Y ☐ N
1	↓	↓	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KR	DATE: 4/4/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-16 | WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0740	DATE: 4/4/18	SAMPLE	TIME: 0820	DATE: 4/4/18
PURGE METHOD:	☒ PUMP Grundfos		PH: 7.26 SU	CONDUCTIVITY: 0.404 umhos/cm	
	☐ BAILER		ORP: -129 mV	DO: 5.22 mg/L	
DEPTH TO WATER: 14.44 T/ PVC			TURBIDITY: 1.2 NTU		
DEPTH TO BOTTOM: 251.05 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 12.00 °C	OTHER:	
VOLUME REMOVED: 2 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: None	
COLOR: Clear	ODOR: None		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER			COMMENTS: FB-02 collected @ 1640		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0745	200	6.23	0.416	124	8.30	1.0	12.00	14.45	INITIAL
0750	↓	6.83	0.411	-15	6.69	1.0	11.92	14.45	
0755		7.10	0.407	-75	5.67	1.9	11.93	14.40	
0800		7.27	0.406	-105	5.41	1.3	11.96	14.40	
0805		7.35	0.405	-123	5.31	1.3	11.97	14.40	
0810		7.30	0.405	-126	5.26	1.3	11.98	14.40	
0815		7.26	0.404	-129	5.22	1.2	12.00	14.40	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOC	E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: BG	DATE: 4/4/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW213-01 WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1255	DATE: 4/4/18	SAMPLE	TIME: 1340	DATE: 4/4/18
PURGE METHOD:	☒ PUMP Grundfos ☐ BAILER		PH: 7.40 SU	CONDUCTIVITY: 0.316 umhos/cm	
			ORP: -17 mV	DO: 5.00 mg/L	
DEPTH TO WATER: 12.14 T/ PVC			TURBIDITY: 7.3 NTU		
DEPTH TO BOTTOM: 184.85 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 1205 °C	OTHER:	
VOLUME REMOVED: 6 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: No	
COLOR: Clear	ODOR: No		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1300	250	7.67	0.189	69	10.04	17.7	11.70	11.97	INITIAL
1305	250	7.54	0.317	19	5.26	11.7	11.88	12.88	1
1310	250	7.56	0.318	9	5.18	11.1	11.93	13.25	2
1315	250	7.58	0.314	-2	5.19	9.7	11.85	13.61	3
1320	250	7.56	0.317	-9	5.18	8.7	11.90	13.76	3.5
1325	250	7.53	0.317	-13	5.17	8.4	11.91	13.93	5
1330	250	7.48	0.317	-15	5.18	7.9	11.86	14.06	5.6
1335	250	7.43	0.316	-16	5.12	7.5	12.04	14.20	6
1340	250	7.40	0.316	-17	5.10	7.3	12.05	14.31	6.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40mL	VOA	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KK	DATE: 4/4/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-18 WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0900	DATE: 4/4/18	SAMPLE	TIME: 0955	DATE: 4/4/18
PURGE METHOD:	☒ PUMP Grundfos ☐ BAILER		PH: 8.62 SU	CONDUCTIVITY: 0.282 umhos/cm	
			ORP: -124 mV	DO: 4.53 mg/L	
DEPTH TO WATER: 30.68 T/ PVC			TURBIDITY: 12.5 NTU		
DEPTH TO BOTTOM: ____ T/ PVC Greater than 300'			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 14.12 °C	OTHER:	
VOLUME REMOVED: 5.0 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: None	
COLOR: Slightly yellow ODOR: None			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0905	200	7.88	0.280	1	6.54	10.3	15.65	31.22	INITIAL
910	200	8.57	0.270	-40	5.12	16.1	14.20	31.45	1
915	200	8.62	0.279	-95	4.79	16.3	13.88	31.65	1
920	200	8.64	0.279	-77	4.70	14.6	13.92	31.76	
925	200	8.67	0.280	-89	4.64	15.0	13.91	31.82	
930	200	8.69	0.281	-101	4.61	13.6	13.91	31.87	
935	200	8.71	0.282	-109	4.60	14.0	13.89	31.90	
940	200	8.75	0.282	-118	4.59	13.8	13.86	31.93	
945	200	8.77	0.282	-125	4.56	13.2	13.92	31.95	
950	200	8.62	0.282	-124	4.53	12.5	14.12	31.95	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOC	E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KR	DATE: 4/4/18	BY: JRC	DATE: 4-9-18

SAMPLE ID: DWSD-01 WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1100	DATE: 4/4/18	SAMPLE	TIME: 1145	DATE: 4/4/18
PURGE METHOD: ☒ PUMP Grundfos ☐ BAILER			PH: 8.10 SU	CONDUCTIVITY: 0.760 umhos/cm	
			ORP: -284 mV	DO: 4.77 mg/L	
DEPTH TO WATER: ____ T/ PVC Less than a foot			TURBIDITY: 3.9 NTU		
DEPTH TO BOTTOM: ____ T/ PVC Greater than 300			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 12.69 °C	OTHER:	
VOLUME REMOVED: 4.5 ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR: None	
COLOR: Yellow ODOR: None			FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1105	300	8.41	0.736	-186	5.21	24.3	13.04	<.6	INITIAL
1110		8.12	0.748	-236	4.87	22.0	12.92	<.6	
1115		8.07	0.753	-255	4.77	9.5	12.92	<.6	
1120		8.07	0.755	-264	4.82	6.3	12.80	<.6	
1125		8.10	0.757	-274	4.79	6.3	12.76	<.6	
1130		8.11	0.759	-278	4.77	3.2	12.73	<.6	
1135		8.11	0.760	-282	4.78	3.6	12.69	<.6	
1140		8.10	0.760	-284	4.77	3.9	12.69	<.6	4.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOC	E	☐ Y ☒ N					☐ Y ☐ N
1	40ml	Pere	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW 74-07 WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1235	DATE: 4-4-18	SAMPLE	TIME: 1305	DATE: 4-4-18

PURGE METHOD: ☒ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 4.29 T/ PVC

DEPTH TO BOTTOM: 12.89 T/ PVC

WELL VOLUME: 2 ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 2.0 ☐ LITERS ☒ GALLONS

COLOR: Clear ODOR: No

TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 6.60 SU CONDUCTIVITY: 0.273 umhos/cm

ORP: 367 mV DO: 3.16 mg/L

TURBIDITY: 1.1 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 12.90 °C OTHER:

COLOR: Clear ODOR:

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1235	150	7.40	0.269	373	4.23	50.9	13.36	4.41	INITIAL
1240	150	6.86	0.271	374	3.59	17.1	13.43	4.41	
1245	150	6.67	0.272	373	3.43	6.0	12.86	4.53	
1250	150	6.60	0.273	373	3.32	5.1	12.89	4.57	
1255	150	6.60	0.273	371	3.24	3.2	12.88	4.59	
1300	150	6.60	0.273	368	3.18	2.3	12.91	4.62	
1305	150	6.60	0.273	367	3.16	1.1	12.90	4.65	2.0 Total Volume

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☒ N					☐ Y ☐ N
3	40ml	VOA	E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: BW 79-025 WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1105	DATE: 4-4-18	SAMPLE	TIME: ~~1148~~ 1151	DATE: 4-4-18

PURGE METHOD: ☒ PUMP Monsoon ☐ BAILER	PH: 6.94 SU; CONDUCTIVITY: 0.345 umhos/cm; ORP: 426 mV; DO: 3.31 mg/L
DEPTH TO WATER: 7.04 T/ PVC	TURBIDITY: 15.8 NTU
DEPTH TO BOTTOM: 17.22 T/ PVC	☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS	TEMPERATURE: 7.42 °C; OTHER: –
VOLUME REMOVED: 8 ☐ LITERS ☐ GALLONS	COLOR: Clear; ODOR: no
COLOR: L. Brown; ODOR: no	FILTRATE (0.45 um) ☐ YES ☐ NO
TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY	FILTRATE COLOR: ____ FILTRATE ODOR: ____
	QC SAMPLE: ☐ MS/MSD ☐ DUP- ____
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1105	150	7.11	0.339	434	10.49	0	16.35	7.19	INITIAL
1110	150	6.67	0.343	448	8.66	800	16.02	7.29	~~0.5~~
1115	150	6.84	0.344	439	7.75	287	16.01	7.29	~~1.0~~
1120	150	6.90	0.344	434	3.44	111	15.94	7.29	~~1.5~~
1125	150	6.94	0.345	431	3.40	68.4	15.89	7.32	~~2.0~~
1130	150	6.93	0.345	429	3.39	40.7	15.79	7.39	~~2.5~~
1135	150	7.07	0.345	422	3.36	26.9	15.80	7.34	~~3.0~~
1140	150	6.94	0.345	427	3.34	26.6	15.80	7.35	~~3.5~~
1145	150	6.95	0.345	426	3.32	16.6	15.75	7.37	
1148		6.96	0.345	425	3.32	16.2	15.76	7.40	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
2	1L	Amb	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: RT	DATE: 4-4-18	BY:	DATE:

SAMPLE ID: BW 79025

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1151	150	6.94	0.345	426	3.31	15.8	15.75	7.42	8

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: 4-4-18	DATE: RT	BY: JRL	DATE: 4-9-18

SAMPLE ID: BW CM-015 WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0800	DATE: 4-4-18	SAMPLE	TIME: 0845	DATE: 4-4-18

PURGE METHOD: ☒ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 15.66 T/ PVC

DEPTH TO BOTTOM: 24.22 T/ PVC

WELL VOLUME: 1.37 ☐ LITERS ☒ GALLONS

VOLUME REMOVED: 4.5 ☐ LITERS ☐ GALLONS

COLOR: brown ODOR: no

TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 6.70 SU CONDUCTIVITY: 0.241 umhos/cm

ORP: 320 mV DO: 4.26 mg/L

TURBIDITY: 8.1 NTU

☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 18.09 °C OTHER:

COLOR: ODOR: no

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0800	150	6.33	0.227	275	5.32	0	17.66	15.75	INITIAL
0805	150	6.50	0.223	267	5.55	200	17.78	15.79	0.5
0810	150	6.59	0.224	275	5.26	272	17.88	15.80	1.0
0815	150	6.64	0.230	282	5.08	126	17.93	15.80	1.5
0820	150	6.67	0.235	292	4.92	81.9	18.13	15.79	2.0
0825	150	6.65	0.240	304	4.68	28.7	18.13	15.80	2.5
0830	150	6.73	0.242	304	4.60	26.3	18.06	15.80	3.0
0835	150	6.78	0.244	310	4.57	14.1	18.11	15.80	3.5
0840	150	6.90	0.241	314	4.52	10.2	18.16	15.84	4.0
0845	150	6.70	0.241	320	4.26	8.1	18.09	15.88	4.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or </= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☒ N					☐ Y ☐ N
3	↓	↓	E	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:

COC NUMBER: SIGNATURE: DATE SIGNED:

06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-4-18	BY:	DATE:

SAMPLE ID: BW21-04D

WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1455	DATE: 4-4-18	SAMPLE	TIME: 1514	DATE: 4-4-18

PURGE METHOD: ☑ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 19.41 T/ PVC

DEPTH TO BOTTOM: 21.85 T/ PVC

WELL VOLUME: 0.39 ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 0.25 ☒ LITERS ☐ GALLONS

COLOR: Reddish orange ODOR: no

TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 7.35 SU CONDUCTIVITY: 0.0 umhos/cm

ORP: 365 mV DO: 7.97 mg/L

TURBIDITY: >1,000 NTU

☐ NONE ☐ SLIGHT ☐ MODERATE ☒ VERY

TEMPERATURE: 25.5 °C OTHER:

COLOR: Orange ODOR: no

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1500	–	7.35	0.0	365	7.97	>1,000	25.5	–	INITIAL
Well unable to produce enough volume for low flow									
- Purge ~~one~~ 250 mL then collect sample									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☑ N					☐ Y ☐ N
3	↓	↓	E	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-13 MID | WELL DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ OTHER Port

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1230	DATE: 4-4-18	SAMPLE	TIME: 1231	DATE: 4-4-18
PURGE METHOD: ☐ PUMP Port ☑ BAILER			PH: 7.15 SU	CONDUCTIVITY: 0.914 umhos/cm	
			ORP: 172 mV	DO: 7.64 mg/L	
DEPTH TO WATER: ____ T/ PVC			TURBIDITY: 1.6 NTU		
DEPTH TO BOTTOM: ____ T/ PVC			☑ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 17.47 °C	OTHER:	
VOLUME REMOVED: ____ ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR:	
COLOR: ____ ODOR: ____			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			FILTRATE COLOR: ____	FILTRATE ODOR: ____	
			QC SAMPLE: ☐ MS/MSD ☐ DUP- ____		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS: System Mid-point sample		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1231	–	7.15	0.914	172	7.64	1.6	17.47	–	INITIAL
	Port	Mid-point	Sample						

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED | PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD: ____	DATE SHIPPED: ____	AIRBILL NUMBER: ____
COC NUMBER: ____	SIGNATURE: ____	DATE SIGNED: ____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-13INF | WELL DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ OTHER Port

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1235	DATE:	SAMPLE	TIME: 1237	DATE: 4-4-18

PURGE METHOD: ☐ PUMP ☐ BAILER	PH: 7.05 SU; CONDUCTIVITY: 0.936 umhos/cm
	ORP: 0.936 mV; DO: 10.33 mg/L
DEPTH TO WATER: T/ PVC	TURBIDITY: 11.0 NTU
DEPTH TO BOTTOM: T/ PVC	☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY
WELL VOLUME: ☐ LITERS ☐ GALLONS	TEMPERATURE: 16.69 °C; OTHER:
VOLUME REMOVED: ☐ LITERS ☐ GALLONS	COLOR: Clear; ODOR: no
COLOR: ODOR:	FILTRATE (0.45 um) ☐ YES ☐ NO
TURBIDITY ☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY	FILTRATE COLOR: FILTRATE ODOR:
	QC SAMPLE: ☐ MS/MSD ☐ DUP-
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER	COMMENTS: Dent Sample

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
									INITIAL

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
2	1L	Amb	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4/4/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: BWTTU-03D | WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 930	DATE: 4/4/18	SAMPLE	TIME: 1009	DATE: 4-4-18

PURGE METHOD: [X] PUMP mon soon [ ] BAILER

DEPTH TO WATER: 14.80 T/ PVC

DEPTH TO BOTTOM: 25.10 T/ PVC

WELL VOLUME: ____ [ ] LITERS [ ] GALLONS

VOLUME REMOVED: 3.25 [ ] LITERS [ ] GALLONS

COLOR: Cloudy ODOR: no

TURBIDITY [ ] NONE [ ] SLIGHT [X] MODERATE [ ] VERY

DISPOSAL METHOD: [ ] GROUND [ ] DRUM [X] OTHER

PH: 6.20 SU | CONDUCTIVITY: 0.997 umhos/cm

ORP: 54 mV | DO: 0.8 mg/L

TURBIDITY: 3.3 NTU

[X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY

TEMPERATURE: 14.74 °C | OTHER:

COLOR: Clear | ODOR: no

FILTRATE (0.45 um) [ ] YES [ ] NO

FILTRATE COLOR: | FILTRATE ODOR:

QC SAMPLE: [ ] MS/MSD [ ] DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
936	200	6.90	0.964	90	7.97	475	14.75	16.20	INITIAL
941	150	6.33	1.00	83	2.54	188	14.50	16.45	0.5
946	150	6.30	1.01	76	2.58	50.6	14.49	16.71	1.0
951	150	6.26	1.01	61	1.27	15.9	14.60	16.85	1.5
956	150	6.23	1.01	58	1.35	6.9	14.66	16.85	2.0
1001	150	6.21	1.00	55	0.98	5.1	14.72	16.87	2.5
1006	150	6.20	1.00	53	0.84	3.7	14.75	16.91	3.0
1009	150	6.20	0.997	54	0.80	3.3	14.74	16.90	3.25

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
1	40mL	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-4-18	BY: JRL	DATE: 4-7-18

SAMPLE ID: West-01/040418 WELL DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ OTHER Surface

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME:	DATE:	SAMPLE	TIME: 900	DATE: 4-4-18
PURGE METHOD: ☐ PUMP ☐ BAILER			PH: 6.81 SU	CONDUCTIVITY: 0.664 umhos/cm	
			ORP: 119 mV	DO: 20.94 mg/L	
DEPTH TO WATER: T/ PVC			TURBIDITY: 17.7 NTU		
DEPTH TO BOTTOM: T/ PVC			☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ☐ LITERS ☐ GALLONS			TEMPERATURE: 11.56 °C	OTHER:	
VOLUME REMOVED: ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR: no	
COLOR: Clear ODOR: no			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD	☐ DUP-	
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
900	—	6.81	0.664	119	20.94	17.7	11.56	—	INITIAL
	Stream	grab	sample						

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: BW CG-01D WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 805	DATE: 4-4-18	SAMPLE	TIME: 840	DATE: 4-4-18
PURGE METHOD: [X] PUMP Monsoon [ ] BAILER			PH: 6.14 SU	CONDUCTIVITY: 0.949 umhos/cm	
			ORP: 150 mV	DO: 0.82 mg/L	
DEPTH TO WATER: 2.19 T/ PVC			TURBIDITY: 8.8 NTU		
DEPTH TO BOTTOM: 38.70 T/ PVC			[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY		
WELL VOLUME: ____ [ ] LITERS [ ] GALLONS			TEMPERATURE: 13.44 °C	OTHER:	
VOLUME REMOVED: 3.25 [ ] LITERS [ ] GALLONS			COLOR: Clear	ODOR: no	
COLOR: Cloudy	ODOR: no		FILTRATE (0.45 um) [ ] YES [ ] NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
[ ] NONE [ ] SLIGHT [X] MODERATE [ ] VERY			QC SAMPLE: [X] MS/MSD	[X] DUP- 01	
DISPOSAL METHOD: [ ] GROUND [ ] DRUM [X] OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
807	200	5.94	0.950	288	8.84	320	12.65	8.46	INITIAL
812	150	6.10	0.943	242	0.96	772	12.92	8.61	0.5
817	150	6.17	0.932	209	0.932	292	12.94	8.50	1.0
822	150	6.15	0.932	183	0.64	70.8	13.13	8.85	1.5
827	150	6.14	0.947	162	0.68	29.4	13.06	8.71	2.0
832	150	6.13	0.950	157	0.71	16.4	13.39	9.00	2.5
837	150	6.12	0.948	149	0.86	10.0	13.42	8.98	3.0
840	150	6.14	0.949	150	0.82	8.8	13.44	9.0	3.25

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
12	40mL	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
4	40mL	VOA	A	[ ] Y [X] N	MS/MSD + DUP01				[ ] Y [ ] N
				[ ] Y [ ] N	Collected				[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-4-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: SW 5 - 04 WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1505	DATE:	SAMPLE	TIME: 1535	DATE: 4-4-18
PURGE METHOD:	☑ PUMP Monsoon ☐ BAILER		PH: 6.86 SU	CONDUCTIVITY: 0.491 umhos/cm	
			ORP: -17 mV	DO: 4.49 mg/L	
DEPTH TO WATER: 6.36 T/ PVC			TURBIDITY: 1.7 NTU		
DEPTH TO BOTTOM: 23.85 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ☐ LITERS ☐ GALLONS			TEMPERATURE: 12.97 °C	OTHER:	
VOLUME REMOVED: 2.0 ☐ LITERS ☑ GALLONS			COLOR: Clear	ODOR: no	
COLOR: Clear	ODOR: no		FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☑ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS: ER-01 collected @ 1740		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
~~1505~~ 1505	150	7.27	0.497	-36	7.67	4.8	14.09	6.77	INITIAL
1510	150	7.03	0.496	-24	5.45	3.3	13.33	6.80	
1515	150	7.02	0.493	-23	4.97	3.8	13.06	6.84	
1520	150	6.95	0.492	-18	4.75	3.3	13.04	6.85	
1525	150	6.93	0.491	-18	4.53	2.0	12.98	6.87	
1530	150	6.89	0.491	-17	4.48	1.9	12.96	6.89	
1535	150	6.86	0.491	-17	4.49	1.7	12.97	6.91	2.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	~~60~~ 40	VOA	A	☐ Y ☑ N					☐ Y ☐ N
3	40ml	VOA	E	☐ Y ☑ N					☐ Y ☐ N
2	1L	Amber	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

 Dup 02

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-4-18	BY:	DATE:

SAMPLE ID: BW 28-02S WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 16.10	DATE: 4-4-18	SAMPLE	TIME: 1700	DATE: 4-4-18

PURGE METHOD: ☑ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 2.80 T/ PVC

DEPTH TO BOTTOM: 21.30 T/ PVC

WELL VOLUME: ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 50 ☐ LITERS ☑ GALLONS

COLOR: L. Brown ODOR: N

TURBIDITY: ☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER

PH: 7.39 SU CONDUCTIVITY: 0.444 umhos/cm

ORP: 392 mV DO: 4.49 mg/L

TURBIDITY: 7.1 NTU

☑ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 16.62 °C OTHER:

COLOR: Clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☑ MS/MSD ☑ DUP- 02

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1610	150	8.41	0.396	369	4.14	478	22.05	2.90	INITIAL
1615	150	7.44	0.431	382	4.60	220	17.90	3.05	
1620	150	7.40	0.437	373	4.59	106	17.27	3.09	
1625	150	7.37	0.438	374	4.52	74.6	17.09	3.10	
1630	150	7.37	0.439	377	4.48	62.6	17.00	3.10	
1635	150	7.37	0.440	381	4.48	45.3	16.91	3.10	
1640	150	7.37	0.441	382	4.46	34.8	16.88	3.10	
1645	150	7.38	0.441	385	4.45	27.0	16.84	3.10	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
9 12	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
3 4	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
6 8	1L	Amb	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ABC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: RT	DATE: 4-4-18	BY:	DATE:

SAMPLE ID: BW28-025

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1650	150	7.36	0.442	388	4.46	20.9	16.77	3.10	
1655	150	7.37	0.442	389	4.46	13.4	16.76	3.15	
1700	150	7.39	0.444	392	4.49	7.1	16.62	3.20	

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-5-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: IW-6 WELL DIAMETER: ☐ 2" ☒ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 814	DATE: 4-5-18	SAMPLE	TIME: 911	DATE: 4-5-18
PURGE METHOD:	☒ PUMP monsoon ☐ BAILER		PH: 6.48 SU	CONDUCTIVITY: 0.461 umhos/cm	
			ORP: 68 mV	DO: 4.01 mg/L	
DEPTH TO WATER: 37.25 T/ PVC			TURBIDITY: 7.2 NTU		
DEPTH TO BOTTOM: 105.50 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 44.56 ☐ LITERS ☒ GALLONS			TEMPERATURE: 12.86 °C	OTHER: —	
VOLUME REMOVED: 8.5 ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR: no	
COLOR: Clear	ODOR: no		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☒ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
815	200	—	—	—	—	—	11.77	37.55	INITIAL
820	150	6.15	0.464	201	4.75	13.5	11.93	37.76	0.5
825	200	6.34	0.466	181	4.28	12.9	12.55	38.04	1.0
830	200	6.43	0.465	164	4.15	~~12.7~~ 11.5	12.72	38.58	1.5
835	200	6.50	0.466	144	4.15	10.10	12.52	38.86	2.5
840	200	6.51	0.463	122	4.08	10.50	12.56	39.40	3.5
845	200	6.51	0.465	109	4.12	9.7	12.33	39.55	4.5
850	200	6.51	0.462	103	4.14	9.8	12.54	39.65	5.0
855	200	6.51	0.462	90	4.04	9.2	12.63	39.82	5.5
900	200	6.49	0.462	82	4.00	7.7	12.98	40.31	6.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: SRL	DATE: 4-5-18	BY:	DATE:

SAMPLE ID: IW-6

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
905	200	6.47	0.461	72	3.98	7.7	12.92	~~80.~~	7.5
908	200	6.47	0.461	70	4.00	7.6	12.88	40.91	8.0
911	200	6.48	0.461	68	4.01	7.2	12.86	40.95	8.5

40.79 wl

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 4-5-18	BY: JRL	DATE: 4-5-18

SAMPLE ID: STR 40-15 WELL DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ OTHER Stream

WELL MATERIAL: ☐ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☐ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1000	DATE: 4-5-18	SAMPLE	TIME: 1000	DATE: 4-5-18
PURGE METHOD: ☐ PUMP ☐ BAILER			PH: 9.08 SU	CONDUCTIVITY: 0.200 umhos/cm	
			ORP: 395 mV	DO: 11.92 mg/L	
DEPTH TO WATER: T/ PVC			TURBIDITY: 13.3 NTU		
DEPTH TO BOTTOM: T/ PVC			☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ☐ LITERS ☐ GALLONS			TEMPERATURE: 9.16 °C	OTHER:	
VOLUME REMOVED: ☐ LITERS ☐ GALLONS			COLOR: Clear	ODOR:	
COLOR: ODOR:			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
Stream	grab	sample	Stream	is flowing	however	very low	flow.		INITIAL

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☐ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KB	DATE: 4/5/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW-23 | WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0745	DATE: 4/5/18	SAMPLE	TIME: 0850	DATE: 4/5/18
PURGE METHOD:	☒ PUMP Grundfos ☐ BAILER		PH: 7.21 SU	CONDUCTIVITY: 0.532 umhos/cm	
			ORP: 4 mV	DO: 0.70 mg/L	
DEPTH TO WATER: 28.55 T/ PVC			TURBIDITY: 9.5 NTU		
DEPTH TO BOTTOM: ____ T/ PVC Greater than 300'			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 12.69 °C	OTHER:	
VOLUME REMOVED: 6 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: None	
COLOR: Clear	ODOR: None		FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0750	250	6.38	0.539	140	1.24	24.6	13.29	28.75	INITIAL
0755	↓	6.84	0.537	67	0.84	13.1	12.84	29.07	
0800		7.04	0.535	31	0.87	5.9	12.95	29.36	
0805		7.11	0.535	22	0.82	6.0	12.83	29.55	
0810		7.14	0.534	20	0.77	6.0	12.85	29.70	
0815		7.17	0.534	17	0.76	6.1	12.76	29.89	
0820		7.18	0.532	16	0.81	6.5	12.67	29.95	
0825		7.20	0.533	11	0.79	7.6	12.75	30.00	
0830		7.21	0.533	10	0.72	7.6	12.74	30.03	
0835	↓	7.21	0.532	7	0.72	8.1	12.84	30.05	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOCs	E	☐ Y ☒ N					☐ Y ☐ N
1	40ml	Perc	A	☐ Y ☒ N					☐ Y ☐ N
2	1L	Dioxane	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME:	PREPARED		CHECKED	
PROJECT NUMBER:	BY: KL	DATE: 4/5/18	BY:	DATE:

SAMPLE ID: DW-23

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0840	250	7.21	0.531	7	0.76	9.3	12.89	30.07	
0845	↓	7.21	0.532	4	0.70	9.5	12.69	30.10	6 gal

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KL	DATE: 4/5/18	BY: SRL	DATE: 4-9-18

SAMPLE ID: DW-28D — WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1155	DATE: 4/5/18	SAMPLE	TIME: 1300	DATE: 4/5/18
PURGE METHOD:	[X] PUMP Grundfos [ ] BAILER		PH: 6.70 SU	CONDUCTIVITY: 0.689 umhos/cm	
			ORP: -1 mV	DO: 0.43 mg/L	
DEPTH TO WATER: 40.00 T/ PVC			TURBIDITY: 144 NTU		
DEPTH TO BOTTOM: 41.45 T/ PVC			[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY		
WELL VOLUME: ____ [ ] LITERS [ ] GALLONS			TEMPERATURE: 15.30 °C	OTHER:	
VOLUME REMOVED: 6.0 [ ] LITERS [ ] GALLONS			COLOR: S. Cloudy	ODOR: no	
COLOR: Gray	ODOR: None		FILTRATE (0.45 um) [ ] YES [X] NO		
TURBIDITY [ ] NONE [ ] SLIGHT [ ] MODERATE [X] VERY			FILTRATE COLOR:	FILTRATE ODOR:	
			QC SAMPLE: [ ] MS/MSD	[ ] DUP-	
DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1200	300	6.73	0.687	59	1.01	637	14.45	42.54	INITIAL
1205	↓	6.76	0.694	-5	0.69	771	14.70	41.61	
1210		6.68	0.694	-9	0.64	>1000	14.83	41.52	
1215		6.70	0.692	-15	0.57	945	15.02	41.51	
1220		6.68	0.692	-15	0.52	>1000	15.09	41.50	
1225		6.69	0.691	-11	0.52	770	15.07	41.50	
1230		6.69	0.691	-7	0.50	551	15.15	41.45	
1235		6.70	0.[illegible]	-4	0.46	386	15.07	41.40	
1240		6.70	0.690	-3	0.46	315	15.18	41.37	
1245		6.70	0.690	-2	0.47	224	15.21	41.30	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOCs	E	[ ] Y [X] N					[ ] Y [ ] N
1	40ml	Perc	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: KR	DATE: 4/5/18	BY:	DATE:

SAMPLE ID: DW-28D

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1250	300	6.70	0.689	-2	0.43	180	15.26	41.26	
1255	↓	6.70	0.689	-1	0.43	144	15.30	41.27	6.0 gal

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-5-18	BY: JBL	DATE: 4-9-18

SAMPLE ID: DW 29S — WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1115	DATE: 4-5-18	SAMPLE	TIME: 1200	DATE: 4-5-18

PURGE METHOD: ☑ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 28.45 T/ PVC

DEPTH TO BOTTOM: 45.25 T/ PVC

WELL VOLUME: 2.74 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 5.0 ☐ LITERS ☒ GALLONS

COLOR: cloudy ODOR: no

TURBIDITY: ☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☑ DRUM ☐ OTHER

PH: 7.22 SU CONDUCTIVITY: 0.700 umhos/cm

ORP: 64 mV DO: 4.59 mg/L

TURBIDITY: 8.3 NTU

☑ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 14.21 °C OTHER:

COLOR: clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1115	200	7.17	0.727	133	6.02	>1000	12.63	29.39	INITIAL
1120	150	7.45	0.752	114	4.38	397	12.88	29.77	
1125	150	7.43	0.734	106	4.36	249	13.06	30.27	
1130	150	7.32	0.715	93	4.73	97.2	13.45	31.18	
1135	150	7.30	0.719	83	4.87	50.3	13.75	32.45	
1140	150	7.29	0.721	76	5.00	44.6	13.69	33.25	
1145	150	7.28	0.716	72	4.83	29.1	13.73	33.84	
1150	150	7.27	0.711	70	4.76	16.4	13.74	34.35	
1155	150	7.24	0.701	69	4.73	10.5	14.09	35.06	
1200	150	7.22	0.700	64	4.59	8.3	14.21	35.83	5.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☑ N					☐ Y ☐ N
3	↓	↓	E	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: RT	DATE: 4-5-18	BY: JRL	DATE: 4-9-18

SAMPLE ID: BW ~~DW~~ JRL 78-12D — WELL DIAMETER: ☑ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1000	DATE: 4-5-18	SAMPLE	TIME: 1050	DATE: 4-5-18

PURGE METHOD: ☑ PUMP Monsoon ☐ BAILER

DEPTH TO WATER: 10.25 T/ PVC

DEPTH TO BOTTOM 18.05 T/ PVC

WELL VOLUME: 1.27 ☐ LITERS ☑ GALLONS

VOLUME REMOVED: 5.0 ☐ LITERS ☒ GALLONS

COLOR: Cloudy ODOR: no

TURBIDITY ☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY

DISPOSAL METHOD ☐ GROUND ☑ DRUM ☐ OTHER

PH: 6.29 SU CONDUCTIVITY: 0.203 umhos/cm

ORP: 159 mV DO: 6.92 mg/L

TURBIDITY: 12.0 NTU

☐ NONE ☑ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 10.71 °C OTHER:

COLOR: clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1000	150	7.09	0.197	127	8.65	>1000	9.58	11.04	INITIAL
1005	150	6.61	0.192	141	8.20	362	9.75	11.66	
1010	150	6.46	0.188	142	7.89	117	10.26	12.04	
1015	150	6.42	0.188	141	7.79	61.9	10.34	12.43	
1020	150	6.39	0.189	139	7.50	34.8	10.67	13.14	
1025	150	6.38	0.190	143	7.27	25.2	10.47	13.22	
1030	150	6.35	0.196	146	7.35	15.7	10.96	13.55	
1035	150	6.37	0.202	146	7.76	22.1	10.66	13.65	
1040	150	6.38	0.205	152	7.74	13.1	10.56	14.26	
1045	150	6.31	0.202	157	7.34	12.5	10.72	14.66	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or </= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☑ N					☐ Y ☐ N
3	↓	↓	E	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

G METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
BER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER:	BY: RT	DATE: 4-5-18	BY:	DATE:

SAMPLE ID: ~~DW~~ BW ~~JRL~~ 78-12D

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)	
1050	150	6.29	0.203	159	6.92	12.0	10.71	14.91	5.0	Total

SIGNATURE: _____ DATE SIGNED: _____

1.469

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: 4-5-18	DATE: RT	BY: JRL	DATE: 4-9-18

SAMPLE ID: DW 76-01 | WELL DIAMETER: ☐ 2" ☐ 4" ☑ 6" ☐ OTHER

WELL MATERIAL: ☑ PVC ☐ SS ☐ IRON ☑ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☑ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 0755	DATE: 4-5-18	SAMPLE	TIME: 0840	DATE: 4-5-18
PURGE METHOD:	☑ PUMP Monsoon ☐ BAILER		PH: 8.15 SU	CONDUCTIVITY: 0.391 umhos/cm	
			ORP: 415 mV	DO: 2.38 mg/L	
DEPTH TO WATER: 33.87 T/ PVC			TURBIDITY: 307 NTU		
DEPTH TO BOTTOM: 52.25 T/ PVC			☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY		
WELL VOLUME: 27 ☐ LITERS ☑ GALLONS			TEMPERATURE: 17.79 °C	OTHER:	
VOLUME REMOVED: 5.0 ☐ LITERS ☑ GALLONS			COLOR: Light tan	ODOR: no	
COLOR: L. Brown	ODOR: no		FILTRATE (0.45 um) ☐ YES ☑ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☑ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0755	200	5.57	0.426	486	3.74	629	15.67	34.20	INITIAL
0800	150	7.57	0.411	451	3.11	418	15.86	34.32	
0805	150	8.04	0.390	443	2.87	404	16.90	34.58	
0810	150	8.28	0.386	434	2.72	375	17.21	34.90	
0815	150	8.22	0.388	433	2.65	331	17.28	35.15	
0820	150	8.23	0.390	427	2.54	295	17.40	35.41	
0825	150	8.11	0.389	428	2.49	312	17.43	35.63	
0830	150	8.19	0.389	421	2.42	334	17.75	35.92	
0835	150	8.13	0.390	419	2.40	311	17.78	36.18	
0840	150	8.15	0.391	415	2.38	307	17.79	36.41	5.0 Total

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
1	40ml	VOA	A	☐ Y ☑ N					☐ Y ☐ N
3	40ml	VOA	E	☐ Y ☑ N					☐ Y ☐ N
2	1L	Amber	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: BG/JRL	DATE: 4/5/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: BW 14-02S WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1135	DATE: 4/5/18	SAMPLE	TIME: 1215	DATE: 4-5-18
PURGE METHOD: [X] PUMP Monsoon [ ] BAILER			PH: 6.56 SU	CONDUCTIVITY: 0.325 umhos/cm	
			ORP: 417 mV	DO: 3.68 mg/L	
DEPTH TO WATER: 11.71 T/ PVC			TURBIDITY: 6.7 NTU		
DEPTH TO BOTTOM: 22.97 T/ PVC			[X] NONE [ ] SLIGHT [ ] MODERATE [ ] VERY		
WELL VOLUME: 1.8 [ ] LITERS [X] GALLONS			TEMPERATURE: 17.52 °C	OTHER:	
VOLUME REMOVED: 4.0 [ ] LITERS [ ] GALLONS			COLOR: Clear	ODOR: no	
COLOR: Cloudy ODOR: no			FILTRATE (0.45 um) [ ] YES [X] NO		
TURBIDITY [ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY			FILTRATE COLOR:	FILTRATE ODOR:	
			QC SAMPLE: [X] MS/MSD	[X] DUP- 03	
DISPOSAL METHOD: [ ] GROUND [ ] DRUM [X] OTHER			COMMENTS: FB-03 collected @ 1300		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1140	200	8.13	0.318	364	4.73	104	17.26	11.80	INITIAL
1145	150	7.25	0.319	391	4.40	171	17.40	11.79	1.0
1150	150	6.68	0.323	412	3.95	86.1	17.24	11.79	1.5
1155	150	6.60	0.324	414	3.82	57.9	17.39	11.79	2.0
1200	150	6.57	0.324	415	3.69	39.5	17.46	11.76	2.5
1205	150	6.56	0.324	416	3.70	21.5	17.55	11.77	3.0
1210	150	6.65	0.325	414	3.68	17.2	17.48	11.77	3.5
1215	150	6.56	0.325	417	3.68	6.7	17.52	11.77	4.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
4 9 + 3	40mL	VOA	E	[ ] Y [X] N					[ ] Y [ ] N
3 + 1	40mL	VOA	A	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: BG	DATE: 4/5/18	BY: JRL	DATE: 4-9-18

SAMPLE ID: BW 45-03S WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 935	DATE: 4/5/18	SAMPLE	TIME: 1030	DATE: 4-5-18
PURGE METHOD: ☒ PUMP Geopump ☐ BAILER			PH: 6.24 SU	CONDUCTIVITY: 0.516 umhos/cm	
			ORP: 46 mV	DO: 0.59 mg/L	
DEPTH TO WATER: 4.11 T/ PVC			TURBIDITY: 6.3 NTU		
DEPTH TO BOTTOM: 10.70 T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 8.75 °C	OTHER:	
VOLUME REMOVED: 4 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: No	
COLOR: Clear	ODOR: No		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
930	200	6.74	0.496	175	3.05	12.3	9.56	4.78	INITIAL
955	200	6.44	0.504	125	0.97	11.3	9.26	5.50	1
1000	200	6.35	0.508	98	0.72	11.4	9.07	5.90	<2
1005	200	6.30	0.511	55	0.68	7.7	8.93	6.07	2
1010	200	6.28	0.513	48	0.60	6.5	8.93	6.08	<3
1015	200	6.26	0.515	37	0.61	6.7	8.85	6.17	3
1020	200	6.25	0.514	45	0.60	6.1	8.83	6.22	<4
1025	200	6.25	0.515	47	0.58	6.6	8.78	6.27	4
1030	200	6.24	0.516	46	0.59	6.3	8.75	6.36	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☐ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: KR.	DATE: 4/5/18	BY: JDL	DATE: 4-9-18

SAMPLE ID: DW-20 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1345	DATE: 4/5/18	SAMPLE	TIME: 1430	DATE: 4/5/18
PURGE METHOD:	☒ PUMP Grundfos ☐ BAILER		PH: 11.09 SU	CONDUCTIVITY: 0.591 umhos/cm	
			ORP: -65 mV	DO: 1.30 mg/L	
DEPTH TO WATER: 11.07 T/ PVC			TURBIDITY: 3.4 NTU		
DEPTH TO BOTTOM: ____ T/ PVC Greater than 300'			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 15.85 °C	OTHER:	
VOLUME REMOVED: 4 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR: None	
COLOR: Clear	ODOR: None		FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1350		10.33	0595	19	2.46	3.9	16.03	11.69	INITIAL
1355		10.38	0.597	-3	1.80	5.0	15.83	11.70	
1400		10.85	0.595	-41	1.53	4.3	15.72	11.71	
1405		10.97	0.592	-53	1.71	4.2	15.72	11.72	
1410		11.00	0.591	-57	1.49	3.7	15.71	11.71	
1415		11.01	0.591	-58	1.59	3.5	15.61	11.72	
1420		11.00	0.594	-59	1.33	3.4	15.67	11.71	
1425		11.09	0.593	-64	1.31	3.3	15.75	11.71	
1430		11.09	0.591	-65	1.30	3.4	15.85	11.71	

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOC	E	☐ Y ☒ N					☐ Y ☐ N
1	40ml	Perc	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544146

Client Information

Client: TRC Environmental
Acct. #:
Project Name/#: ARC Gainesville
PWSID #:
Project Manager: G. King
P.O. #:
Sampler: JRL, KR, BG, RT
Quote #:
State where samples were collected: Virginia
For Compliance: Yes ☐ No ☑

Matrix

Soil ☐ Sediment ☐ Tissue ☐
Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐
Other: ____

Analysis Requested / Preservation Codes

For Lab Use Only
FSC: ____
SCR#: 221109

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOC 8260	Perchlorate	1,4 Dioxane	Remarks
DW-30S/040318	4-3-18	1420	X		4	X	X		
SW42-02/040318		0950	X		4	X	X		
DW-15/040318		0930	X		3	X			
~~[illegible]~~ DW-72B/040318		1250	X		5	X		X	
DW-32I/040318		1530	X		5	X		X	
DW-28I/040318		1655	X		6	X	X	X	
SW40-57/040318		1742	X		4	X	X		
STR-04/040318		1238	X		4	X	X		
DW-12/040318		1141	X		6	X	X	X	
SW200-02/040318		1048	X		4	X	X		

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: Standard

E-mail address: G.King@trcsolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	3/14/18	14:00			
[signature]	4-3-18	1700			

EDD Required? Yes No
If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544145

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: JRL, KR, BG, RT	Quote #:
State where samples were collected: Virginia	For Compliance: Yes ☐ No ☑

Matrix: Soil ☐ Sediment ☐ Tissue ☐ Water: Ground ☑ Potable ☐ Surface ☐ NPDES ☐ Other: ____

Analysis Requested / Preservation Codes

For Lab Use Only
FSC: _____
SCR#: _____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOC 8260	Perchlorate	1,4 Dioxane	Remarks
DW 200-01/040318	4-3-18	1008	X		4	X	X		
DW SB-02/040318		927	X		6	X	X	X	
SW 40-07A/040318		1650	X		4	X	X		
BW 28-04D/040318		1557	X		4	X	X		
SW 47-02/040318		1526	X		4	X	X		
SW 28-41/040318		1455	X		4	X	X		
SW SB-03/040318		1343	X		6	X	X	X	
SW 222-02/040318		1156	X		4	X	X		
SW 212-01/040318		0930	X		4	X	X		
TB-01/040318		—	X		2	X			

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD.

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-3-18	1700			

EDD Required? Yes No
If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544144

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: JRL, RT, BG, KR	Quote #:
State where samples were collected: Virginia	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: _____

Analysis Requested — Preservation Codes

For Lab Use Only
FSC: _____
SCR#: _____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOC's	Perchlorate	1,4 Dioxane								Remarks
FB-01/040318	4-3-18	1610	X			X		3	X										
DW-16/040418	4-4-18	0820	X			X		3	X										
DW 213-01/040418	4-4-18	1340	X			X		1		X									
DW-18/040418	4-4-18	0955	X			X		3	X										
DW SB-01/040418	4-4-18	1145	X			X		4	X	X									
SW 5-04/040418	4-4-18	1535	X			X		6	X	X	X								
SW 74-07/040418	4-4-18	1305	X			X		4	X	X									
BW 79-02S/040418	4-4-18	~~1145~~ 1131	X			X		6	X	X	X								
SW TTU-03/040418	4-4-18	1045	X			X		4	X	X									
BW CM-01S/040418	4-4-18	0845	X			X		4	X	X									

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD

E-mail address: GKing@TRCsolutions.com

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-4-18	1830			

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

EDD Required? Yes No
If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300
The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.
7044 0216

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544143

Client Information

Client: TRC Environmental

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: JRL, RT, BG, KR

Quote #:

State where samples were collected: Virginia

For Compliance: Yes ☐ No ☑

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water: Potable	Water: Ground	Water: Surface	Water: NPDES	Other:	Total # of Containers	VOCs	Perchlorate	1,4 Dioxane							Remarks
BW 21-09D/040418	4-4-18	1514	X						X				4	X	X								
DW-13MID/040418		1231	X						X				3	X									
DW-13INF/040418		1233	X						X				6	X	X	X							
FB-02/040418		1640	X						X				3	X									
BW TTU-03D/040418		1009	X						X				4	X	X								
West-01/040418		0900	X						X				4	X	X								
BW CG-01D/040418		840	X						X				12	X	X								MS/MSD
DUP-01/040418		—	X						X				4	X	X								
DW-26I/040418		1620	X						X				4	X	X								
EB-01/040418		1740	X						X				5	X	X	X							

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-4-18	1830			

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Temperature upon receipt _____ °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544142

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: JRL, BG, RT, KR	Quote #:
State where samples were collected: Virginia	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☒ Surface ☐ NPDES ☐ Other: ____

Analysis Requested — Preservation Codes

For Lab Use Only: FSC: _____ SCR#: _____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs	Perchlorate	1,4 Dioxane	Remarks
BW 28-023/040418	4-4-18	1700	X		18 ~~24~~	X	X	X	
TB-02/040418	4-4-18	—	X		2 ~~3~~	X			
DUP-02/040418	4-4-18	—	X		6	X	X	X	

4-4-18

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-4-18	18:30			

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544137

Client Information

Client: TRC Environmental

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: JRL, BG, RT, KR

Quote #:

State where samples were collected: Virginia

For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Other: ____

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs	Perchlorate	1,4 Dioxane	Remarks
DW-23/040518	4-5-18	0850	X		6	X	X	X	
BW 45-03S/040518		1030	X		4	X	X		
STR40-15/040518		1000	X		4	X	X		
DW 76-01/040518		0840	X		6	X	X	X	
IW-6/040518		0911	X		4	X	X		
~~DW76-01/040518~~		~~0~~							
DW 78-12D/040518		1050	X		1		X		
DW 29S/040518		1200	X		4	X	X		
BW 14-02S/040518		1215	X		12	X	X		MS/MSD
DUP-03/040518		—	X		4	X	X		

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: S+D.

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4-5-18	1600			

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt _____ °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 544141

Client Information

Client: TRC Environmental

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: JRL, BG, RT, KR

Quote #:

State where samples were collected: Virginia

For Compliance: Yes ☐ No ☒

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Ground	Potable	Surface	NPDES	Other:	Total # of Containers	VOC's	Perchlorate	1,4 Dioxane	Remarks
DW-28D/040518	4-5-18	1300	X					X					4	X	X		
FB-03/040518	4-5-18	1300	X					X					3	X			
EB-02/040518	4-5-18	1315	X					X					6	X	X	X	
TB-03/040518	4-5-18	—	X					X					3	X			
DW-20/040518	4-5-18	1430	X					X					4	X	X		

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: STD

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[illegible]	4-5-18	1600			

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Temperature upon receipt _____ °C

4-5-18 Horiba Calibration records

Horiba Serial #:

16961

pH 3.87 / 3.85

mS/cm: 4.48 / 4.46

NTU: 0.0 / 0.0

DO: 8.67 / 8.62

Serial #:

18804

pH 4.001 3.98

mScm 4.53 / 4.53

NTU 0.0 / 0.0

DO 11.32 / 11.33

Serial #

19492

pH 3.91 / 3.86

mscm 4.63 / 4.66

NTU 0.0 / 0.0

DO 11.40 / 11.30

4-4-18 Gainesville

Horiba Calibration

Serial ID # 19492
@ 710:
pH 3.95 / 3.94
mS/cm 4.60 / 4.63
NTU 0.0 / 0.0
DO 10.66 / 10.38

Serial ID # 18804
@ 715:
pH 3.98 / 3.95
mS/cm 4.51 / 4.52
NTU 0.0 / 0.0
DO 11.28 / 11.51

ID # 16961
@ 720
pH 3.87 / 3.83
mS/cm 4.53 / 4.54
NTU 0.0 / 0.0
DO 9.19 / 9.20

ARGUS-HAZCO

Certificate of Compliance and Calibration

Certificate Number 3/27/2018 - 5869

Order#	01034602	**Make/Model**	HORIBA U-52-10
Customer#	0049700	**Asset #**	0001192
Customer Name	TRC COMPANIES	**Serial Number**	T10MF634

pH Sensor Installed and Calibrated ☑

Set Point	pH 4.00
Lot Number	13124
Final Span	pH 4.00

DO Sensor Installed and Calibrated ☑

Temperature:	
Set Point	9.10
Final Span	9.10

ORP Installed? ☐

ORP Cal Value:	
ORP Lot#:	
Final Span	

Conductivity Sensor Installed and Calibrated ☑

Set Point	4.49 ms/cm
Lot Number	13124
Final Span	4.49 ms/cm

Turbidity Sensor Installed and Calibrated ☑

Set Point	0.00 ntu
Lot Number	13124
Final Span	0.00 ntu

Notes

Location	Miamisburg,	**Asset Released In Tolerance**	☑
Technician	BILL WEBER	**All Tests Passed**	☑
Date	3/27/2018		
Time	8:57		
SOP#			

Quality Control: JR **Date:** 3/27/18

Please Note: All tests performed with NIST Traceable Calibration Solutions at ambient room temperature, humidity, and pressure at the location listed above. Time in transit or any change in temperature, pressure, humidity, or elevation may result in changes to the calibration values listed. Performance of a bump test is recommended prior to each use; refer to owners manual for bump testing and calibration procedures. Use of this test sheet constitutes proof that the testing environment was within manufacturers' limitation and the instrument conforms to manufacturers' specification. For a copy of the calibration standard certificate of analysis or MSDS, contact us at 800-332-0435.

111

RHEA

By _____ Date 4/4/18 Subject _____

Chkd By _____ Date _____ Sheet _____ of _____

Project No. _____

✓ DW213-01/040418	1340		1 Perc'	
DW5B01/040418	1145	3 VOCs	1 Perc'	
✓ DW-16/040418	0820	3 VOCs		
✓ DW-18/040418	0955	3 VOCs		
SWTTU-03/040418	1045	3 VOCs	1 Perc'	
BW 79-025/040418	1151	3 VOCs	1 Perc'	2 Dia
BWTTU-03D/040418	1009	3 VOCs	1 Perc'	
DW-13 MID/040418	1231	3 VOCs		
DW-13I NF/040418	1237	3 VOCs	1 Perc'	2 Dia
BWCG-01D/040418	0840	3 VOCs	1 Perc'	- MS/MSD/Dup 3+1 3+1 3+1
West-01/040418	0900	3 VOCs	1 Perc'	
SW5-04/040418	1535	3 VOCs	1 Perc'	2 Dia ?
SW74-07/040418	1305	3 VOCs	1 Per'	
~~BW 79-025/040418~~	~~1145~~ 1151	~~3 VOC's~~	~~1 Perc~~	
~~SW TTU-03/040418~~	~~1045~~	~~3 VOC's~~	~~1 Per~~	
BW CM-01S/040418	0845	3 VOC's	1 Per'	
BW 21-04D	1514	3 VOC's	1 Perc'	
~~DW-13 MID~~	~~1231~~	~~3 VOC's~~		
~~DW-13 INF~~	~~1237~~	~~3 VOC's~~	~~1 Per~~	~~2 Dia~~
FB-02/040418	1640	3 VOC's		
~~BW TTU-03D~~	~~1009~~	~~3 VOC's~~	~~1 Perc~~	
BW28025/040418	1700	3 VOCs	1 Perc'	2 Dia MS/MSD/DUP 3+1+2 3+1+2 3+2
EB-01/040418	1740	3 VOC's	1 Perc'	1 Dia
DW-26I/040418	1620	3 VOC's	1 perc	

RHEA

19

By _____ Date 4/3/18 Subject _____

Chkd By _____ Date _____ Sheet _____ of _____

Project No. _____

DW-15/040318	0930 [redacted]	3 VOCs		
SW42-02/040318	0950	3 VOCs	1 Perc	
SW222-02/040318	1156	3 VOCs	1 Perc	
SW200-02/040318	1048	3 VOCs	1 Perc	
DW200-01/040318	1008	3 VOCs	1 Perc	
DWSB-02/040318	0927	3 VOCs	1 Perc	2 Dia
DW-30S/040318	1420	3 VOCs	1 Perc	
DW-28I/040318	1655	3 VOCs	1 Perc	2 Dia
DW-72B/040318	1250	3 VOCs		2 Dia
SWSB-03/040318	1343	3 VOCs	1 Perc	2 Dia
SW212-01/040318	0930	3 VOCs	1 Perc	
DW-32I/040318	1530	3 VOCs		2 Dia
[redacted]	[redacted]	[redacted]		
DW-12/040318	1141	3 VOCs	1 Perc	2 Dia
STR-04/040318	1238	3 VOCs	1 Perc	
BW28-04D/040318	1557	3 VOCs	1 Perc	
SW28-41/040318	1455	3 VOCs	1 Perc	
SW47-02/040318	1526	3 VOCs	1 Perc	
SW40-07A/040318	1650	3 VOCs	1 Perc	
SW40-57/040318	1742	3 VOCs	1 Perc	
FB-01/040318	1610	3 VOCs		
~~BW-ITU-03D/040418~~	~~1009~~	~~3 VOC's~~	~~1 Perc~~	

RHEA

By _____ Date 4/5/18 Subject _____

Chkd By _____ Date _____ Sheet _____ of _____

Project No. _____

DW-23/040518 ✓	0850	3 VOCs	1 Perc	2 Dio ✓
BW45-035/040518 ✓	1030	3 VOCs	1 Perc ✓	
STR40-15/040518 ✓	1000	3 VOCs	1 Perc ✓	
DW76-01/040518 ✓	0840	3 VOCs	1 Perc	2 Dio ✓
IW-6/040518 ✓	0911	3 VOCs	1 Perc ✓	
~~DW 76-01~~	~~0840~~	~~3 VOCs~~	~~1 Perc~~	~~2 Dia~~
DW 78-12D ✓	1050	~~3 VOCs~~	1 Perc ✓	
DW 29S	1200	3 VOCs	1 Perc	
BW14-02S ✓	1215	3 VOCs ✓	1 Perc ✓	+ MS/MSD + ~~Dup~~ ✓
Dup-03	—	3 VOCs	1 Perc ✓	
DW 28D ✓	1300	3 VOCs	1 Perc ✓	
FB-03 ✓	1300	3 VOCs	✓	
EB-02 ✓	1315	3 VOCs	1 Perc	2 Dia ✓
DW-20	1430	3 VOCs	1 Perc	

TRC

WATER SAMPLE LOG

PROJECT NAME: GAINESVILLE, VA	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: AG	DATE: 10.09.18	BY: JRL	DATE: 10-12-18

SAMPLE ID: SW212-01 WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1025	DATE: 10.09.18	SAMPLE	TIME: 1055	DATE: 10.09.18

PURGE METHOD: [X] PUMP monsoon [ ] BAILER

DEPTH TO WATER: 13.65 T/ PVC

DEPTH TO BOTTOM: 14.85 T/ PVC

WELL VOLUME: 0.78 [ ] LITERS [X] GALLONS

VOLUME REMOVED: 0.90 [ ] LITERS [X] GALLONS

COLOR: — ODOR: —

TURBIDITY [ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY

DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER

PH: 6.17 SU CONDUCTIVITY: 0.359 umhos/cm

ORP: 20 mV DO: 0.63 mg/L

TURBIDITY: 2.35 NTU

[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY

TEMPERATURE: 21.15 °C OTHER:

COLOR: — ODOR: —

FILTRATE (0.45 um) [ ] YES [X] NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: [ ] MS/MSD [ ] DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1025	~100	6.45	0.391	112	1.12	18.7	19.38	13.70	INITIAL
1030	~100	6.28	0.375	56	0.00	9.63	20.62	13.75	0.15
1035	~100	6.20	0.366	60	0.72	6.38	20.75	13.78	0.30
1040	~100	6.17	0.364	29	0.71	5.00	21.12	13.84	0.45
1045	~100	6.16	0.362	25	0.70	4.46	21.09	13.86	0.60
1050	~100	6.16	0.360	22	0.66	3.88	21.11	13.89	0.75
1055	~100	6.17	0.359	20	0.63	2.35	21.15	13.90	0.90

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or </= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml		HCL	[ ] Y [X] N					[ ] Y [ ] N
1	40ml		UNPRES	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: GAINESVILLE, VA	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: ACL	DATE: 10.09.18	BY: JRL	DATE: 10-12-18

SAMPLE ID: SW2W-02 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 09.10	DATE: 10.09.18	SAMPLE	TIME: 0940	DATE: 10.09.18
PURGE METHOD:	☒ PUMP Mon Soon ☐ BAILER		PH: 6.15 SU	CONDUCTIVITY: 0.399 umhos/cm	
			ORP: 215 mV	DO: 5.18 mg/L	
DEPTH TO WATER: 8.42 T/ PVC		> 7.93	TURBIDITY: 48.8 NTU		
DEPTH TO BOTTOM: 16.35 T/ PVC			☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 5.18	☐ LITERS ☒ GALLONS		TEMPERATURE: 18.52 °C	OTHER:	
VOLUME REMOVED: 1.2	☐ LITERS ☒ GALLONS		COLOR: —	ODOR: —	
COLOR: CLEAR	ODOR: —		FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ~~☐ MS/MSD~~ ~~☐ DUP~~		
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ~~☒ OTHER~~			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0910	~150	6.32	0.387	214	7.25	186	20.31	8.69	INITIAL
0915	~150	6.15	0.387	217	6.24	148	17.91	8.77	0.2
0920	~150	6.10	0.391	217	5.63	95.9	18.29	8.91	0.4
0925	~150	6.10	0.393	215	5.34	77.0	18.51	9.00	0.6
0930	~150	6.11	0.394	214	5.22	57.4	18.55	9.04	0.8
0935	~150	6.13	0.392	213	5.20	53.4	18.53	9.05	1.0 gal
0940	~150	6.15	0.399	215	5.18	48.8	18.52	9.07	1.2

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml		HCL	☐ Y ☒ N					☐ Y ☐ N
1	40ml		UNPRES	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 10-9-18	BY: JRL	DATE: 10-12-18

SAMPLE ID: STR-04 WELL DIAMETER: ~~☐ 2" ☐ 4" ☐ 6" ☐~~ OTHER Stream

WELL MATERIAL: ~~☐ PVC ☐ SS ☐ IRON~~ ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ~~☐ GW ☐ WW ☐ SW ☐ DI~~ ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1325	DATE: 10-9-18	SAMPLE	TIME: 1335	DATE: 10-9-18
PURGE METHOD: ☐ PUMP ☑ BAILER Stream			PH: 7.92 SU	CONDUCTIVITY: 0.450 umhos/cm	
			ORP: 82 mV	DO: 12.87 mg/L	
DEPTH TO WATER: ____ T/ PVC			TURBIDITY: 4.42 NTU		
DEPTH TO BOTTOM: ____ T/ PVC			☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 26.10 °C	OTHER:	
VOLUME REMOVED: ____ ☐ LITERS ☐ GALLONS			COLOR: Slight Cloudy	ODOR: no	
COLOR: Slight Cloudy ODOR: no			FILTRATE (0.45 um) ☐ YES ☑ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☒ SLIGHT ☒ MODERATE ☐ VERY			QC SAMPLE: ☐ MS/MSD ☐ DUP-		
DISPOSAL METHOD: ☒ GROUND ☐ DRUM ☐ OTHER			COMMENTS: Stream sample		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1335									INITIAL
Stream grab sample									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☑ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARI Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 10-9-18	BY: JRL	DATE: 10-12-18

SAMPLE ID: DW-12 | WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1135	DATE: 10-9-18	SAMPLE	TIME: 1152	DATE: 10-9-18
PURGE METHOD: ☐ PUMP ☐ BAILER ~~Artesian~~			PH: 7.86 SU	CONDUCTIVITY: 0.349 umhos/cm	
			ORP: -186 mV	DO: 4.93 mg/L	
DEPTH TO WATER: — T/ PVC @ 6.0psi			TURBIDITY: 0.22 NTU		
DEPTH TO BOTTOM: — T/ PVC			☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: ____ ☐ LITERS ☐ GALLONS			TEMPERATURE: 20.79 °C	OTHER:	
VOLUME REMOVED: 15.0 ☐ LITERS ☒ GALLONS			COLOR: Clear	ODOR:	
COLOR: Clear ODOR: no			FILTRATE (0.45 um) ☐ YES ☒ NO		
TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			FILTRATE COLOR:	FILTRATE ODOR:	
			QC SAMPLE: ☐ MS/MSD	☐ DUP-	
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1135	300	8.01	0.352	-167	3.85	10.1	24.07	—	INITIAL
1140	350	7.97	0.346	-174	4.59	1.02	22.92	—	5.0
1147	350	8.01	0.346	-195	4.67	0.0	21.55	—	10.0
1152	350	7.86	0.349	-186	4.93	0.22	20.79	—	15.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N	VOC				☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N	Perchlorate				☐ Y ☐ N
2	1,000mL	Amb	A	☐ Y ☒ N	1,4 Dioxane				☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARL Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 10-9-18	BY: JRL	DATE: 10-12-18

SAMPLE ID: DW SB-02 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1018	DATE: 10-9-18	SAMPLE	TIME: 1110	DATE: 10-9-18

PURGE METHOD: ☐ PUMP ☐ BAILER Artesian

DEPTH TO WATER: — T/ PVC

DEPTH TO BOTTOM: — T/ PVC

WELL VOLUME: — ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 150 ☐ LITERS ☒ GALLONS

COLOR: Clear ODOR: no

TURBIDITY: ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 7.49 SU CONDUCTIVITY: 0.667 umhos/cm

ORP: -82 mV DO: 8.08 mg/L

TURBIDITY: 0.96 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 20.62 °C OTHER:

COLOR: Clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1019	200	6.87	0.683	-15	4.12	12.4	25.57	—	INITIAL
1032	250	7.62	0.677	-83	3.17	0.20	24.29	-	5.0
1057	250	7.66	0.673	-96	6.35	2.40	21.34	-	10.0
1110	250	7.49	0.667	-82	8.08	0.96	20.62	-	15.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
2	1000mL	Amb	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARL Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 10-9-18	BY: JRL	DATE: 10-12-18

SAMPLE ID: DW SB-01 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1405	DATE: 10-9-18	SAMPLE	TIME: 1449	DATE: 10-9-18

PURGE METHOD: ☑ PUMP Grundfos ☐ BAILER

DEPTH TO WATER: 0.82 T/ PVC

DEPTH TO BOTTOM: 7.00 T/ PVC

WELL VOLUME: ____ ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 4.5 ☐ LITERS ☒ GALLONS

COLOR: Clear ODOR: no

TURBIDITY: ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 7.48 SU CONDUCTIVITY: 1.03 umhos/cm

ORP: -253 mV DO: 3.26 mg/L

TURBIDITY: 9.94 NTU

☑ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 20.22 °C OTHER: ____

COLOR: Clear ODOR: ____

FILTRATE (0.45 um) ☐ YES ☑ NO

FILTRATE COLOR: ____ FILTRATE ODOR: ____

QC SAMPLE: ☐ MS/MSD ☐ DUP- ____

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1414	200	8.08	0.770	83	13.57	54.5	22.24	0.8	INITIAL
1419	200	7.69	0.990	-210	2.28	27.8	19.04	0.8	< .5
1424	200	7.54	1.04	-219	3.03	41.7	19.09	0.8	~ 1.0
1429	200	7.55	1.03	-234	3.25	12.4	17.80	0.8	1.5
1434	200	7.65	1.03	-262	3.33	11.9	17.73	0.8	2.5
1439	200	7.69	1.03	-282	3.37	10.3	18.66	0.8	3.5
1444	200	7.57	1.03	-270	3.32	9.42	20.17	0.8	4.0
1449	200	7.48	1.03	-253	3.26	9.94	20.22	0.8	4.5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - ____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☑ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☑ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville 2018	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 10-9-18	BY: JRL	DATE: 10-12-18

SAMPLE ID: DW 200-01 | WELL DIAMETER: ☐ 2" ☐ 4" ☒ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 903	DATE: 10-9-18	SAMPLE	TIME: 955	DATE: 10-9-18

PURGE METHOD: ☐ PUMP ☐ BAILER Artesian

DEPTH TO WATER: — T/ PVC

DEPTH TO BOTTOM: — T/ PVC

WELL VOLUME: — ☐ LITERS ☐ GALLONS

VOLUME REMOVED: 15 ☐ LITERS ☒ GALLONS

COLOR: Clear ODOR: no

TURBIDITY ☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER

PH: 6.79 SU | CONDUCTIVITY: 0.814 umhos/cm

ORP: -76 mV | DO: 7.25 mg/L

TURBIDITY: 0.39 NTU

☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 21.25 °C | OTHER:

COLOR: Clear | ODOR: no

FILTRATE (0.45 um) ☐ YES ☒ NO

FILTRATE COLOR: | FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS: Artesian

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
903	200	6.03	0.914	80	3.25	0.17	23.01	—	INITIAL
919	250	6.75	0.816	-36	3.17	0.0	22.38	—	5 gal
936	250	7.00	0.812	-106	4.79	0.0	21.69	—	10 gal
955	250	6.79	0.814	-76	7.25	0.39	21.25	—	15 gal

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40mL	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40mL	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

PROJECT NAME: GAINESVILLE, VA	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: AKC	DATE: 10.09.18	BY: JRL	DATE: 10-12-18

SAMPLE ID: SW SB-03 | WELL DIAMETER: ☒ 2" ☐ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1320	DATE:	SAMPLE	TIME: 1427	DATE: 10.09.18

PURGE METHOD: ☒ PUMP MONSOON PRO ☐ BAILER	PH: 6.58 SU; CONDUCTIVITY: 2.69 umhos/cm; ORP: 79 mV; DO: 4.44 mg/L
DEPTH TO WATER: 6.45 T/ PVC	TURBIDITY: 49.4 NTU ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY
DEPTH TO BOTTOM: 18.15 T/ PVC	
WELL VOLUME: 1.88 ☐ LITERS ☒ GALLONS	TEMPERATURE: 23.30 °C; OTHER:
VOLUME REMOVED: 2.6 ☐ LITERS ☒ GALLONS	COLOR: ; ODOR:
COLOR: Clear; ODOR: NO	FILTRATE (0.45 um) ☐ YES ☐ NO
TURBIDITY ☐ NONE ☐ SLIGHT ☑ MODERATE ☐ VERY	FILTRATE COLOR: ; FILTRATE ODOR:
	QC SAMPLE: ☑ MS/MSD ☑ DUP- 01
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1322	~150	6.58	2.85	89	8.87	371	23.17	7.30	INITIAL
1327	~150	6.55	2.91	79	7.62	295	23.11	7.80	0.2
1332	~150	6.41	2.94	93	6.52	247	23.13	8.22	0.4
1337	~150	6.39	2.96	99	6.34	213	23.33	8.33	0.6
1342	~150	6.35	2.98	112	6.12	182	23.62	8.35	0.8
1347	~150	6.34	2.90	119	6.11	149	22.58	8.39	1 gallon
1352	~150	6.37	2.75	121	6.05	136	20.44	8.91	1.2
1357	~150	6.45	2.68	124	5.54	116	20.23	9.25	1.4
1402	~150	6.44	2.69	128	5.26	102	20.47	9.55	1.6
1407	~150	6.47	2.66	124	5.01	85.5	20.39	9.81	1.8

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
9	40		HCL	☐ Y ☒ N	3	VOA	E		☐ Y ☐ N
3	40		UNPRES	☐ Y ☒ N	1	40ml	VOA	A	☐ Y ☐ N
6	1L		UNPRES	☐ Y ☒ N	2	1,000mL	Amb	A	☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED: 10-9-18	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE: [signature]	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: GAINESVILLE, VA	PREPARED		CHECKED	
PROJECT NUMBER: 229531	BY: ACC	DATE: 10.09.18	BY: JRL	DATE: 10-12-18

SAMPLE ID: SWSB-03 / 100918

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1412	~150	6.53	2.67	90	4.56	60.5	22.15	10.13	2 gallons
1417	~150	6.55	2.67	86	4.51	55.9	22.20	10.42	2.2
1422	~150	6.54	2.68	83	4.48	58.6	22.24	10.98	2.4
1427	~150	6.58	2.69	79	4.44	49.4	22.30	11.11	2.6

SIGNATURE: _____ DATE SIGNED: _____

WELL DRY

TRC

WATER SAMPLE LOG

PROJECT NAME: GAINESVILLE, VA	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: AC	DATE: 10.09.18	BY: JRL	DATE: 10-12-18

SAMPLE ID: SW 222-02 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 1155	DATE: 10.09.18	SAMPLE	TIME:	~~DATE:~~
PURGE METHOD: ☒ PUMP monsoon ☐ BAILER			PH: SU	CONDUCTIVITY: umhos/cm	
			ORP: mV	DO: mg/L	
DEPTH TO WATER: 8.67 T/ PVC			TURBIDITY: NTU		
DEPTH TO BOTTOM: 8.74 T/ PVC			☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY		
WELL VOLUME: 0.05 ☐ LITERS ☒ GALLONS			TEMPERATURE: °C	OTHER:	
VOLUME REMOVED: ☐ LITERS ☐ GALLONS			COLOR:	ODOR:	
COLOR: ODOR:			FILTRATE (0.45 um) ☐ YES ☐ NO		
TURBIDITY			FILTRATE COLOR:	FILTRATE ODOR:	
☐ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY			QC SAMPLE: ☐ ~~MS/MSD~~ ☐ DUP-		
DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☐ OTHER			COMMENTS: WELL DRY		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
									INITIAL
			DTW = DTB / 0.05 gallons IN WELL						
			NO PURGE OR SAMPLE						

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Gainesville SOW 17_2018	MODEL: U-53	SAMPLER: JRL
PROJECT NO.: 229931	SERIAL #: F/A01191	DATE: 10-9-18

PH CALIBRATION CHECK

pH 7 (LOT #): (EXP. DATE): POST-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 627 (EXP. DATE): POST-CAL. READING / STANDARD	CAL. RANGE	TIME
/	4.02 / 4.01	☒ WITHIN RANGE	830
/	/	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 627 (EXP. DATE): POST-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
4.48 / 4.47	18°	☒ WITHIN RANGE	830
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): (EXP. DATE): POST-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING POST-CAL. READING /SATURATED AIR	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
19.06 / 18.76	18°	☒ WITHIN RANGE	830
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	
/		☐ WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): (EXP. DATE): POST-CAL. READING / STANDARD	(LOT #): 627 (EXP. DATE): POST-CAL. READING / STANDARD	CAL. RANGE	TIME
/	0.0 / 0.0	☒ WITHIN RANGE	830
/	/	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	
/	/	☐ WITHIN RANGE	

COMMENTS

☑ AUTOCAL SOLUTION (LOT #): 627 (EXP. DATE): 9/26/19	☐ STANDARD SOLUTION (S) LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	**CALIBRATION RANGES** [1]
☒ pH	pH: +/- 0.2 S.U.
☒ COND	COND: +/- 1% OF CAL. STANDARD
☒ ORP	ORP: +/- 25 mV
☒ D.O.	D.O.: VARIES
☒ TURB	TURB: +/- 5% OF CAL. STANDARD
☐ _____	[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
☐ _____	

NOTES

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED: [signature] DATE: 10-9-18

CHECKED BY _____ DATE _____

REVISED 06/2011

TRC

WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: Gainesville SOW17 – 2018	MODEL: U-53	SAMPLER: JRL
PROJECT NO.: 229931	SERIAL #: FA00627	DATE: 10-9-18

PH CALIBRATION CHECK

pH 7 (LOT #): (EXP. DATE): POST-CAL. READING / STANDARD	pH 4 / 10 (LOT #): 627 (EXP. DATE): POST-CAL. READING / STANDARD	CAL. RANGE	TIME
/	3.99 / 4.00	[X] WITHIN RANGE	831
/	/	[ ] WITHIN RANGE	
/	/	[ ] WITHIN RANGE	
/	/	[ ] WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 627 (EXP. DATE): POST-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
4.46 / 4.46	18°	[X] WITHIN RANGE	831
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): (EXP. DATE): POST-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING POST-CAL. READING /SATURATED AIR	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
8.63 / 8.50	18°	[X] WITHIN RANGE	831
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	
/		[ ] WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): (EXP. DATE): POST-CAL. READING / STANDARD	(LOT #): 627 (EXP. DATE): POST-CAL. READING / STANDARD	CAL. RANGE	TIME
/	0.0 / 0.0	[X] WITHIN RANGE	831
/	/	[ ] WITHIN RANGE	
/	/	[ ] WITHIN RANGE	
/	/	[ ] WITHIN RANGE	

COMMENTS

[X] AUTOCAL SOLUTION (LOT #): 627 (EXP. DATE): 92619	[ ] STANDARD SOLUTION (S) LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
CALIBRATED PARAMETERS	CALIBRATION RANGES [1]
[X] pH	pH: +/- 0.2 S.U.
[X] COND	COND: +/- 1% OF CAL. STANDARD
[X] ORP	ORP: +/- 25 mV
[X] D.O.	D.O.: VARIES
[X] TURB	TURB: +/- 5% OF CAL. STANDARD
[ ] _____	[1] CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
[ ] _____	

NOTES

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED _____ DATE _____ CHECKED BY _____ DATE _____

Eco-Rental Solutions

Calibration Certificate

rev 8/9/11

Work Order No.: SE-060449
Date of Service: 9/26/2018 10:00:00 AM

Unit Under Test: Horiba U-53-2, 2 meter cable

Asset No.: FA01191 Technician Matt Cribbin

Serial No: R37958LS

Initials: _____

TEST	Specification	Result
Standard Calibration	Pass/Fail	Pass

TEST STANDARDS USED:

DESCRIPTION	LOT NO./EXPIRATION DATE	QUANTITY
Air Saturated Water		1
Sodium Sulfite/ Zero DO Standard	Lot No. C473638, No exp date	1
ORP Standard Solution	Lot No.16J100375 exp. 10/03/21	1
pH 7.00 Standard Solution	Lot No. 8GE854 Exp. 05/20	1
pH 10.00 Standard Solution	Lot No. 7GK699 Exp. Nov. 2019	1
pH 4.00 Standard Solution	Lot No. 8GF041 Exp. 06/20	1
7.00 mS Conductivity Standard Solution	Lot No. 7GL794 Exp.012/18	1
AutoCal Solution for Horiba U-22/52	Lot No. 18085808 Exp. 2/19	1
100 NTU Horiba Standard	Does not expire	1

TEST EQUIPMENT USED:

DESCRIPTION	ASSET NO.	SERIAL NO.	DATE OF LAST CAL	DATE CAL DUE

Test Equipment and standards are traceable to National standards.

Eco-Rental Solutions

Calibration Certificate

rev 8/9/11

Work Order No.: SE-060451
Date of Service: 9/26/2018 10:40:00 AM

Unit Under Test: Horiba U-53-2, 2 meter cable

Asset No.: FA00627 Technician Matt Cribbin
Serial No: YDL806CT

Initials: MJC

TEST	Specification	Result
Standard Calibration	Pass/Fail	Pass

TEST STANDARDS USED:

DESCRIPTION	LOT NO./EXPIRATION DATE	QUANTITY
Air Saturated Water		1
Sodium Sulfite/ Zero DO Standard	Lot No. C473638, No exp date	1
ORP Standard Solution	Lot No.16J100375 exp. 10/03/21	1
7.00 mS Conductivity Standard Solution	Lot No. 7GL794 Exp.012/18	1
pH 7.00 Standard Solution	Lot No. 8GE854 Exp. 05/20	1
pH 10.00 Standard Solution	Lot No. 7GK699 Exp. Nov. 2019	1
pH 4.00 Standard Solution	Lot No. 8GF041 Exp. 06/20	1
AutoCal Solution for Horiba U-22/52	Lot No. 18085808 Exp. 2/19	1
100 NTU Horiba Standard	Does not expire	1

TEST EQUIPMENT USED:

DESCRIPTION	ASSET NO.	SERIAL NO.	DATE OF LAST CAL	DATE CAL DUE

Test Equipment and standards are traceable to National standards.

Eco-Rental Solutions

Accessory Checklist
HORIBA U-53

ASSET # 627 DATE 9-26-18 TECHNICIAN MTC

STANDARD ACCESSORIES

- ☑ Hard Shipping Case
- ☑ Flow Cell with 7/16" Quick Connect Fittings
- ☑ (2) ¼" & (2) 3/8" barb to push connects
- ☑ (2) ¼" female quick connects
- ☑ Teflon tape
- ☑ U-50 Series Instrument Instruction Manual
- ☑ U-50 Series Flow Cell Manual
- ☑ Horiba U-50 Series Before & After Use Instructions
- ☑ Horiba Auto Calibration Procedure Instructions
- ☑ Data Collection Software Instruction Manual
- ☑ U-50 Data Collection Software on CD/flashdrive
- ☑ USB Cable
- ☑ Four Spare C Alkaline Batteries
- ☑ White silicone cap for DO Sensor
- ☑ Black plastic cap for pH sensor
- ☑ Sensor Guard
- ☑ Black and Clear calibration cups (1 each)
- ☑ 500ml bottle PH4 Auto-Cal Solution (4.49mS/cm, 4.0pH, 0.0NTU)
- ☑ Horiba 330 Reference electrode solution
- ☑ Service Kit: DO solution, DO cap, holder/tightening tool for DO cap, sand/polish paper, silicone grease and spanner wrench
- ☑ Calibration Certificate

OPTIONAL ACCESSORIES (Additional cost may be applied)

QUANTITY	DESCRIPTION	LOT#:
	500mL PH4 Auto-Cal Solution	
	4L PH4 Auto-Cal Solution	
	1L Horiba Turbidity Standard, 100NTU	
	1L Horiba Turbidity Standard, 800NTU	
	1L Horiba Conductivity Standard (718uS/cm)	
	1L Horiba Conductivity Standard (6.67mS/cm)	
	1L Horiba Conductivity Standard (58.7mS/cm)	

- ☒ Hard Shipping Case
- ☒ Flow Cell with 7/16" Quick Connect Fittings
- ☒ (2) ¼" & (2) 3/8" barb to push connects
- ☒ (2) ¼" female quick connects
- ☒ Teflon tape
- ☒ U-50 Series Instrument Instruction Manual
- ☒ U-50 Series Flow Cell Manual
- ☒ Horiba U-50 Series Before & After Use Instructions
- ☒ Horiba Auto Calibration Procedure Instructions
- ☒ Data Collection Software Instruction Manual
- ☒ U-50 Data Collection Software on CD/flashdrive
- ☒ USB Cable
- ☒ Four Spare C Alkaline Batteries
- ☒ White silicone cap for DO Sensor
- ☒ Black plastic cap for pH sensor
- ☒ Sensor Guard
- ☒ Black and Clear calibration cups (1 each)
- ☒ 500ml bottle PH4 Auto-Cal Solution (4.49mS/cm, 4.0pH, 0.0NTU)
- ☒ Horiba 330 Reference electrode solution
- ☒ Service Kit: DO solution, DO cap, holder/tightening tool for DO cap, sand/polish paper, silicone grease and spanner wrench
- ☒ Calibration Certificate

OPTIONAL ACCESSORIES (Additional cost may be applied)

QUANTITY	DESCRIPTION	LOT#:
_____	500mL PH4 Auto-Cal Solution	_____
_____	4L PH4 Auto-Cal Solution	_____
_____	1L Horiba Turbidity Standard, 100NTU	_____
_____	1L Horiba Turbidity Standard, 800NTU	_____
_____	1L Horiba Conductivity Standard (718uS/cm)	_____
_____	1L Horiba Conductivity Standard (6.67mS/cm)	_____
_____	1L Horiba Conductivity Standard (58.7mS/cm)	_____

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

1 of 2

COC # 567064

Client Information

Client: TRC Environmental	Acct. #:
Project Name/#: ARC Gainesville	PWSID #:
Project Manager: G. King	P.O. #:
Sampler: J. Lair / A. Cann	Quote #:
State where samples were collected: VA	For Compliance: Yes ☐ No ☑

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☑ NPDES ☐ Surface ☐ | Other: _____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC: _____
SCR#: 231986

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOC	ClO4	1,4 Dioxane							Remarks
SW 200-02/100918	10-9-18	0940	X			X		4	X	X								
SW 212-01/100918	10/9/18	1055	X			X		4	X	X								
SW SB-03/100918	10/9/18	1427	X			X		18	X	X	X							MS/MSD
DUP-01/100918	10/9/18	—	X			X		6	X	X	X							
DW 200-01/100918	10/9/18	955	X			X		4	X	X								
DW SB-01/100918	10/9/18	1449	X			X		4	X	X								
DW SB-02/100918	10/9/18	1110	X			X		6	X	X	X							
DW-12/100918	10/9/18	1152	X			X		6	X	X	X							
STR-04/100918	10/9/18	1335	X			X		4	X	X								
FB-01/100918	10/9/18	1105	X					3	X									

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: STD

E-mail address: GKing@TRCsolutions.com

Relinquished by	Date	Time	Received by	Date	Time
Richard Ratter	9-28-18	8:30			
[signature]	10-9-18	1740			

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

EDD Required? Yes No
If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Temperature upon receipt _____ °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

2 of 2

COC # 567063

Client Information

Client: TRC Environmental

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: J. Lair / A. Cann

Quote #:

State where samples were collected: VA

For Compliance: Yes ☐ No ☑

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water	Ground	Potable	Surface	NPDES	Other:	Total # of Containers	VOC	C104	1,4 Dioxane	Remarks
RIN-01/100918	10/9/18	1545	X					X	X					6	X	X	X	
TB-01/100918	10/9/18	—	X					X						3	X			

10-9-18

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: STD

E-mail address: GKing@TRCSolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10-9-18	1740			

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt _____ °C

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 12/18/18	BY:	DATE:

SAMPLE ID: SW 222-02 WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☒ PVC ☐ SS ☐ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 755	DATE: 12/18/18	SAMPLE	TIME: 900	DATE: 12/18/18

PURGE METHOD: ☒ PUMP Mon500n ☐ BAILER

DEPTH TO WATER: 3.3 T/ PVC

DEPTH TO BOTTOM: 8.9 T/ PVC

WELL VOLUME: 0.9 ☐ LITERS ☒ GALLONS

VOLUME REMOVED: 3.5 ☐ LITERS ☐ GALLONS

COLOR: Clear ODOR: no

TURBIDITY ☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☒ OTHER

PH: 5.74 SU CONDUCTIVITY: 0.267 umhos/cm

ORP: 259 mV DO: 8.4 mg/L

TURBIDITY: 79.5 NTU

☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY

TEMPERATURE: 9.02 °C OTHER:

COLOR: Clear ODOR: no

FILTRATE (0.45 um) ☐ YES ☐ NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: ☐ MS/MSD ☐ DUP-

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
800	150	6.83	0.333	78	10.13	239	16.15	3.5	INITIAL
805	150	6.36	0.282	148	8.4	229	15.43	4.0	0.5
810	150	6.30	0.281	175	8.1	212	14.69	3.55	< 1.0
815	150	6.27	0.260	198	8.04	193	13.61	3.61	1.0
820	150	6.15	0.256	211	8.2	164	12.85	3.80	1.5
825	150	6.07	0.255	224	8.2	128	11.88	3.90	1.75
830	150	6.01	0.256	231	8.3	111	11.40	4.0	2.0
835	150	5.95	0.258	238	8.29	102	10.87	3.95	2.25
840	150	5.87	0.260	246	8.32	94.1	10.20	3.85	2.5
845	150	5.81	0.262	252	8.5	85.9	9.78	3.87	2.75

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	40ml	VOA	E	☐ Y ☒ N					☐ Y ☐ N
1	40ml	VOA	A	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

REVISED 06/2011

TRC

WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: ARC SOW 2018	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 12/18/18	BY:	DATE:

SAMPLE ID: SW 22-02

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
850	150	5.77	0.265	256	8.3	80.7	9.33	3.81	3.0
855	150	5.76	0.266	257	8.4	81.9	9.21	3.85	3.25
900	150	5.74	0.267	259	8.4	79.9	9.02	3.84	3.5

SIGNATURE: _____ DATE SIGNED: _____

TRC

WATER SAMPLE LOG

PROJECT NAME: ARL Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 12-18-18	BY:	DATE:

SAMPLE ID: DWSB-02 | WELL DIAMETER: ☐ 2" ☒ 4" ☐ 6" ☐ OTHER

WELL MATERIAL: ☐ PVC ☐ SS ☒ IRON ☐ GALVANIZED STEEL ☐ OTHER

SAMPLE TYPE: ☒ GW ☐ WW ☐ SW ☐ DI ☐ LEACHATE ☐ OTHER

PURGING	TIME: 905	DATE: 12/18/18	SAMPLE	TIME: 915	DATE: 12/18/18

PURGE METHOD: ☐ PUMP ☐ BAILER Artesian		PH: 7.57 SU	CONDUCTIVITY: .835 umhos/cm
		ORP: -22 mV	DO: 2.3 mg/L
DEPTH TO WATER: 0.0 T/ PVC		TURBIDITY: 18.1 NTU	
DEPTH TO BOTTOM: — T/ PVC		☒ NONE ☐ SLIGHT ☐ MODERATE ☐ VERY	
WELL VOLUME: — ☐ LITERS ☐ GALLONS		TEMPERATURE: 13.52 °C	OTHER:
VOLUME REMOVED: — ☐ LITERS ☐ GALLONS		COLOR: Clear	ODOR: no
COLOR: Clear	ODOR: no	FILTRATE (0.45 um) ☐ YES ☐ NO	
TURBIDITY		FILTRATE COLOR:	FILTRATE ODOR:
☐ NONE ☒ SLIGHT ☐ MODERATE ☐ VERY		QC SAMPLE: ☐ MS/MSD ☐ DUP-	
DISPOSAL METHOD: ☐ GROUND ☒ DRUM ☐ OTHER		COMMENTS:	

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
905	200	7.09	.805	107	2.9	25.1	12.76	—	INITIAL
910	500	7.52	.779	-14	2.3	16.5	13.25	—	5 gal
915	500	7.57	.835	-22	2.3	18.1	13.52		10 gal

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- **10 %** COND.: +/- **10 %** ORP: +/- **10 %** D.O.: +/- **10 %** TURB: +/- **10 %** or <= **5** TEMP.: +/- **0.5°C**

BOTTLES FILLED | PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
2	1 L	Jar	no	☐ Y ☒ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N
				☐ Y ☐ N					☐ Y ☐ N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

TRC

WATER SAMPLE LOG

PROJECT NAME: ARC Gainesville	PREPARED		CHECKED	
PROJECT NUMBER: 229931	BY: JRL	DATE: 12-18-18	BY:	DATE:

SAMPLE ID: SWSB-03 | WELL DIAMETER: [X] 2" [ ] 4" [ ] 6" [ ] OTHER

WELL MATERIAL: [X] PVC [ ] SS [ ] IRON [ ] GALVANIZED STEEL [ ] OTHER

SAMPLE TYPE: [X] GW [ ] WW [ ] SW [ ] DI [ ] LEACHATE [ ] OTHER

PURGING	TIME: 1030	DATE: 12-18-18	SAMPLE	TIME: 1105	DATE: 12/18/18

PURGE METHOD: [X] PUMP monsoon [ ] BAILER

DEPTH TO WATER: 4.80 T/ PVC

DEPTH TO BOTTOM: 18.15 T/ PVC

WELL VOLUME: 2.17 [ ] LITERS [X] GALLONS

VOLUME REMOVED: 3.0 [ ] LITERS [X] GALLONS

COLOR: Clear ODOR: no

TURBIDITY [ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY

DISPOSAL METHOD: [ ] GROUND [X] DRUM [ ] OTHER

PH: 6.60 SU CONDUCTIVITY: 3.69 umhos/cm

ORP: ~~2.87~~ 146 mV DO: 2.87 mg/L

TURBIDITY: 29.5 NTU

[ ] NONE [X] SLIGHT [ ] MODERATE [ ] VERY

TEMPERATURE: 13.14 °C OTHER:

COLOR: Clear ODOR: no

FILTRATE (0.45 um) [ ] YES [ ] NO

FILTRATE COLOR: FILTRATE ODOR:

QC SAMPLE: [ ] MS/MSD [X] DUP- 01

COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1035	150	6.58	3.92	147	4.19	34.2	12.55	7.25	INITIAL
1040	150	6.54	3.85	149	3.33	25.0	12.44	8.34	0.5
1045	150	6.54	3.85	150	3.17	25.8	12.58	8.32	1.0
1050	150	6.54	3.82	151	3.03	22.9	12.87	8.32	1.5
1055	150	6.58	3.72	152	2.95	27.9	13.11	8.82	2.0
1100	150	6.59	3.69	150	2.89	29.9	13.08	8.97	2.5
1105	150	6.60	3.69	146	2.87	29.5	13.15	9.06	3.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 10 % COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED — PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____

NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
4	1L	Amb	none	[ ] Y [X] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N
				[ ] Y [ ] N					[ ] Y [ ] N

SHIPPING METHOD:	DATE SHIPPED:	AIRBILL NUMBER:
COC NUMBER:	SIGNATURE:	DATE SIGNED:

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # _____ Group # _____ Sample # _____

COC # 575951

Client Information

Client: TRC Environmental Corp

Acct. #:

Project Name/#: ARC Gainesville

PWSID #:

Project Manager: G. King

P.O. #:

Sampler: J. Lair

Quote #:

State where samples were collected: VA

For Compliance: Yes ☐ No ☑

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Ground Water	Potable Water	Surface Water	NPDES Water	Other:	Total # of Containers	VOCs	Perchlorate	1,4 Dioxane	Remarks
SW 222-02/121818	12.18.18	900	X					X					4	X	X		
DWSB-02/121818		915	X					X					2			X	
SWSB-03/121818		1105	X					X					2	X		X	
DW-13/121818		1000	X					X					6	X	X	X	
DW-13 mid/121818		1005	X					X					3	X			
DUP-01/121818		–	X					X					2			X	
TB-01/121818		–	X					X					2	X			
[signature]	12.18.18																

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: std

E-mail address: GKing@TRCsolutions.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12.18.18	1420	Fedex		

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt _____ °C

Eco-Rental Solutions

Calibration Certificate

rev 8/9/11

Work Order No.: SE-063098
Date of Service: 12/13/2018 11:00:00 AM

Unit Under Test: Horiba U-53-2, 2 meter cable

Asset No.: FA00627 Technician Matt Cribbin
Serial No: YDL806CT

Initials: _____

TEST	Specification	Result
Standard Calibration	Pass/Fail	Pass

TEST STANDARDS USED:

DESCRIPTION	LOT NO./EXPIRATION DATE	QUANTITY
Air Saturated Water		1
Sodium Sulfite/ Zero DO Standard	Lot No. C473638, No exp date	1
ORP Standard Solution	Lot No.16J100375 exp. 10/03/21	1
7.00 mS Conductivity Standard Solution	Lot No. 8GG502 Exp. 7/19	1
pH 10.00 Standard Solution	Lot No. 8GI657 Exp. 9/20	1
pH 7.00 Standard Solution	Lot No. 8GI527 Exp. 09/20	1
pH 4.00 Standard Solution	Lot No. 8GI846 Exp. 09/20	1
AutoCal Solution for Horiba U-22/52	Lot No. 18085808 Exp. 2/19	1
100 NTU Horiba Standard	Does not expire	1

TEST EQUIPMENT USED:

DESCRIPTION	ASSET NO.	SERIAL NO.	DATE OF LAST CAL	DATE CAL DUE

Test Equipment and standards are traceable to National standards.

APPENDIX F

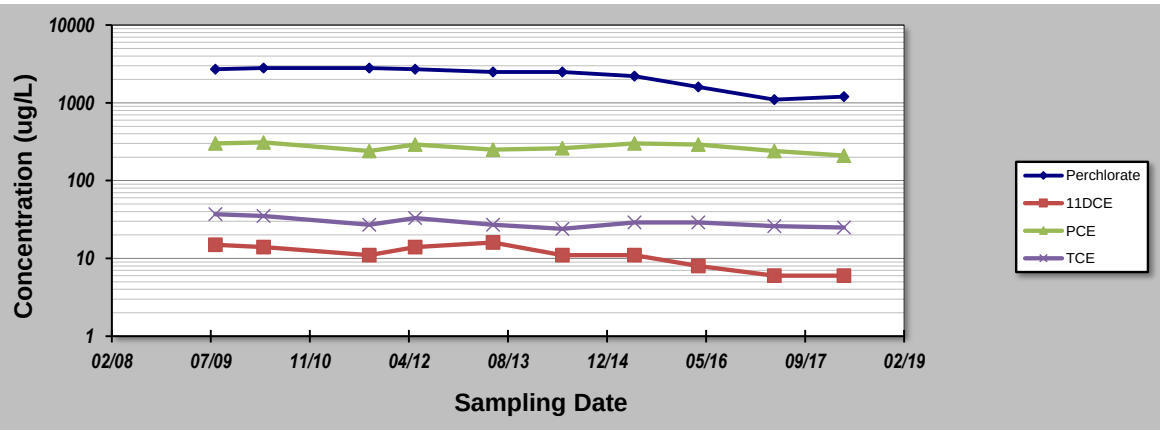
DATA EVALUATION TRENDS AND CHARTS

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	5-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW 14-02S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	11DCE	PCE	TCE			
Sampling Event	Sampling Date	BW 14-02S CONCENTRATION (ug/L)						
1	29-Jul-09	2700	15	300	37			
2	29-Mar-10	2800	14	*310*	35			
3	14-Sep-11	2800	11	240	27			
4	2-May-12	2700	14	290	33			
5	30-May-13	2500	16	250	27			
6	16-May-14	2500	11	260	24			
7	14-May-15	2200	11	300	29			
8	1-Apr-16	1600	8	290	29			
9	19-Apr-17	1100	6	240	26			
10	5-Apr-18	1200	6	210	25			
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.30	0.32	0.12	0.15			
Mann-Kendall Statistic (S):		-36	-30	-18	-25			
Confidence Factor:		>99.9%	99.7%	93.4%	98.6%			
Concentration Trend:		Decreasing	Decreasing	Prob. Decreasing	Decreasing			

Annual sampling since 2009 is shown; sampling prior to 2009 had an inconsistent frequency (with no samples in 2007-2008 and two samples in 2005-2006). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

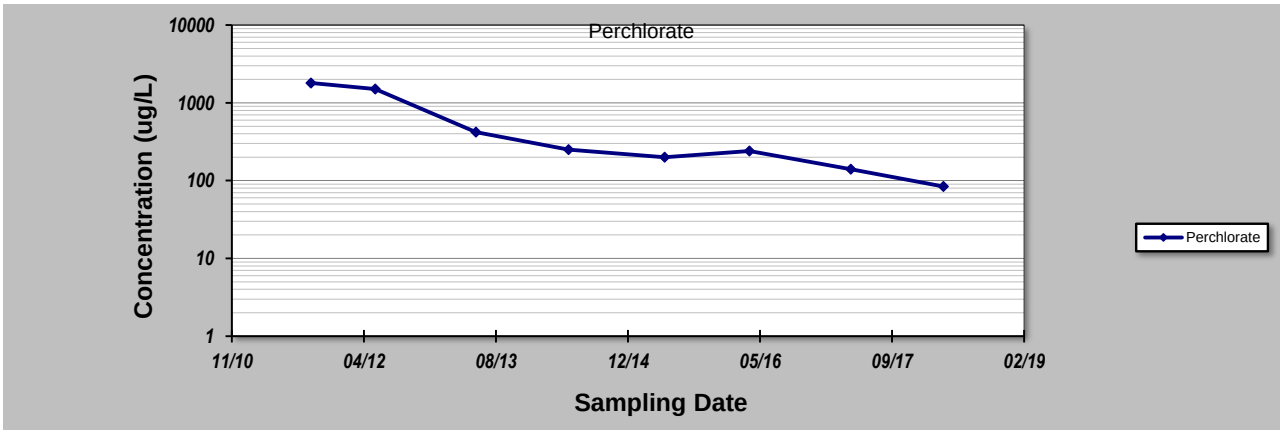
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	5-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW 21-04D
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**BW 21-04D CONCENTRATION (ug/L)**						
1	14-Sep-11	1800						
2	14-May-12	1500						
3	30-May-13	420						
4	16-May-14	250						
5	15-May-15	200						
6	31-Mar-16	240						
7	19-Apr-17	140						
8	4-Apr-18	84						
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.16						
Mann-Kendall Statistic (S):		-26						
Confidence Factor:		100.0%						
Concentration Trend:		Decreasing						

Annual sampling since 2011 is shown; sampling prior to 2011 had an inconsistent frequency (with no samples from 2008-2010). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

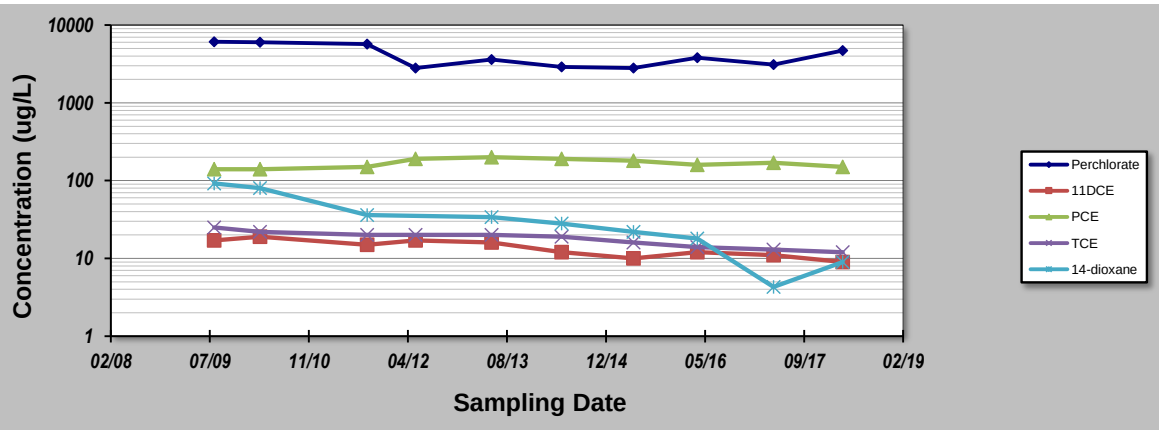
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	5-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	BW 28-02S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	11DCE	PCE	TCE	14-dioxane		
Sampling Event	Sampling Date	BW 28-02S CONCENTRATION (ug/L)						
1	28-Jul-09	*6100*	17	140	25	*92*		
2	16-Mar-10	6000	19	140	22	*80*		
3	8-Sep-11	5700	15	150	20	*36*		
4	9-May-12	2800	17	190	20			
5	28-May-13	3600	16	200	20	*34*		
6	17-May-14	2900	12	190	19	28		
7	14-May-15	2800	10	180	16	*22*		
8	1-Apr-16	3800	12	160	14	18		
9	20-Apr-17	3100	11	170	13	4.3		
10	4-Apr-18	*4700*	9	150	12	*9*		
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.33	0.25	0.13	0.23	0.85		
Mann-Kendall Statistic (S):		-14	-33	6	-42	-34		
Confidence Factor:		87.3%	99.9%	66.8%	>99.9%	>99.9%		
Concentration Trend:		Stable	Decreasing	No Trend	Decreasing	Decreasing		

Annual sampling since 2009 is shown; sampling prior to 2009 had an inconsistent frequency (with no samples in 2007-2008 and two samples in 2005-2006). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

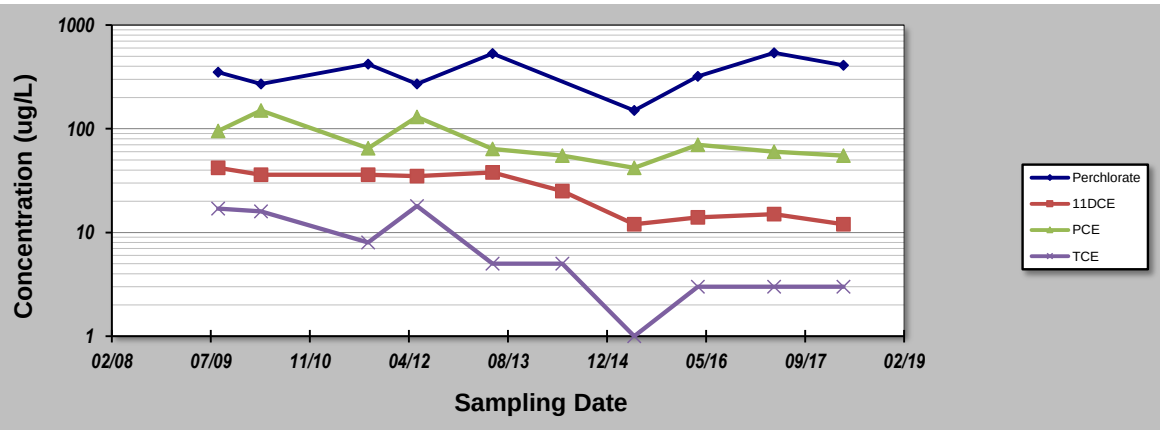
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	5-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	BW 28-04D
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	11DCE	PCE	TCE			
Sampling Event	Sampling Date	BW 28-04D CONCENTRATION (ug/L)						
1	12-Aug-09	350	42	95	17			
2	16-Mar-10	270	36	150	16			
3	8-Sep-11	420	36	65	8			
4	11-May-12	270	35	130	18			
5	28-May-13	530	38	64	*5*			
6	15-May-14		25	55	5			
7	13-May-15	150	12	42	1			
8	30-Mar-16	320	14	70	3			
9	18-Apr-17	540	15	60	3			
10	3-Apr-18	410	12	55	3			
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.35	0.46	0.45	0.83			
Mann-Kendall Statistic (S):		7	-31	-24	-29			
Confidence Factor:		72.8%	99.8%	98.2%	99.5%			
Concentration Trend:		No Trend	Decreasing	Decreasing	Decreasing			

Annual sampling since 2009 is shown; sampling prior to 2009 had an inconsistent frequency (with no samples in 2007-2008). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

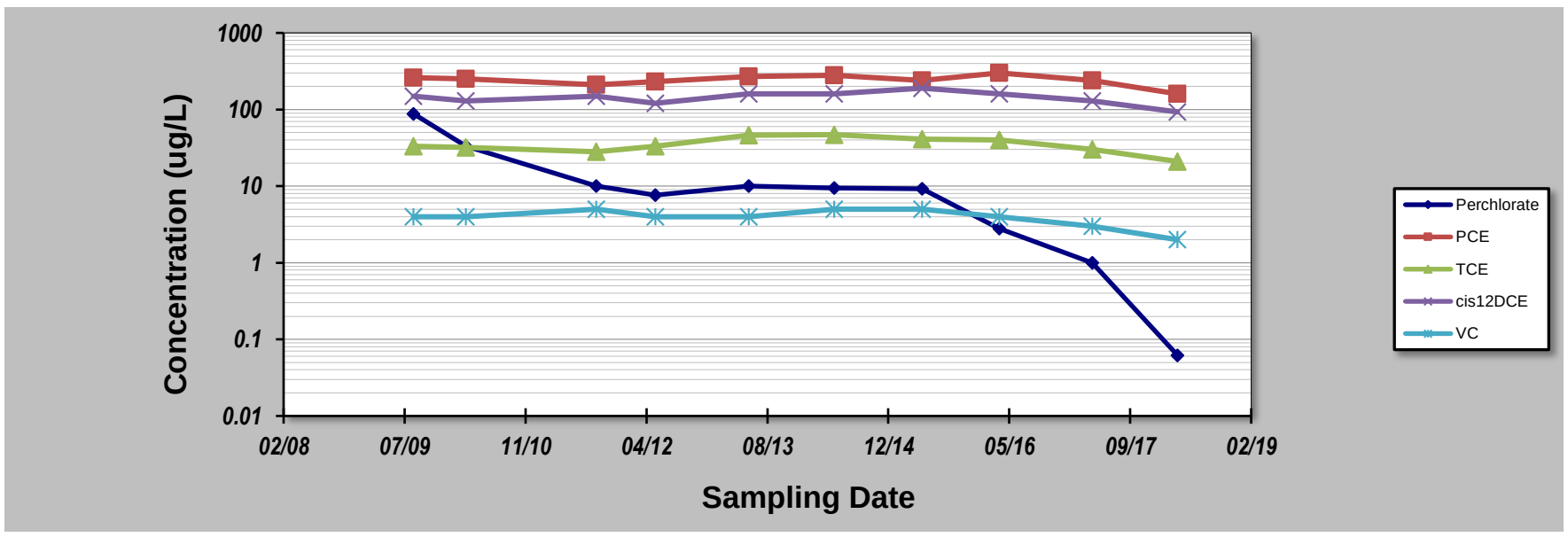
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	7-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW 45-03S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE	cis12DCE	VC		
Sampling Event	**Sampling Date**	**BW 45-03S CONCENTRATION (ug/L)**					
1	12-Aug-09	88	260	33	150	*4*	
2	17-Mar-10	33	250	32	130	*4*	
3	7-Sep-11	10	210	28	150	*5*	
4	7-May-12	7.6	230	33	120	*4*	
5	29-May-13	10	270	46	160	*4*	
6	18-May-14	9.5	280	47	160	5	
7	15-May-15	9.2	240	41	190	5	
8	30-Mar-16	2.8	300	40	160	4	
9	18-Apr-17	1	240	30	130	3	
10	5-Apr-18	*0.062*	160	21	93	2	
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		1.55	0.16	0.24	0.19	0.24	
Mann-Kendall Statistic (S):		-38	-2	-4	0	-12	
Confidence Factor:		>99.9%	53.5%	60.3%	45.6%	83.2%	
Concentration Trend:		Decreasing	Stable	Stable	Stable	Stable	

Annual sampling since 2009 is shown; sampling prior to 2009 had an inconsistent frequency (with no samples in 2007-2008 and two samples in 2005-2006). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

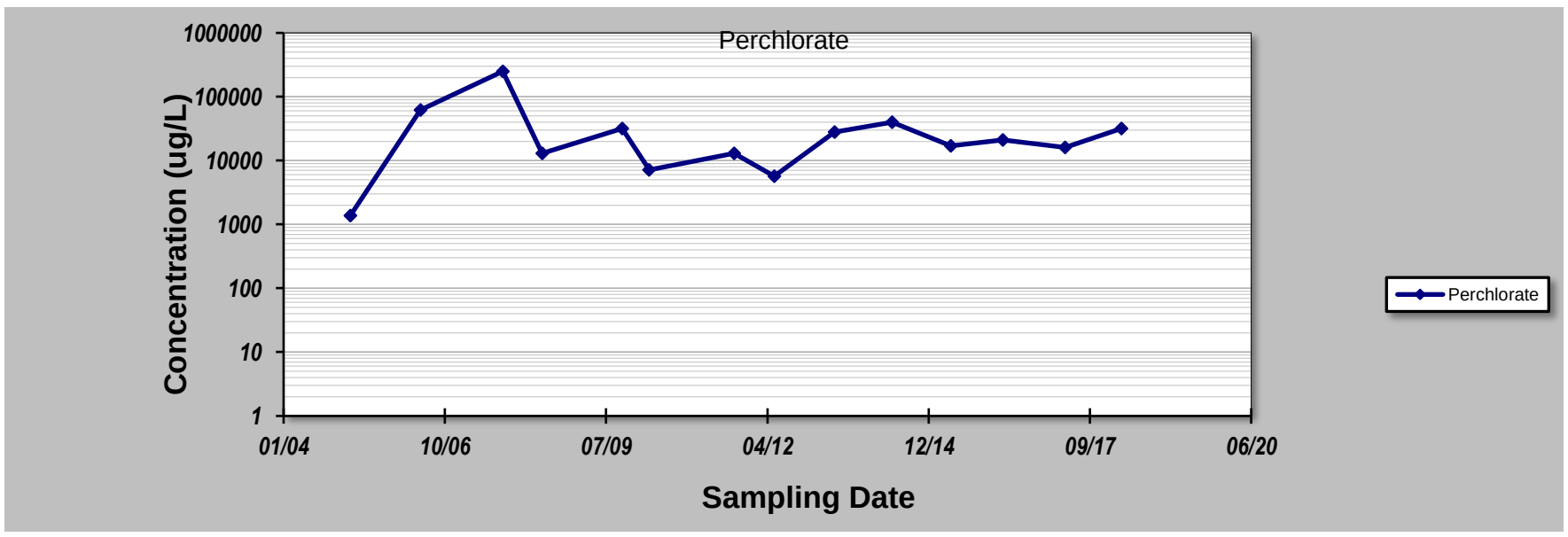
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	7-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW 78-12D
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**BW 78-12D CONCENTRATION (ug/L)**						
1	3-Mar-05	1380						
2	11-May-06	62000						
3	4-Oct-07	250000						
4	5-Jun-08	13000						
5	13-Oct-09	32000						
6	30-Mar-10	7200						
7	7-Sep-11	13000						
8	14-May-12	5700						
9	22-May-13	28000						
10	15-May-14	40000						
11	14-May-15	17000						
12	1-Apr-16	21000						
13	20-Apr-17	16000						
14	5-Apr-18	32000						
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.64						
Mann-Kendall Statistic (S):		5						
Confidence Factor:		58.5%						
Concentration Trend:		No Trend						

Appear stable since 2008 based on long term chart. Results variable over order of magnitude causing the No Trend result. Annual sampling since 2005 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

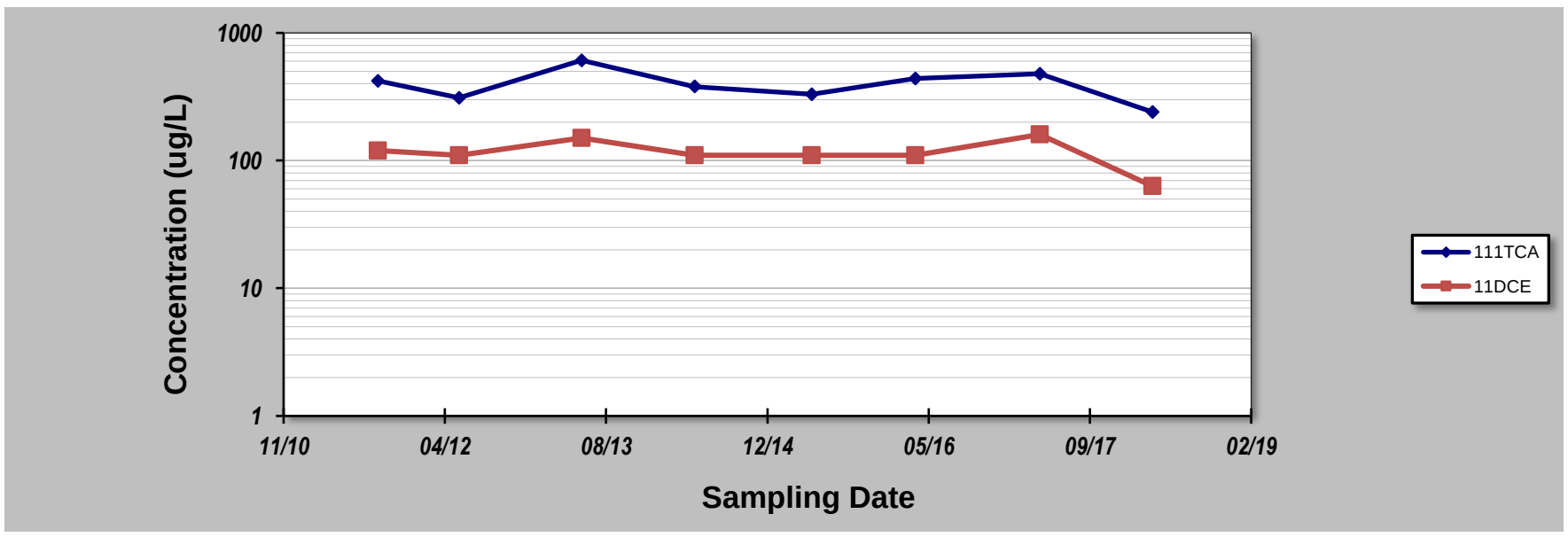
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	7-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW 79-02S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	111TCA	11DCE					
Sampling Event	**Sampling Date**	**BW 79-02S CONCENTRATION (ug/L)**						
1	7-Sep-11	420	120					
2	15-May-12	310	110					
3	30-May-13	610	150					
4	16-May-14	380	110					
5	13-May-15	330	110					
6	30-Mar-16	440	110					
7	19-Apr-17	480	160					
8	4-Apr-18	240	63					
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.28	0.25					
Mann-Kendall Statistic (S):		-2	-6					
Confidence Factor:		54.8%	72.6%					
Concentration Trend:		Stable	Stable					

Annual sampling since 2011 is shown; sampling prior to 2011 had an inconsistent frequency (with no samples from 2007-2010 and two samples in 2005-2006). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

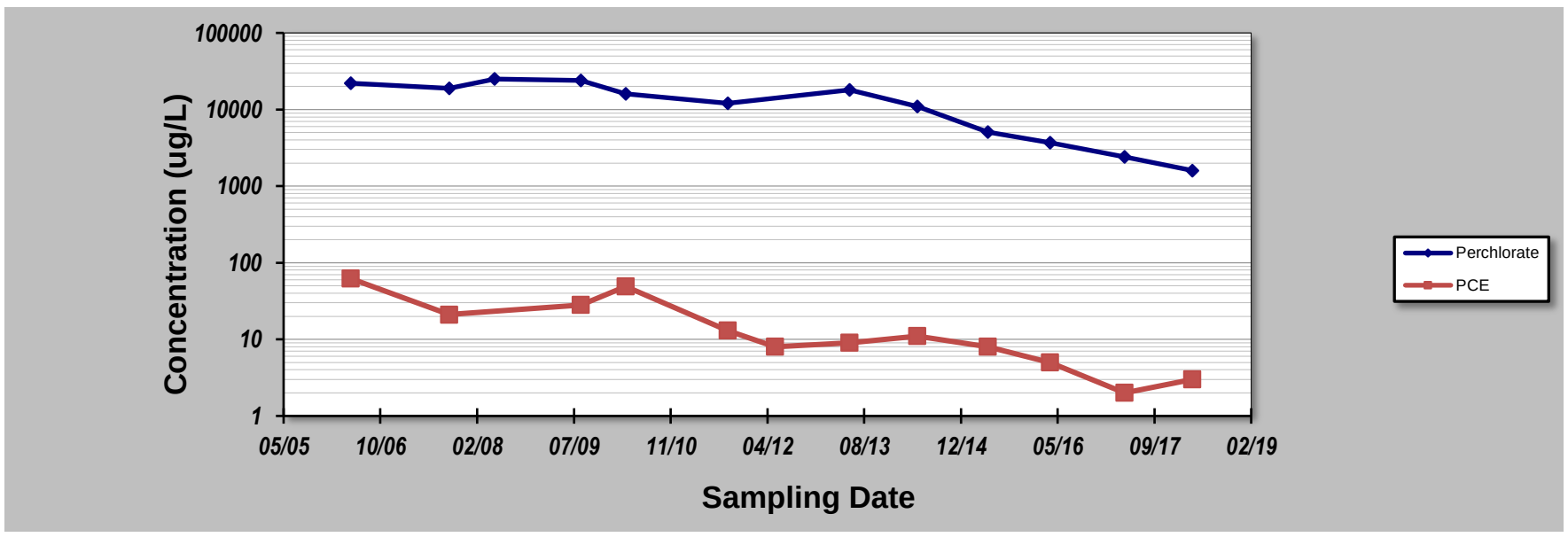
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	7-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW CG-01D
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE					
Sampling Event	**Sampling Date**	**BW CG-01D CONCENTRATION (ug/L)**						
1	11-May-06	22000	62					
2	1-Oct-07	19000	21					
3	23-May-08	25000						
4	11-Aug-09	24000	28					
5	31-Mar-10	16000	49					
6	9-Sep-11	12000	13					
7	10-May-12		8					
8	30-May-13	18000	9					
9	15-May-14	11000	11					
10	15-May-15	5100	8					
11	1-Apr-16	3700	5					
12	20-Apr-17	2400	2					
13	5-Apr-18	1600	3					
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.64	1.05					
Mann-Kendall Statistic (S):		-54	-51					
Confidence Factor:		>99.9%	>99.9%					
Concentration Trend:		Decreasing	Decreasing					

Annual sampling since 2005 is shown; sampling prior to 2012 had an inconsistent frequency. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

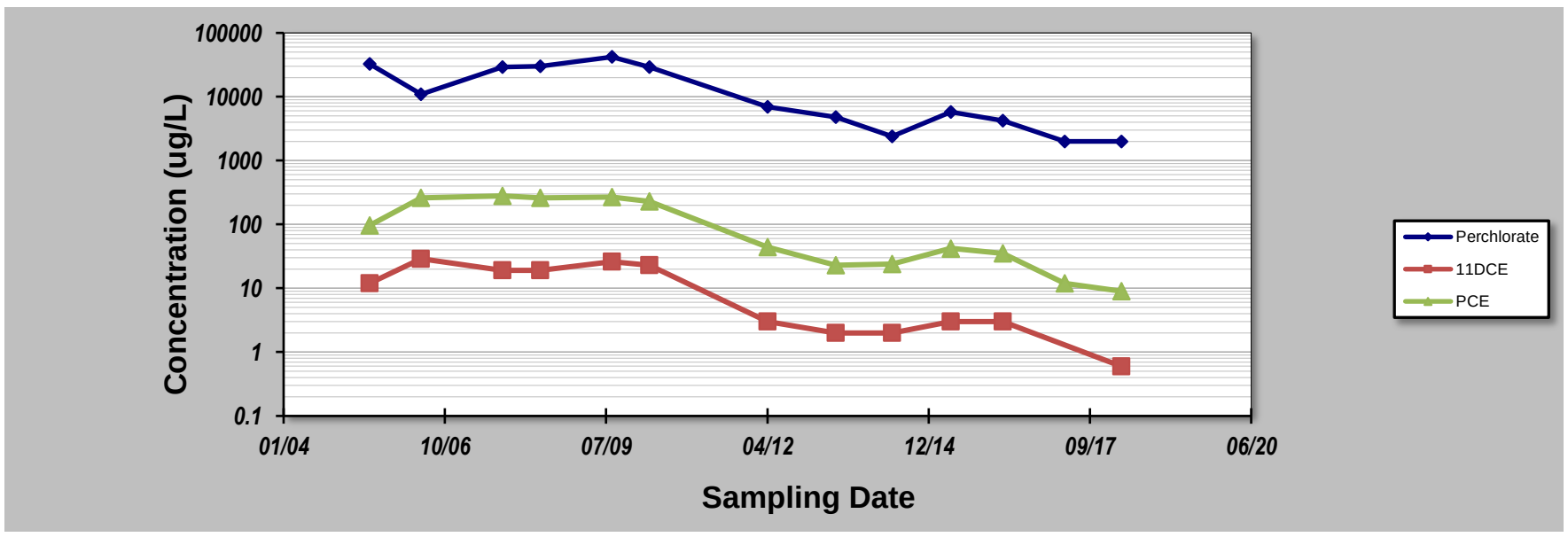
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	7-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW CM-01S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11DCE	PCE				
Sampling Event	**Sampling Date**	**BW CM-01S CONCENTRATION (ug/L)**					
1	30-Jun-05	32700	12	96			
2	15-May-06	11000	29	260			
3	2-Oct-07	29000	19	280			
4	23-May-08	30000	*19*	*260*			
5	11-Aug-09	42000	26	270			
6	31-Mar-10	29000	23	230			
7	8-Sep-11						
8	3-Apr-12	6900	*3*	44			
9	31-May-13	4800	*2*	23			
10	15-May-14	2400	2	24			
11	14-May-15	5800	3	42			
12	1-Apr-16	4200	3	35			
13	19-Apr-17	2000		12			
14	4-Apr-18	2000	*0.6*	9			
15							
Coefficient of Variation:		0.94	0.91	0.95			
Mann-Kendall Statistic (S):		-54	-35	-51			
Confidence Factor:		>99.9%	99.2%	100.0%			
Concentration Trend:		Decreasing	Decreasing	Decreasing			

Annual sampling since 2005 is shown; sampling prior to 2013 had an inconsistent frequency. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. The September 2011 sample was removed from the data set as it had uncharacteristically low concentrations.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

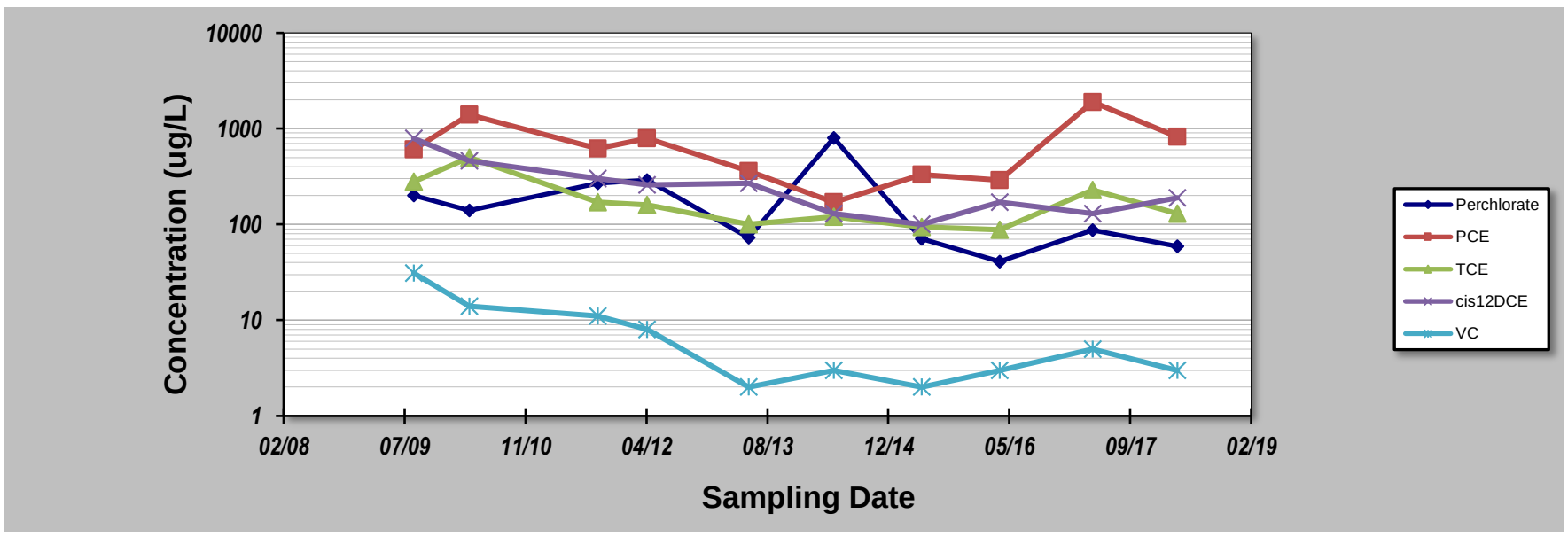
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	BW TTU-03D
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE	cis12DCE	VC		
Sampling Event	**Sampling Date**	**BW TTU-03D CONCENTRATION (ug/L)**					
1	13-Aug-09	200	610	280	790	31	
2	31-Mar-10	140	1400	500	460	14	
3	13-Sep-11	270	620	170	300	11	
4	4-Apr-12	290	790	160	260	8	
5	28-May-13	73	360	100	270	*2*	
6	15-May-14	800	170	120	130	3	
7	14-May-15	71	330	94	100	2	
8	1-Apr-16	41	290	88	170	3	
9	20-Apr-17	87	1900	230	130	5	
10	4-Apr-18	59	820	130	190	3	
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		1.12	0.75	0.67	0.74	1.10	
Mann-Kendall Statistic (S):		-17	-3	-21	-28	-23	
Confidence Factor:		92.2%	56.9%	96.4%	99.4%	97.7%	
Concentration Trend:		Prob. Decreasing	Stable	Decreasing	Decreasing	Decreasing	

Annual sampling since 2009 is shown; sampling prior to 2009 had an inconsistent frequency (with multiple samples in 2005-2006, no samples in 2007, and elevated detection limits in 2008 limiting the usefulness of the data for trend analysis). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

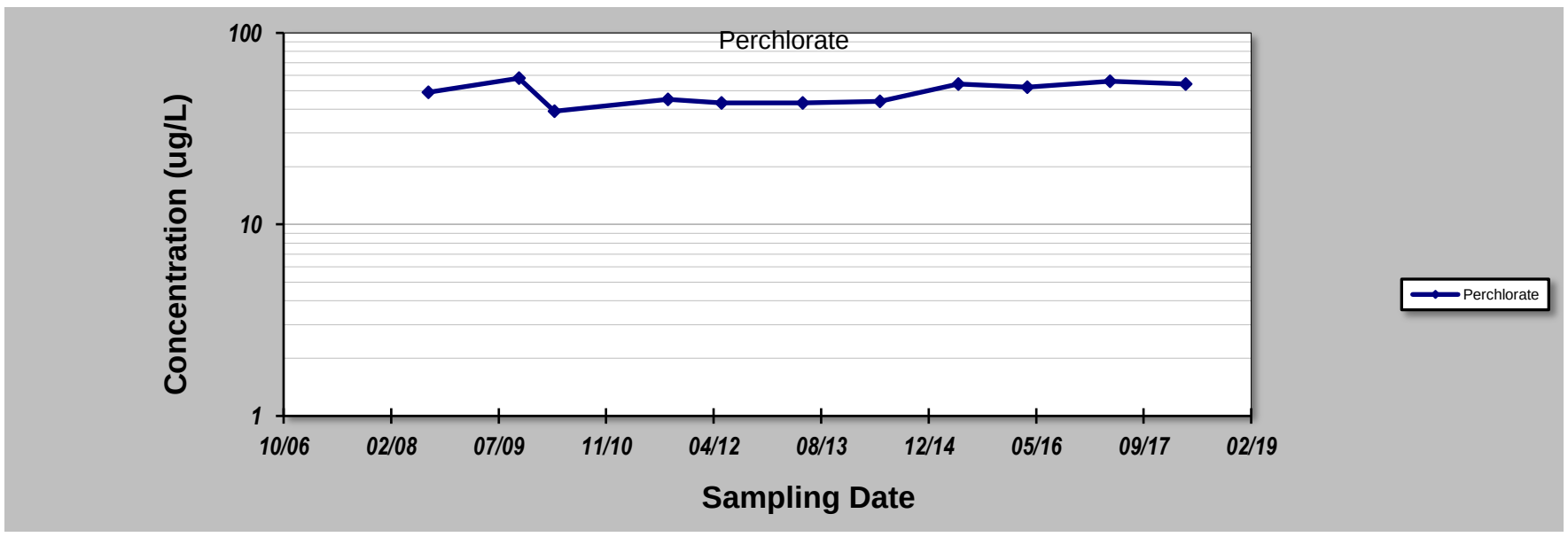
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	DW 213-01
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**DW 213-01 CONCENTRATION (ug/L)**						
1	14-Aug-08	49						
2	8-Oct-09	58						
3	23-Mar-10	39						
4	1-Sep-11	45						
5	7-May-12	43						
6	21-May-13	43						
7	15-May-14	44						
8	14-May-15	54						
9	29-Mar-16	52						
10	18-Apr-17	56						
11	4-Apr-18	54						
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.13						
Mann-Kendall Statistic (S):		15						
Confidence Factor:		85.9%						
Concentration Trend:		No Trend						

Sampling since 2008 is shown.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

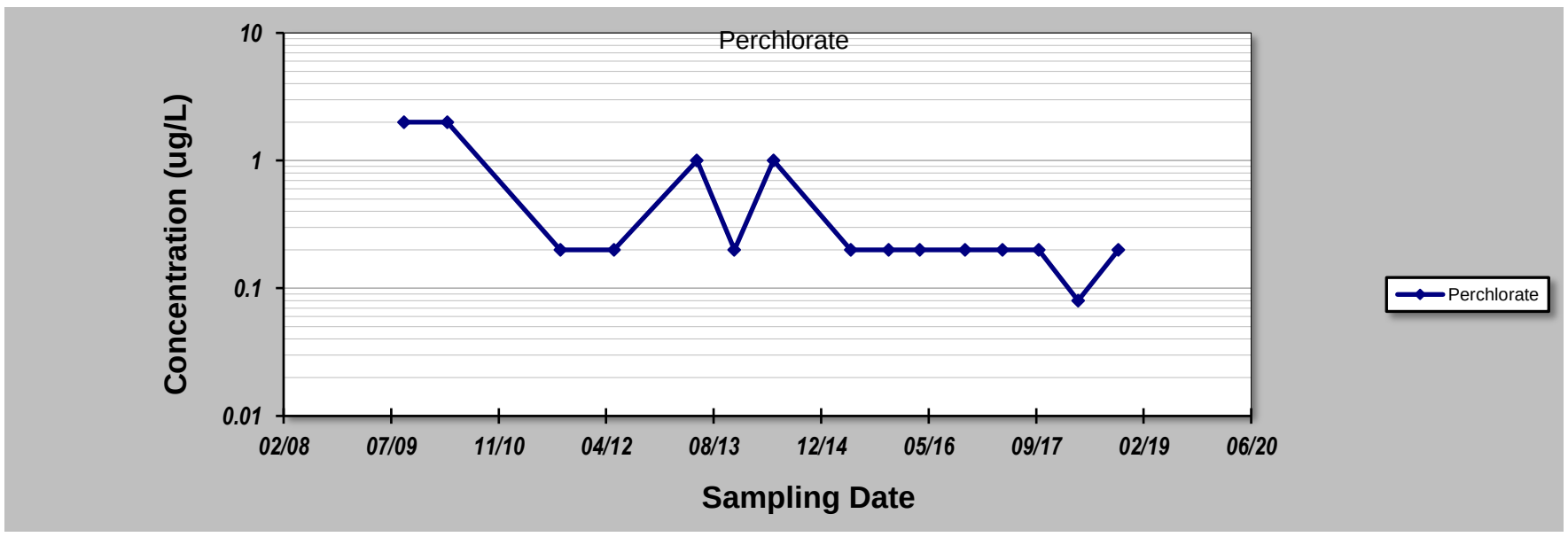
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	206707
Facility Name:	ARC Gainesville	Constituent:	DW SB-01
Conducted By:	GSK	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**DW SB-01 CONCENTRATION (ug/L)**						
1	4-Sep-09	2						
2	24-Mar-10	2						
3	1-Sep-11	0.2						
4	7-May-12	0.2						
5	28-May-13	1						
6	18-Nov-13	0.2						
7	19-May-14	1						
8	13-May-15	0.2						
9	6-Nov-15	0.2						
10	29-Mar-16	0.2						
11	27-Oct-16	0.2						
12	18-Apr-17	0.2						
13	3-Oct-17	0.2						
14	4-Apr-18	*0.08*						
15	9-Oct-18	0.2						
16								
17								
18								
19								
20								
Coefficient of Variation:		1.22						
Mann-Kendall Statistic (S):		-46						
Confidence Factor:		98.8%						
Concentration Trend:		Decreasing						

Results since 2009. Blue highlight are non-detect. Italics and gray are estimated "J". Perchlorate, 11DCE, PCE, TCE all non-detect since 2009.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

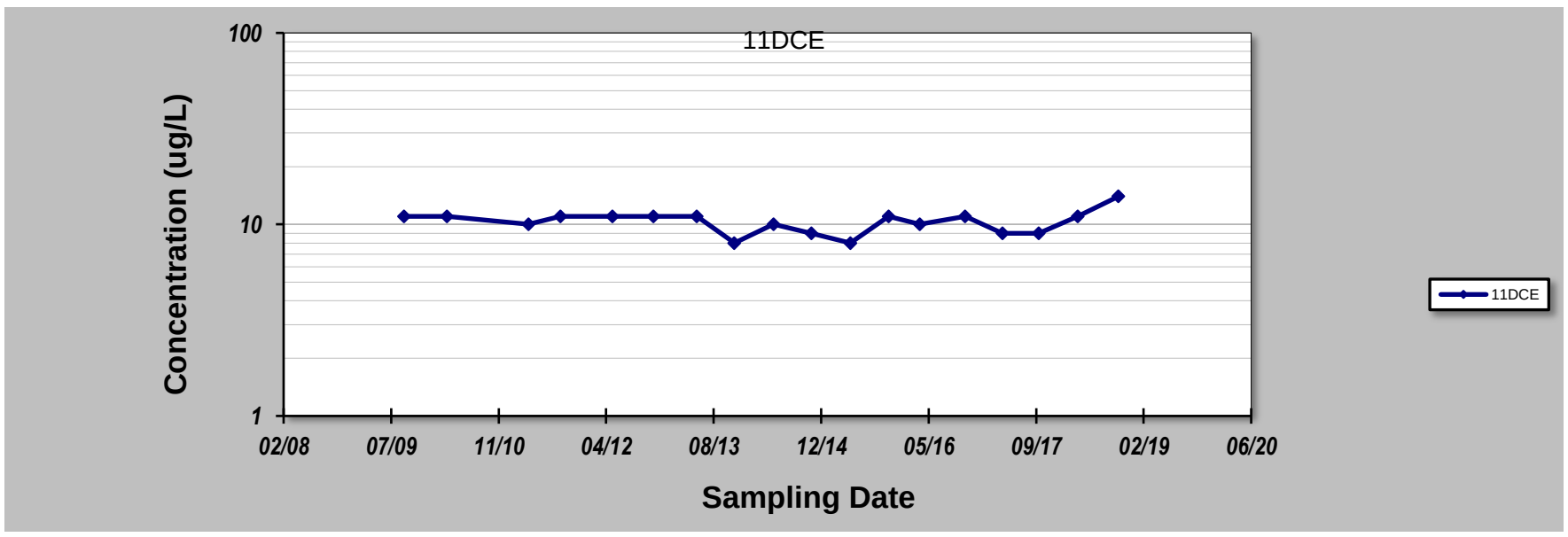
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	DW SB-02
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	11DCE						
Sampling Event	**Sampling Date**	**DW SB-02 CONCENTRATION (ug/L)**					
1	4-Sep-09	11					
2	23-Mar-10	11					
3	5-Apr-11	10					
4	1-Sep-11	11					
5	1-May-12	11					
6	7-Nov-12	11					
7	28-May-13	11					
8	18-Nov-13	8					
9	19-May-14	10					
10	11-Nov-14	9					
11	12-May-15	8					
12	5-Nov-15	11					
13	29-Mar-16	10					
14	27-Oct-16	11					
15	18-Apr-17	9					
16	3-Oct-17	9					
17	3-Apr-18	11					
18	9-Oct-18	14					
19							
20							
Coefficient of Variation:		0.14					
Mann-Kendall Statistic (S):		-12					
Confidence Factor:		66.0%					
Concentration Trend:		Stable					

Semi-Annual sampling since 2011 is shown. Annual sampling from 2009 and 2010 is also shown; sampling prior to 2011 had inconsistent frequency.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

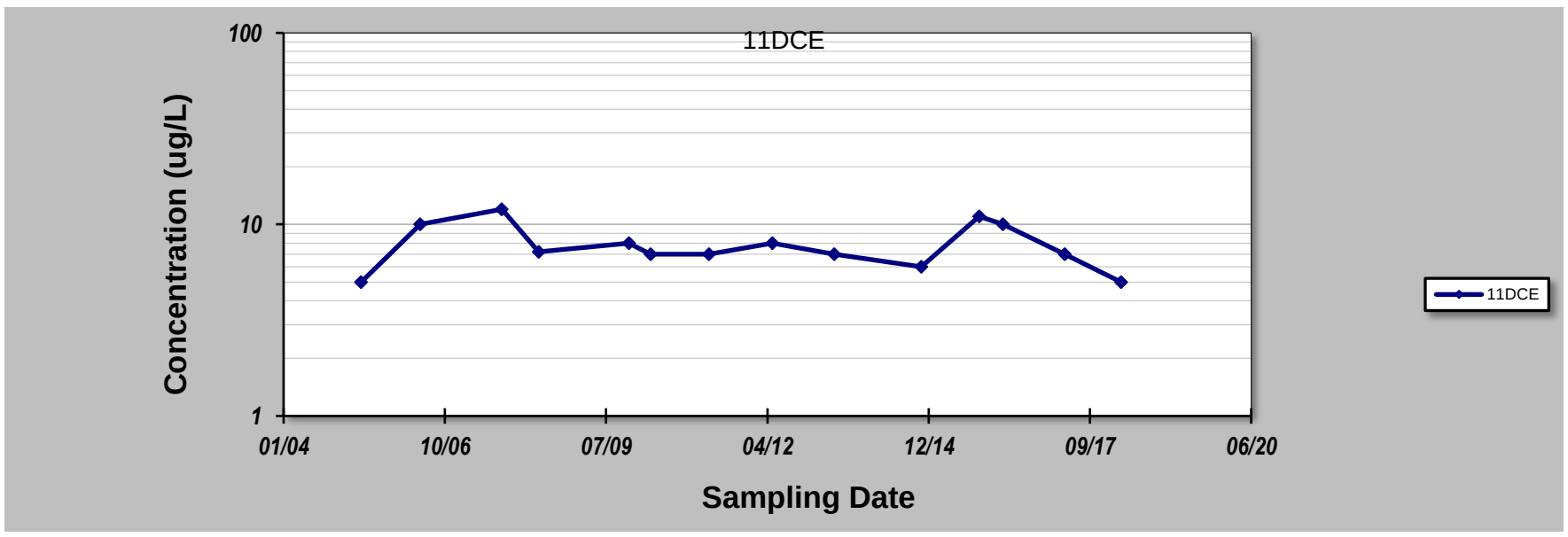
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	DW-12
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	11DCE						
Sampling Event	**Sampling Date**	**DW-12 CONCENTRATION (ug/L)**						
1	9-May-05	5						
2	10-May-06	10						
3	28-Sep-07	12						
4	13-May-08	*7.2*						
5	24-Nov-09	8						
6	7-Apr-10	7						
7	5-Apr-11	7						
8	1-May-12	8						
9	21-May-13	7						
10	11-Nov-14	6						
11	5-Nov-15	11						
12	30-Mar-16	10						
13	18-Apr-17	7						
14	3-Apr-18	*5*						
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.28						
Mann-Kendall Statistic (S):		-33						
Confidence Factor:		92.4%						
Concentration Trend:		Prob. Decreasing						

Annual sampling since 2005 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. Due to inconsistent sampling frequency from 2007-2009, those years were simplified to include only one sample result per year in this table. "J" or "j" flagged results shown in italics and gray cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

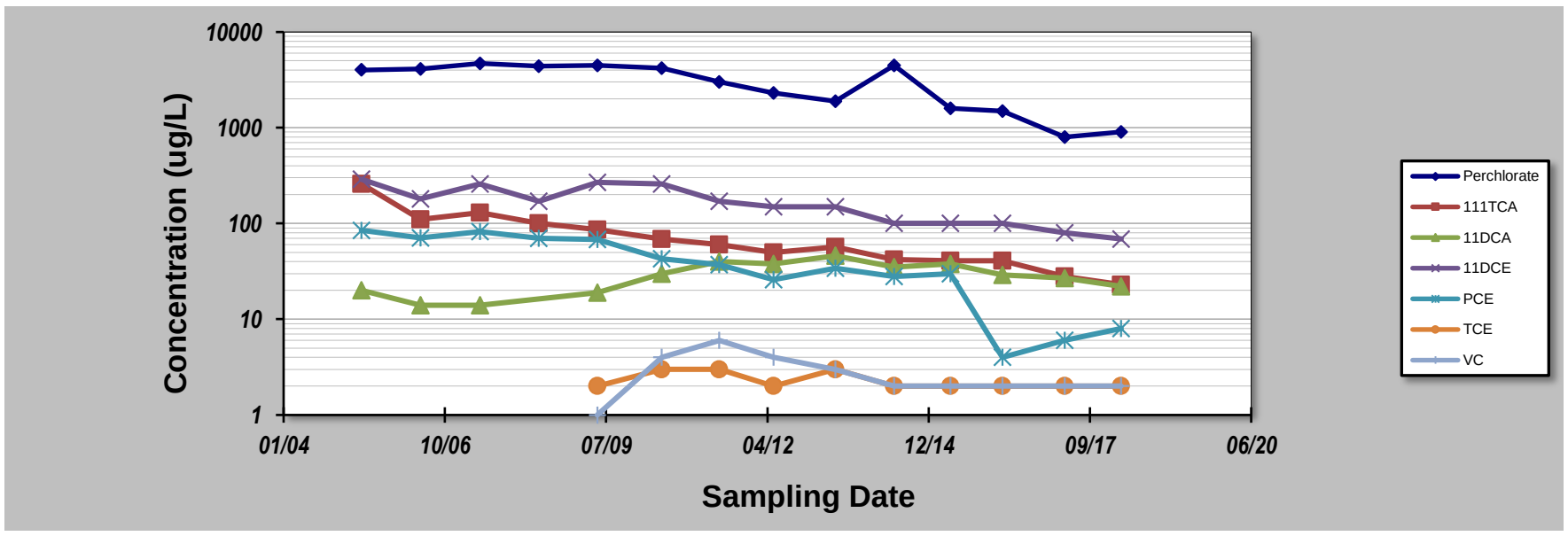
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	DW-13
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	111TCA	11DCA	11DCE	PCE	TCE	VC
Sampling Event	Sampling Date	DW-13 CONCENTRATION (ug/L)						
1	10-May-05	4020	260	20	290	85		
2	12-May-06	4100	110	14	180	71		
3	16-May-07	4700	130	14	260	82		
4	15-May-08	4400	*100*		*170*	*70*		
5	12-May-09	4500	86	19	270	68	*2*	*1*
6	16-Jun-10	4200	69	30	260	43	*3*	*4*
7	8-Jun-11	3000	60	40	170	37	*3*	6
8	9-May-12	2300	50	38	150	26	*2*	*4*
9	28-May-13	1900	57	46	150	34	*3*	*3*
10	27-May-14	4500	42	35	100	28	2	2
11	11-May-15	1600	41	38	100	30	2	2
12	28-Mar-16	1500	41	29	100	4	2	2
13	18-Apr-17	800	28	27	80	6	2	2
14	4-Apr-18	900	23	22	69	8	2	2
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.65	0.78	0.36	0.45	0.67	0.21	0.53
Mann-Kendall Statistic (S):		-83	-86	16	-73	-75	-13	-14
Confidence Factor:		>99.9%	>99.9%	81.6%	>99.9%	>99.9%	85.4%	87.3%
Concentration Trend:		Decreasing	Decreasing	No Trend	Decreasing	Decreasing	Stable	Stable

Annual sampling since 2005 is shown. There have been over 100 samples since 2005 at a varying frequency. To simplify the data set, only samples collected in May were utilized. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. The 2008 sampling results for VOCs were not utilized due to elevated detection limits during that sampling round.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

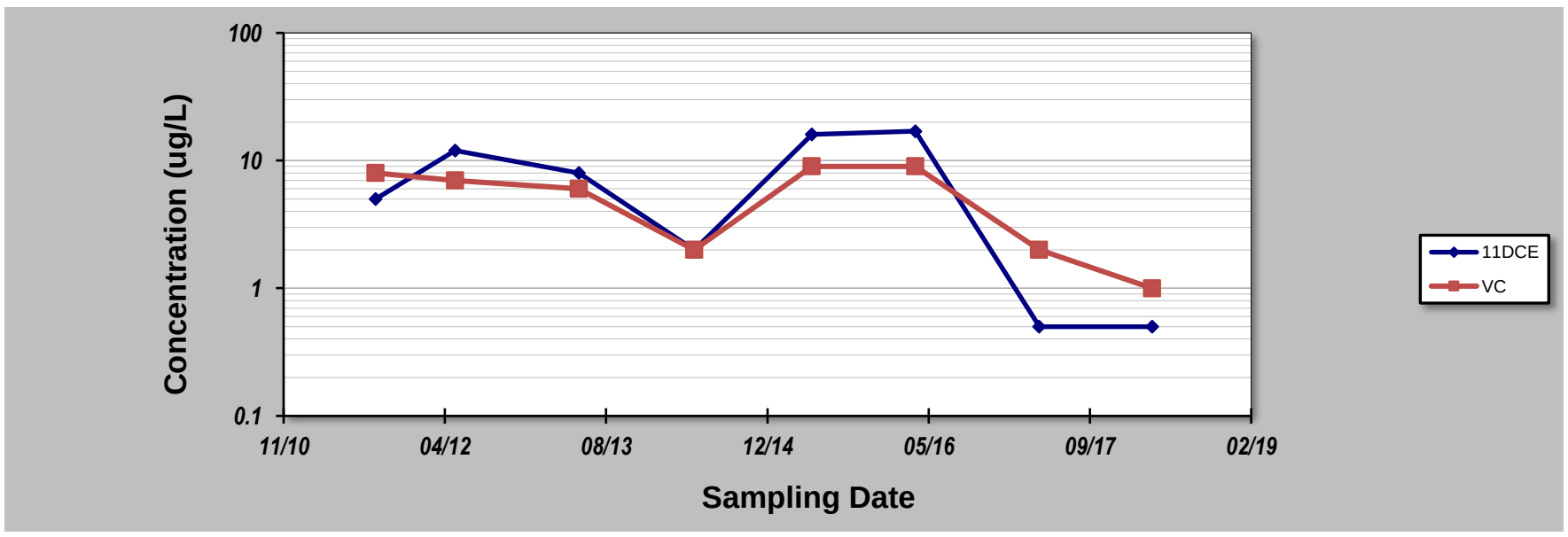
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	DW-15
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	11DCE	VC					
Sampling Event	**Sampling Date**	**DW-15 CONCENTRATION (ug/L)**						
1	30-Aug-11	*5*	8					
2	3-May-12	12	7					
3	21-May-13	8	6					
4	14-May-14	2	2					
5	14-May-15	16	9					
6	30-Mar-16	17	9					
7	18-Apr-17	0.5	2					
8	3-Apr-18	0.5	1					
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.88	0.61					
Mann-Kendall Statistic (S):		-5	-10					
Confidence Factor:		68.3%	86.2%					
Concentration Trend:		Stable	Stable					

Annual sampling since 2011 is shown, which represents the timeframe after modification to the NDTS. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color (included in calculation).



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

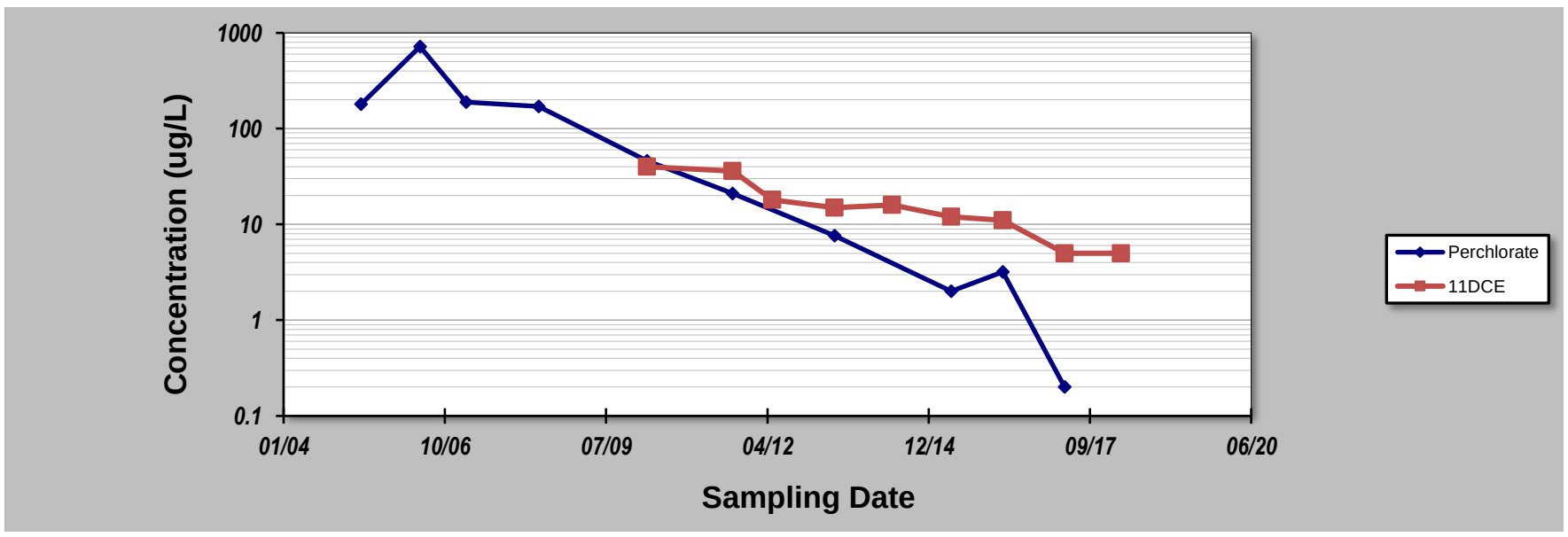
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-16
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11DCE					
Sampling Event	**Sampling Date**	**DW-16 CONCENTRATION (ug/L)**						
1	9-May-05	180						
2	9-May-06	720						
3	19-Feb-07	190						
4	13-May-08	170						
5	17-Mar-10	*46*	40					
6	30-Aug-11	21	36					
7	2-May-12		18					
8	22-May-13	*7.6*	*15*					
9	14-May-14		16					
10	15-May-15	2	12					
11	30-Mar-16	3.2	11					
12	18-Apr-17	0.2	5					
13	4-Apr-18		5					
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.65	0.71					
Mann-Kendall Statistic (S):		-39	-33					
Confidence Factor:		>99.9%	>99.9%					
Concentration Trend:		Decreasing	Decreasing					

As of fall 2017, no longer sampled for Perchlorate. Annual sampling since 2005 is shown; there was no sampling in 2009. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. The 2008 VOC results for 11DCE was "2.3 J" (highlighted in green) and was eliminated from this data set due to apparent J flag and detecton limit issues with the VOC sampling results during this event.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

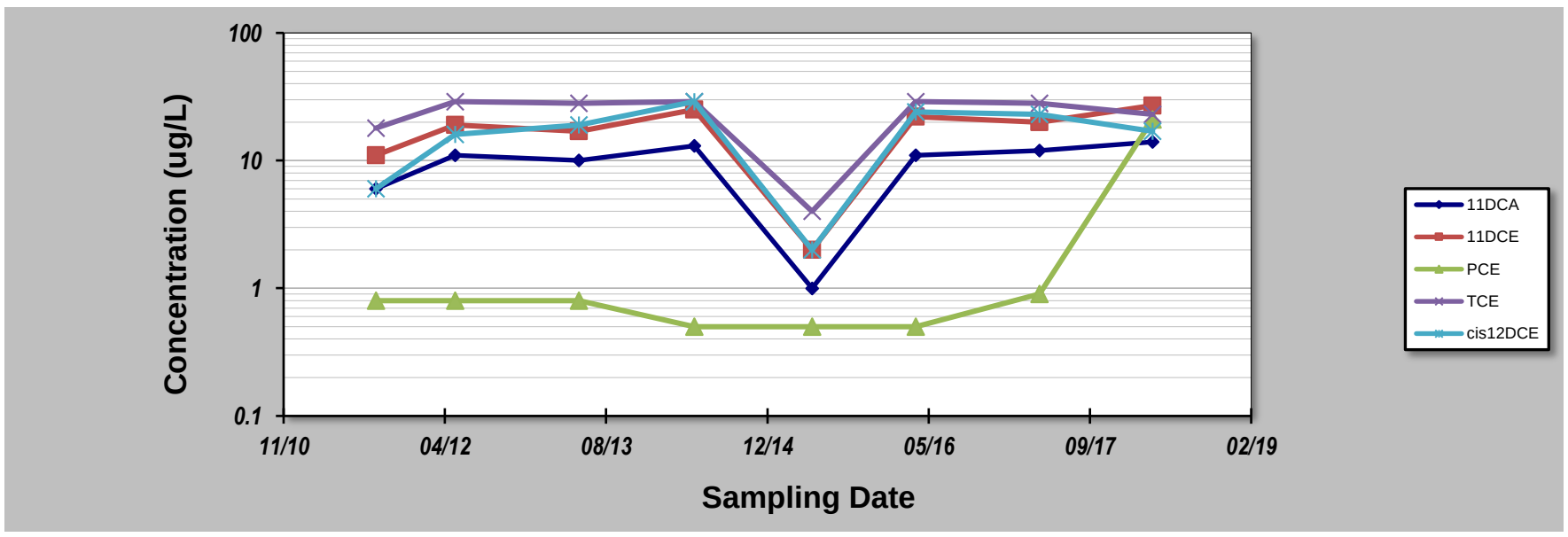
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-18
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		11DCA	11DCE	PCE	TCE	cis12DCE		
Sampling Event	Sampling Date	DW-18 CONCENTRATION (ug/L)						
1	31-Aug-11	6	11	0.8	18	*6*		
2	3-May-12	11	19	0.8	29	*16*		
3	22-May-13	10	*17*	0.8	*28*	*19*		
4	14-May-14	13	25	0.5	29	*29*		
5	15-May-15	1	2	0.5	4	2		
6	31-Mar-16	11	22	0.5	29	*24*		
7	19-Apr-17	12	20	*0.9*	28	*23*		
8	4-Apr-18	14	27	21	23	*17*		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.44	0.45	2.23	0.37	0.54		
Mann-Kendall Statistic (S):		13	12	4	-2	6		
Confidence Factor:		92.9%	91.1%	64.0%	54.8%	72.6%		
Concentration Trend:		Prob. Increasing	Prob. Increasing	No Trend	Stable	No Trend		

Annual sampling since 2011 is shown, which represents the timeframe after modification to the NDTS. ; Non-detect results are highlighted with a light blue cell color; they are included in the calculation. Estimated "J" are shown in italics and gray cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

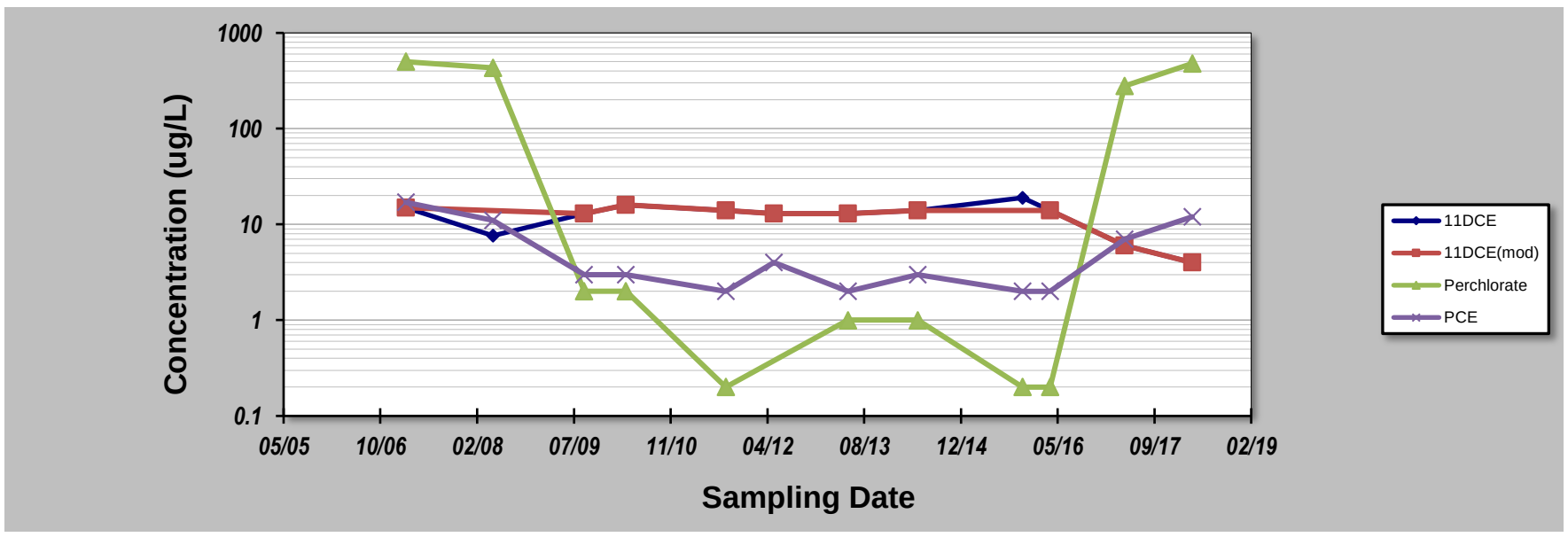
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC
Facility Name:	ARC Gainesville	Constituent:	DW-20
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		11DCE	11DCE(mod)	Perchlorate	PCE			
Sampling Event	Sampling Date	DW-20 CONCENTRATION (ug/L)						
1	19-Feb-07	15	15	500	17			
2	14-May-08	*7.6*	*removed min*	430	*11*			
3	28-Aug-09	*13*	*13*	*2*	*3*			
4	1-Apr-10	16	16	*2*	*3*			
5	30-Aug-11	14	14	*0.2*	*2*			
6	4-May-12	13	13	Not Sampled	*4*			
7	22-May-13	*13*	*13*	*1*	*2*			
8	18-May-14	14	14	*1*	3			
9	11-Nov-15	19	removed max	*0.2*	2			
10	1-Apr-16	14	14	*0.2*	2			
11	20-Apr-17	6	6	280	7			
12	5-Apr-18	4	4	480	12			
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.35	0.32	1.42	0.89			
Mann-Kendall Statistic (S):		-12	-21	-14	-11			
Confidence Factor:		77.0%	96.4%	84.0%	74.9%			
Concentration Trend:		Stable	Decreasing	No Trend	Stable			

Annual sampling since 2007 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results for perchlorate are highlighted with a light blue cell color; they are included in the calculation at the reporting limit.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

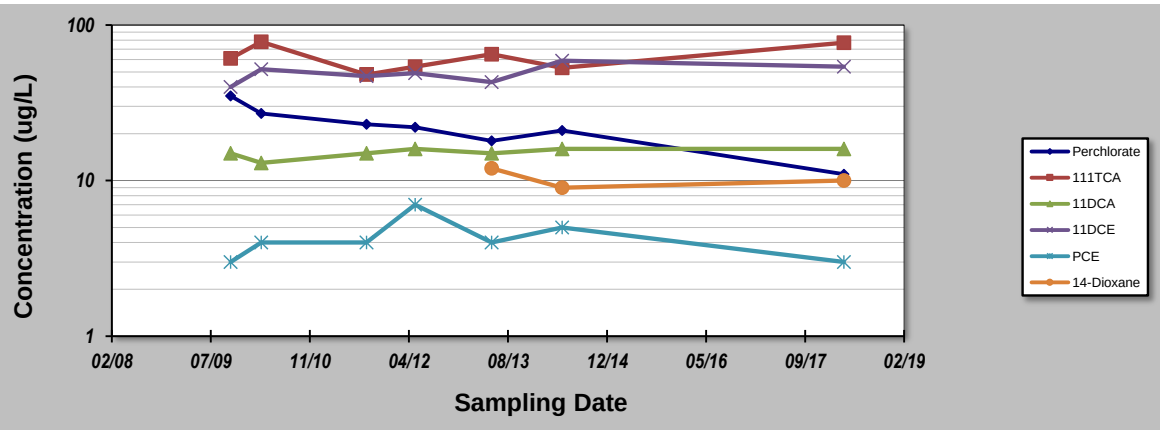
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC
Facility Name:	ARC Gainesville	Constituent:	DW-23
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	111TCA	11DCA	11DCE	PCE	14-Dioxane	
Sampling Event	Sampling Date	DW-23 CONCENTRATION (ug/L)						
1	14-Oct-09	35	61	15	40	*3*		
2	17-Mar-10	27	78	13	52	*4*		
3	31-Aug-11	23	48	15	47	*4*		
4	2-May-12	22	54	16	49	7		
5	23-May-13	18	65	15	43	*4*	12	
6	14-May-14	21	53	16	59	5	9	
7	5-Apr-18	11	77	16	54	3	10	
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.33	0.19	0.07	0.13	0.32	0.15	
Mann-Kendall Statistic (S):		-19	1	11	9	3	-1	
Confidence Factor:		99.9%	50.0%	93.2%	88.1%	61.4%		
Concentration Trend:		Decreasing	No Trend	Prob. Increasing	No Trend	No Trend		

Annual sampling since 2009 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. .Although 11DCA statistics indicates probably increasing, this is believed to be stable based on the minor variation in results concentrations.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

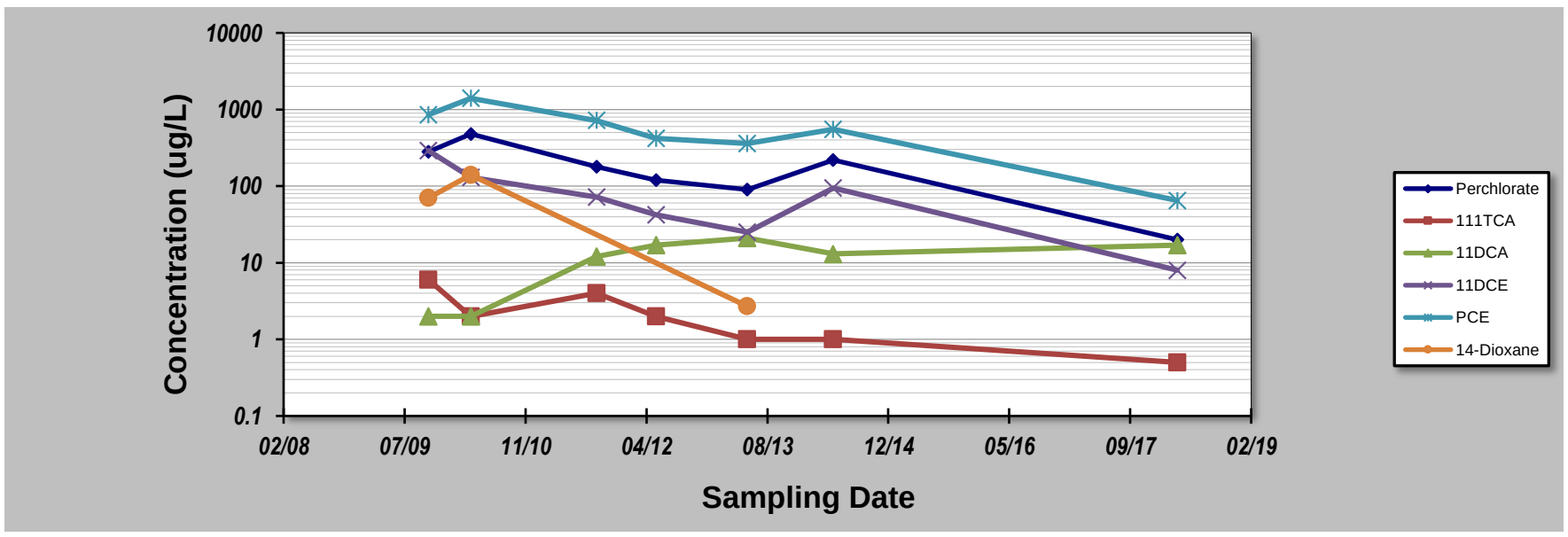
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC
Facility Name:	ARC Gainesville	Constituent:	DW-26I
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	111TCA	11DCA	11DCE	PCE	14-Dioxane	
Sampling Event	Sampling Date	DW-26I CONCENTRATION (ug/L)						
1	13-Oct-09	280	6	*2*	290	850	70	
2	6-Apr-10	480	*2*	2	130	1400	140	
3	8-Sep-11	180	*4*	12	72	720		
4	11-May-12	120	*2*	17	42	420		
5	23-May-13	90	*1*	21	25	360	2.7	
6	13-May-14	220	1	13	94	550		
7	4-Apr-18	20	0.5	17	8	65		
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.76	0.84	0.62	1.01	0.68	0.97	
Mann-Kendall Statistic (S):		-13	-17	13	-15	-15	-1	
Confidence Factor:		96.5%	99.5%	96.5%	98.5%	98.5%		
Concentration Trend:		Decreasing	Decreasing	Increasing	Decreasing	Decreasing		

Annual sampling since 2009 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are included in the calculation at the reporting limit.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

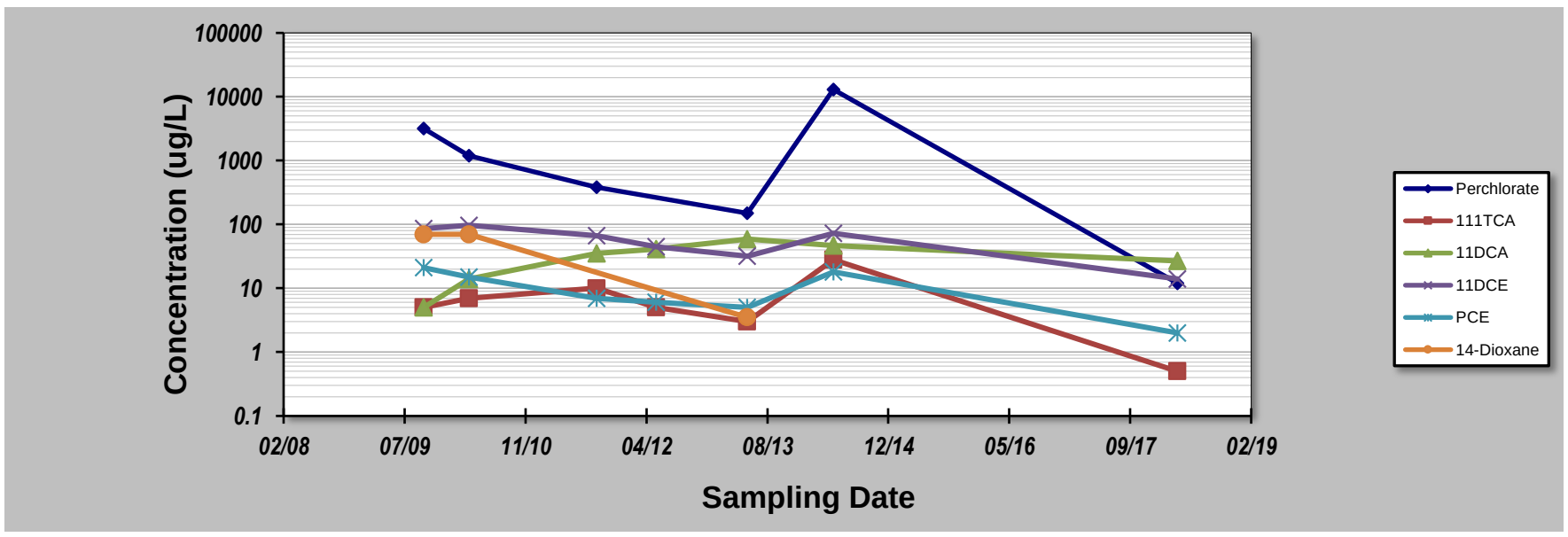
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC
Facility Name:	ARC Gainesville	Constituent:	DW-28D
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	111TCA	11DCA	11DCE	PCE	14-Dioxane	
Sampling Event	Sampling Date	DW-28D CONCENTRATION (ug/L)						
1	23-Sep-09	3200	5	5	86	21	70	
2	29-Mar-10	1200	7	14	97	15	70	
3	8-Sep-11	380	10	35	67	7		
4	11-May-12		*5*	41	45	6		
5	23-May-13	150	*3*	59	32	5	3.5	
6	14-May-14	13000	28	47	73	18		
7	5-Apr-18	12	0.5	27	14	2		
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.69	1.10	0.58	0.51	0.69	0.80	
Mann-Kendall Statistic (S):		-7	-4	11	-13	-13	-2	
Confidence Factor:		86.4%	66.7%	93.2%	96.5%	96.5%		
Concentration Trend:		No Trend	No Trend	Prob. Increasing	Decreasing	Decreasing		

Annual sampling since 2009 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are included in the calculation at the reporting limit.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

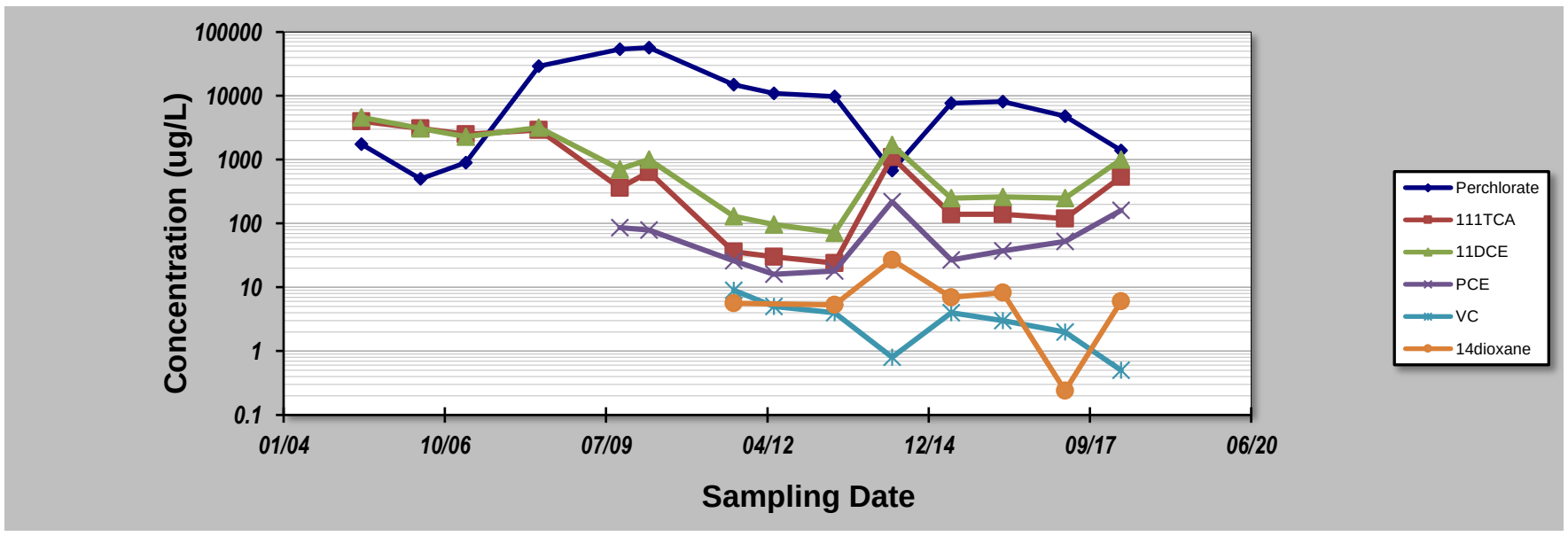
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-28I
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	111TCA	11DCE	PCE	VC	14dioxane	
Sampling Event	Sampling Date	DW-28I CONCENTRATION (ug/L)						
1	10-May-05	1740	4000	4600				
2	12-May-06	500	3100	3100				
3	16-Feb-07	900	2500	2300				
4	15-May-08	29000	*2900*	*3200*				
5	29-Sep-09	54000	360	710	86			
6	29-Mar-10	57000	640	1000	79			
7	6-Sep-11	15000	36	130	26	9	5.6	
8	11-May-12	11000	30	96	16	5		
9	23-May-13	9800	24	72	18	*4*	5.3	
10	14-May-14	680	1100	1700	220	*0.8*	27	
11	15-May-15	7700	140	250	27	4	7	
12	1-Apr-16	8100	140	260	37	3	8.3	
13	20-Apr-17	4800	120	250	52	2	0.24	
14	3-Apr-18	1400	540	1000	160	0.5	6	
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.32	1.24	1.08	0.94	0.77	1.01	
Mann-Kendall Statistic (S):		-13	-44	-39	7	-21	-1	
Confidence Factor:		74.1%	99.2%	98.2%	70.0%	99.6%	50.0%	
Concentration Trend:		No Trend	Decreasing	Decreasing	No Trend	Decreasing	No Trend	

Annual sampling since 2005 is shown; sampling prior to 2012 had an inconsistent frequency with sampling at different times of the year. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

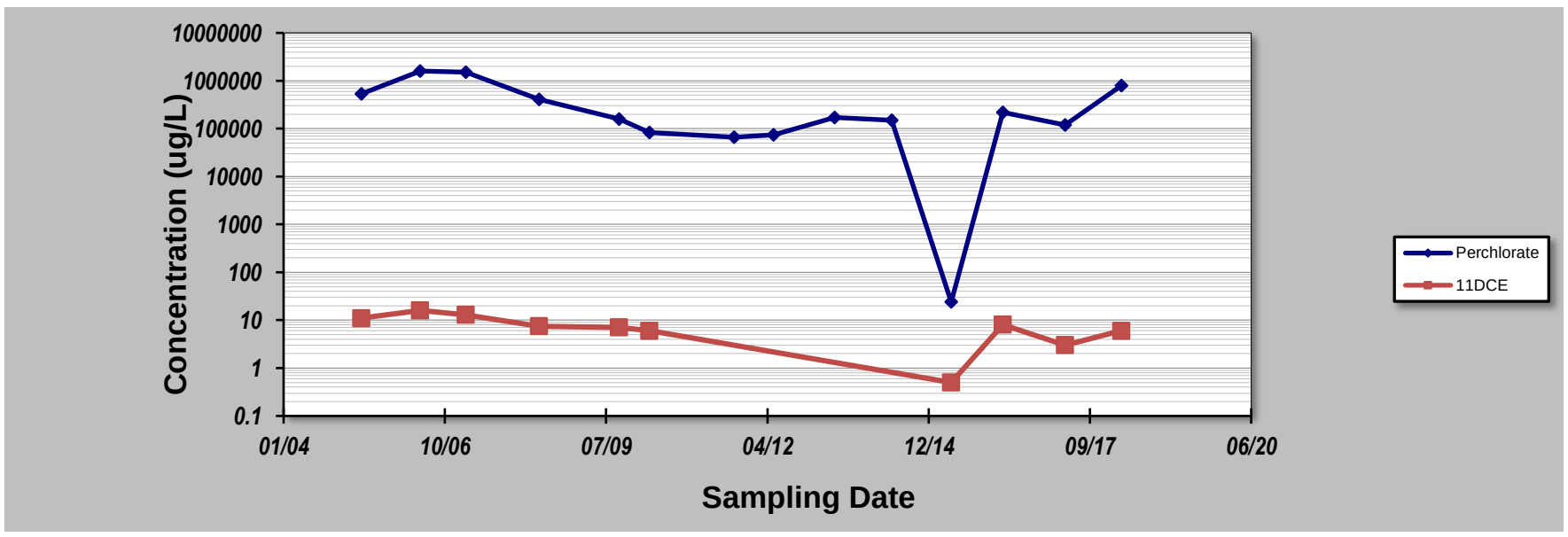
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-29S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11DCE					
Sampling Event	**Sampling Date**	**DW-29S CONCENTRATION (ug/L)**						
1	11-May-05	529000	11					
2	10-May-06	1600000	16					
3	16-Feb-07	1500000	13					
4	16-May-08	410000	7.4					
5	25-Sep-09	160000	7					
6	31-Mar-10	84000	6					
7	7-Sep-11	67000						
8	10-May-12	75000						
9	22-May-13	170000						
10	13-May-14	150000						
11	15-May-15	24	0.5					
12	1-Apr-16	220000	8					
13	20-Apr-17	120000	3					
14	5-Apr-18	800000	6					
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.25	0.59					
Mann-Kendall Statistic (S):		-27	-26					
Confidence Factor:		92.1%	98.9%					
Concentration Trend:		Prob. Decreasing	Decreasing					

Annual sampling since 2005 is shown; sampling prior to 2012 had an inconsistent frequency with sampling at different times of the year. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the sample closest to May 15 was chosen. For multiple May samples, the sample closest to May 15 was chosen. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

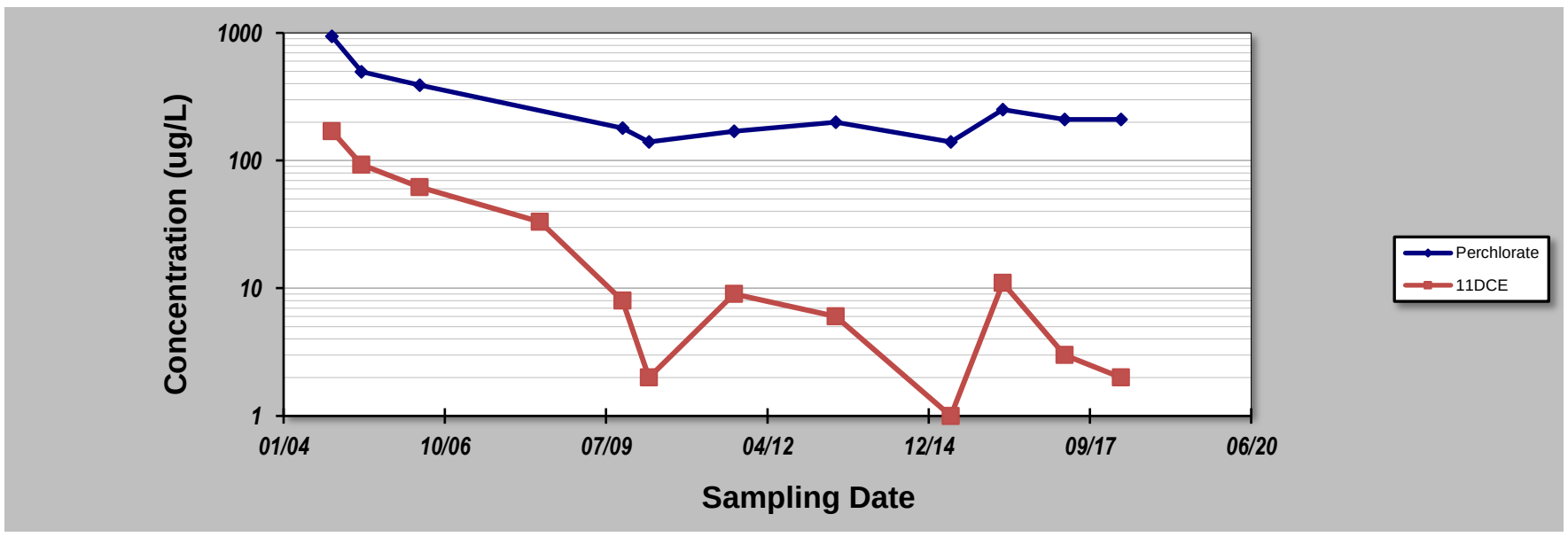
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-30S
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11DCE					
Sampling Event	**Sampling Date**	**DW-30S CONCENTRATION (ug/L)**						
1	9-Nov-04	937	170					
2	11-May-05	497	93					
3	8-May-06	390	62					
4	22-May-08		*33*					
5	16-Oct-09	180	8					
6	29-Mar-10	140	*2*					
7	8-Sep-11	170	9					
8	29-May-13	200	6					
9	14-May-15	140	1					
10	31-Mar-16	250	11					
11	19-Apr-17	210	3					
12	3-Apr-18	210	2					
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.79	1.55					
Mann-Kendall Statistic (S):		-15	-43					
Confidence Factor:		85.9%	99.9%					
Concentration Trend:		Stable	Decreasing					

Sampling data since 2004 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. The only sample excluded from the trend analysis was 2/17/2005 event, which also exhibits the same decreasing



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

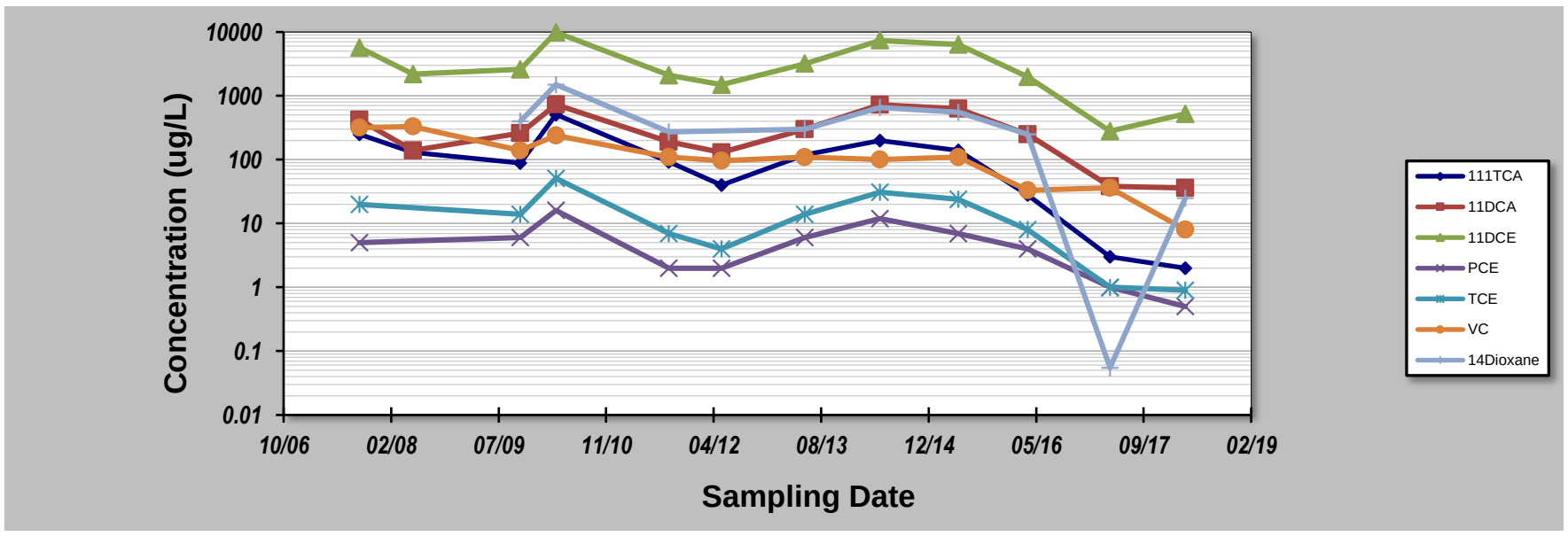
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-32I
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		111TCA	11DCA	11DCE	PCE	TCE	VC	14Dioxane
Sampling Event	Sampling Date	DW-32I CONCENTRATION (ug/L)						
1	28-Sep-07	250	420	5700	*5*	20	320	
2	3-Jun-08	*130*	*140*	*2200*			*330*	
3	15-Oct-09	88	260	2600	6	14	140	400
4	30-Mar-10	510	730	9900	16	51	240	1500
5	6-Sep-11	92	190	2100	*2*	7	110	270
6	8-May-12	40	130	1500	*2*	*4*	96	
7	30-May-13	120	300	3200	6	14	110	300
8	15-May-14	200	720	7400	12	31	100	*660*
9	14-May-15	140	630	6400	*7*	24	110	550
10	1-Apr-16	28	250	2000	4	8	33	250
11	19-Apr-17	3	38	280	1	1	36	*0.055*
12	3-Apr-18	2	36	520	*0.5*	*0.9*	8	25
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.05	0.78	0.82	0.85	0.95	0.78	1.03
Mann-Kendall Statistic (S):		-32	-18	-22	-17	-22	-49	-18
Confidence Factor:		98.4%	87.5%	92.4%	89.1%	94.9%	>99.9%	96.2%
Concentration Trend:		Decreasing	Stable	Prob. Decreasing	Stable	Prob. Decreasing	Decreasing	Decreasing

Annual sampling since 2007 is shown; sampling prior to 2012 had an inconsistent frequency with sampling at different times of the year. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

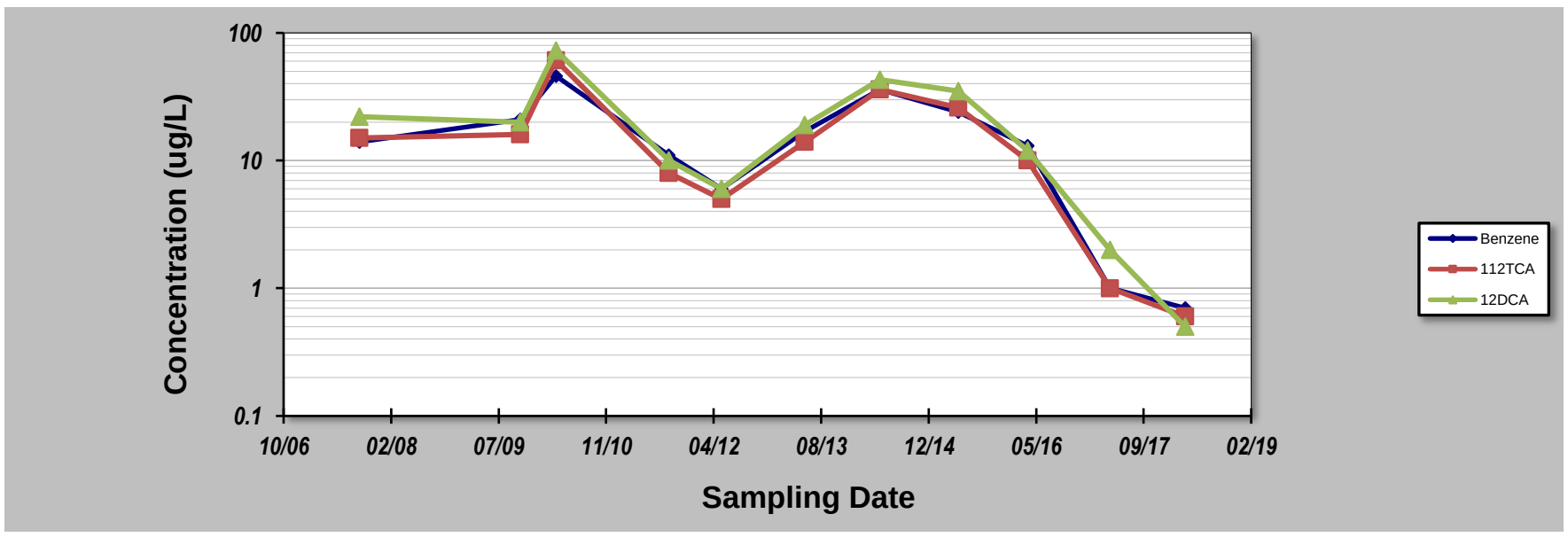
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-32I
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Benzene	112TCA	12DCA				
Sampling Event	**Sampling Date**	**DW-32I CONCENTRATION (ug/L)**						
1	28-Sep-07	14	15	22				
2	3-Jun-08							
3	15-Oct-09	21	16	20				
4	30-Mar-10	46	61	73				
5	6-Sep-11	11	8	10				
6	8-May-12	6	*5*	6				
7	30-May-13	17	14	19				
8	15-May-14	36	36	43				
9	14-May-15	24	26	35				
10	1-Apr-16	13	10	12				
11	19-Apr-17	1	1	2				
12	3-Apr-18	*0.7*	*0.6*	0.5				
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.81	1.02	0.97				
Mann-Kendall Statistic (S):		-19	-21	-23				
Confidence Factor:		91.8%	94.0%	95.7%				
Concentration Trend:		Prob. Decreasing	Prob. Decreasing	Decreasing				

Annual sampling since 2007 is shown; sampling prior to 2012 had an inconsistent frequency with sampling at different times of the year. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

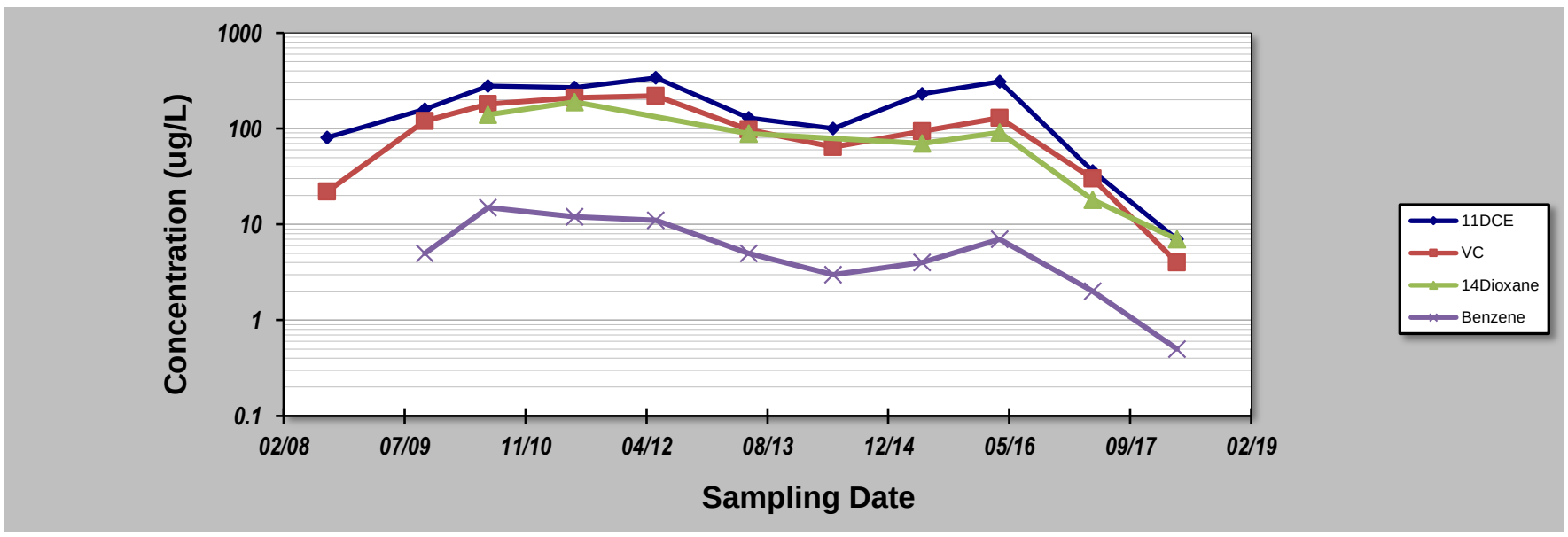
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW-72B
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		11DCE	VC	14Dioxane	Benzene			
Sampling Event	Sampling Date	DW-72B CONCENTRATION (ug/L)						
1	20-Aug-08	81	22					
2	28-Sep-09	160	120		5			
3	16-Jun-10	280	180	*140*	15			
4	9-Jun-11	270	210	*190*	12			
5	10-May-12	340	220		11			
6	28-May-13	130	98	*89*	*5*			
7	13-May-14	100	64		3			
8	15-May-15	230	94	70	4			
9	1-Apr-16	310	130	91	7			
10	19-Apr-17	36	30	18	2			
11	3-Apr-18	7	4	7	0.5			
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.65	0.70	0.75	0.73			
Mann-Kendall Statistic (S):		-11	-15	-15	-28			
Confidence Factor:		77.7%	85.9%	98.5%	99.4%			
Concentration Trend:		Stable	Stable	Decreasing	Decreasing			

Annual sampling since 2008 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

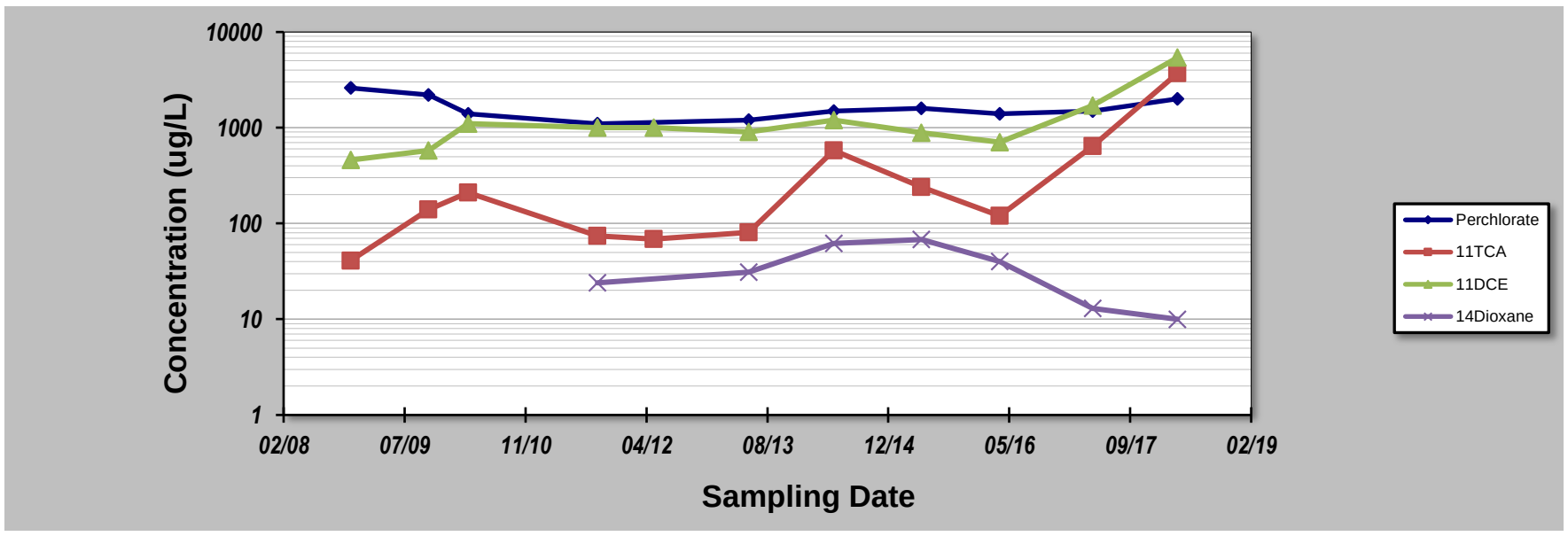
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW 76-01
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11TCA	11DCE	14Dioxane			
Sampling Event	**Sampling Date**	**DW 76-01 CONCENTRATION (ug/L)**					
1	25-Nov-08	2600	41	460			
2	13-Oct-09	2200	140	580			
3	26-Mar-10	1400	210	1100			
4	12-Sep-11	1100	74	1000	*24*		
5	1-May-12		69	1000			
6	29-May-13	1200	81	900	*31*		
7	15-May-14	1500	580	1200	62		
8	13-May-15	1600	240	890	68		
9	31-Mar-16	1400	120	710	40		
10	19-Apr-17	1500	640	1700	13		
11	5-Apr-18	2000	3700	5400	10		
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.29	2.00	1.02	0.64		
Mann-Kendall Statistic (S):		-1	31	22	-5		
Confidence Factor:		50.0%	99.2%	94.9%	71.9%		
Concentration Trend:		Stable	Increasing	Prob. Increasing	Stable		

Annual sampling since 2008 is shown; sampling prior to 2012 had an inconsistent frequency with sampling at different times of the year. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

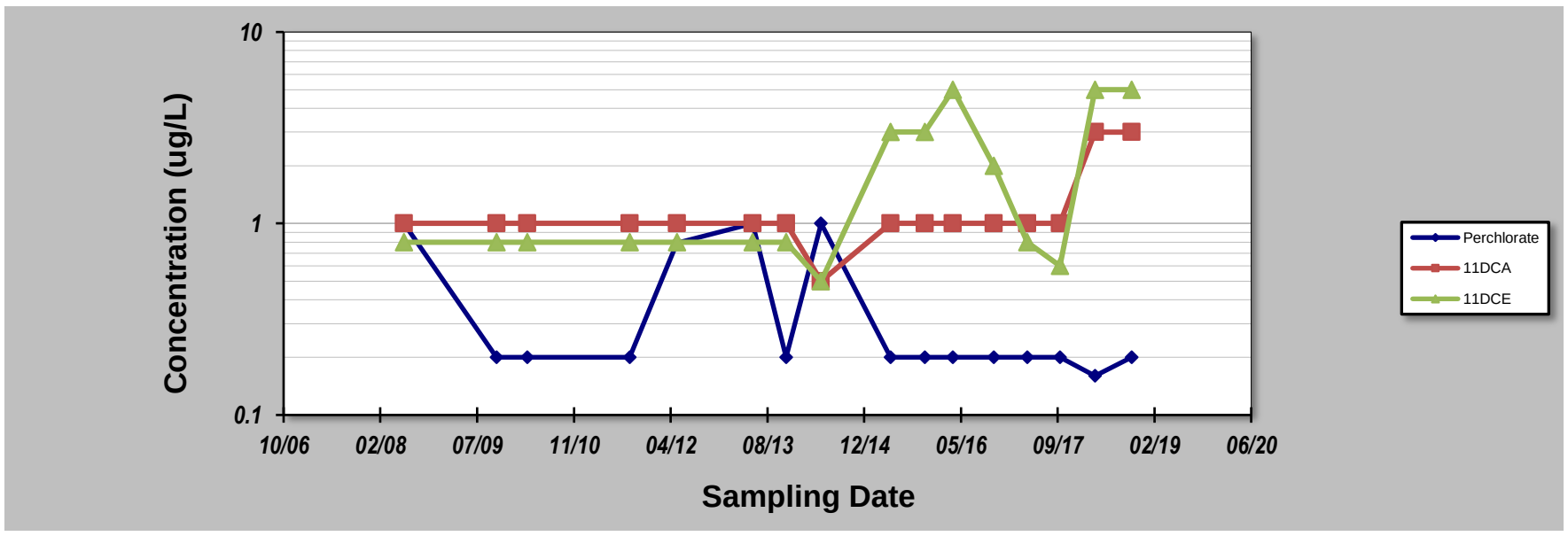
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	DW 200-01
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11DCA	11DCE				
Sampling Event	**Sampling Date**	**DW 200-01 CONCENTRATION (ug/L)**						
1	23-Jun-08	1	1	0.8				
2	14-Oct-09	0.2	1	0.8				
3	23-Mar-10	0.2	1	0.8				
4	2-Sep-11	0.2	1	0.8				
5	3-May-12	*0.79*	1	0.8				
6	29-May-13	1	1	0.8				
7	18-Nov-13	0.2	1	0.8				
8	18-May-14	1	0.5	0.5				
9	13-May-15	0.2	1	3				
10	5-Nov-15	0.2	1	3				
11	30-Mar-16	0.2	1	5				
12	27-Oct-16	0.2	1	2				
13	18-Apr-17	0.2	1	*0.8*				
14	3-Oct-17	0.2	1	*0.6*				
15	3-Apr-18	*0.16*	3	5				
16	9-Oct-18	0.2	3	5				
17								
18								
19								
20								
Coefficient of Variation:		0.88	0.58	0.90				
Mann-Kendall Statistic (S):		-36	27	36				
Confidence Factor:		94.2%	87.7%	94.2%				
Concentration Trend:		Prob. Decreasing	No Trend	Prob. Increasing				

Perchlorate No Trend due to predominant non-detects. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are included in the calculation at the reporting limit.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

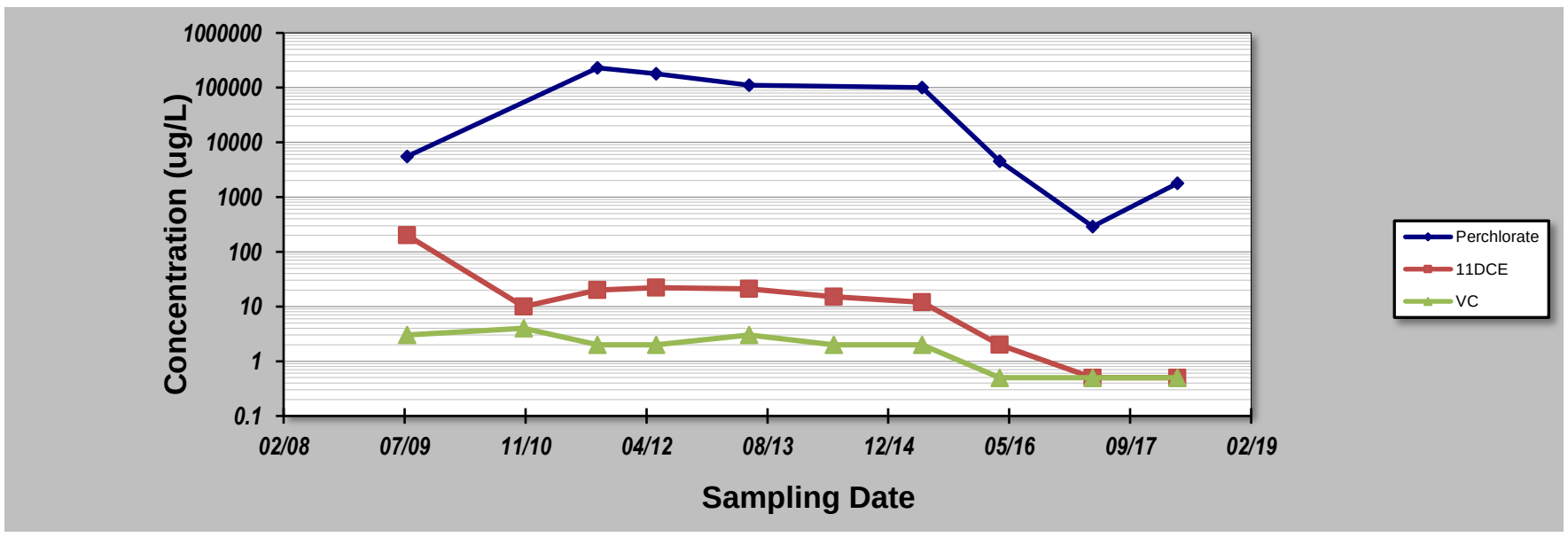
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	IW-6
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	11DCE	VC				
Sampling Event	**Sampling Date**	**IW-6 CONCENTRATION (ug/L)**						
1	16-Jul-09	5500	200	*3*				
2	11-Nov-10		10	*4*				
3	12-Sep-11	230000	20	*2*				
4	11-May-12	180000	22	*2*				
5	30-May-13	110000	21	*3*				
6	15-May-14		15	2				
7	15-May-15	100000	12	2				
8	1-Apr-16	4500	2	0.5				
9	20-Apr-17	290	0.5	0.5				
10	5-Apr-18	1800	0.5	0.5				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.15	1.99	0.61				
Mann-Kendall Statistic (S):		-18	-30	-29				
Confidence Factor:		98.4%	99.7%	99.5%				
Concentration Trend:		Decreasing	Decreasing	Decreasing				

Annual sampling since 2009 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light gray cell color; they are included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

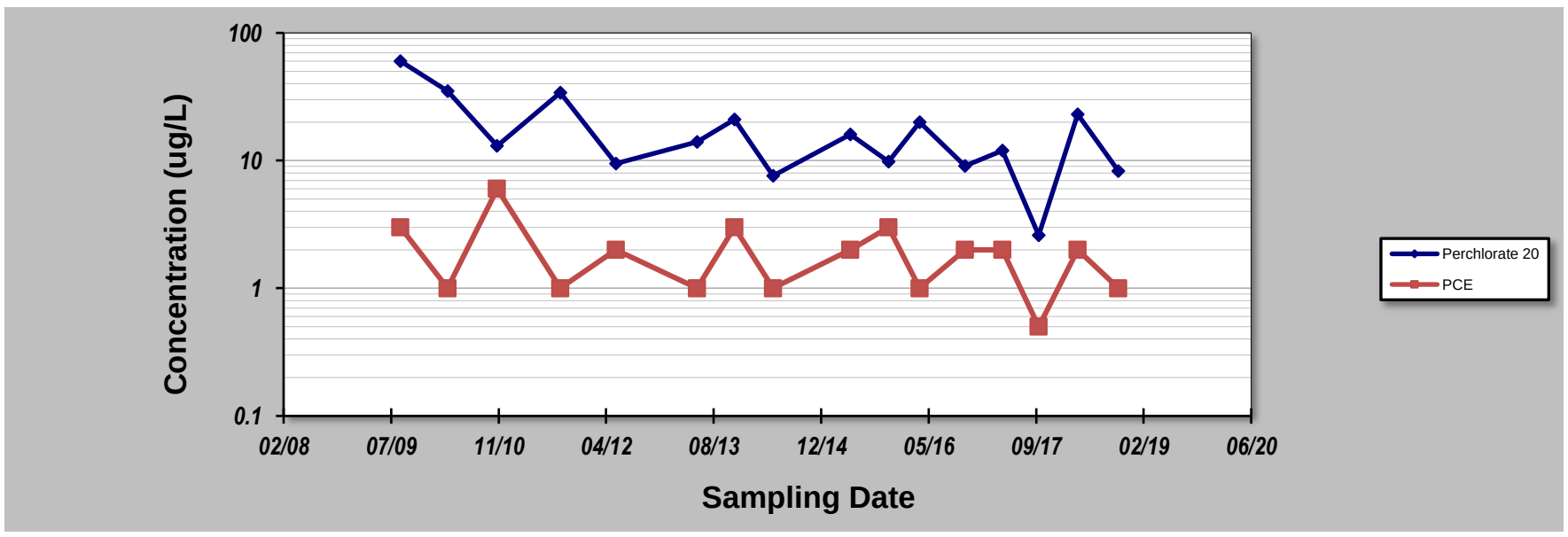
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	STR 04 (surface water)
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE					
Sampling Event	**Sampling Date**	**STR 04 (SURFACE WATER) CONCENTRATION (ug/L)**						
1	19-Aug-09	60	*3*					
2	26-Mar-10	35	*1*					
3	11-Nov-10	13	6					
4	1-Sep-11	34	*1*					
5	17-May-12	9.5	*2*					
6	29-May-13	14	*1*					
7	19-Nov-13	21	*3*					
8	17-May-14	7.6	1					
9	12-May-15	16	2					
10	5-Nov-15	9.8	3					
11	29-Mar-16	20	1					
12	26-Oct-16	9.1	2					
13	18-Apr-17	12	2					
14	3-Oct-17	2.6	0.5					
15	3-Apr-18	23	2					
16	9-Oct-18	8.3	1					
17								
18								
19								
20								
Coefficient of Variation:		0.78	0.68					
Mann-Kendall Statistic (S):		-48	-22					
Confidence Factor:		98.4%	82.5%					
Concentration Trend:		Decreasing	Stable					

Sampling since 2009 is shown. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

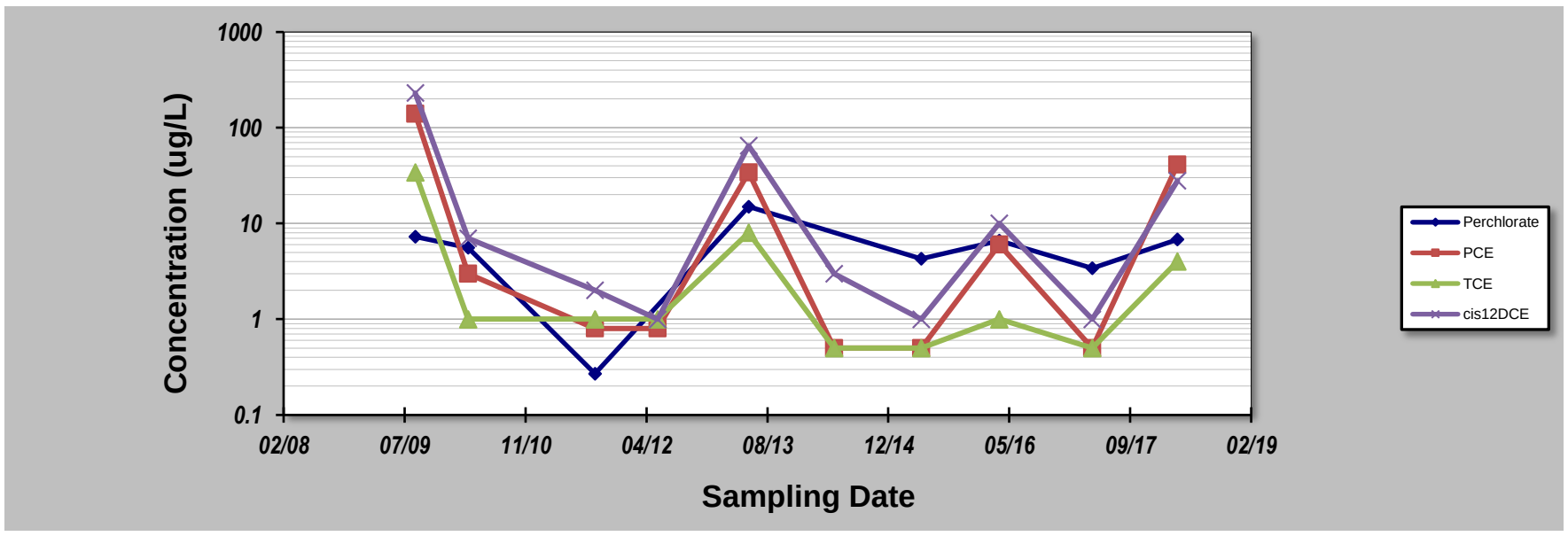
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	STR 40-15 (surface water)
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:		Perchlorate	PCE	TCE	cis12DCE			
Sampling Event	Sampling Date	STR 40-15 (SURFACE WATER) CONCENTRATION (ug/L)						
1	19-Aug-09	7.3	140	34	230			
2	26-Mar-10	5.6	*3*	1	7			
3	1-Sep-11	*0.27*	0.8	1	*2*			
4	17-May-12		0.8	1	*1*			
5	29-May-13	15	34	8	65			
6	17-May-14		0.5	0.5	3			
7	12-May-15	4.3	0.5	0.5	1			
8	29-Mar-16	6.6	6	1	10			
9	18-Apr-17	3.4	0.5	0.5	1			
10	5-Apr-18	6.8	41	4	28			
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.69	1.93	2.02	2.05			
Mann-Kendall Statistic (S):		-2	-9	-12	-8			
Confidence Factor:		54.8%	75.8%	83.2%	72.9%			
Concentration Trend:		Stable	No Trend	No Trend	No Trend			

Sampling since 2009 is shown. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

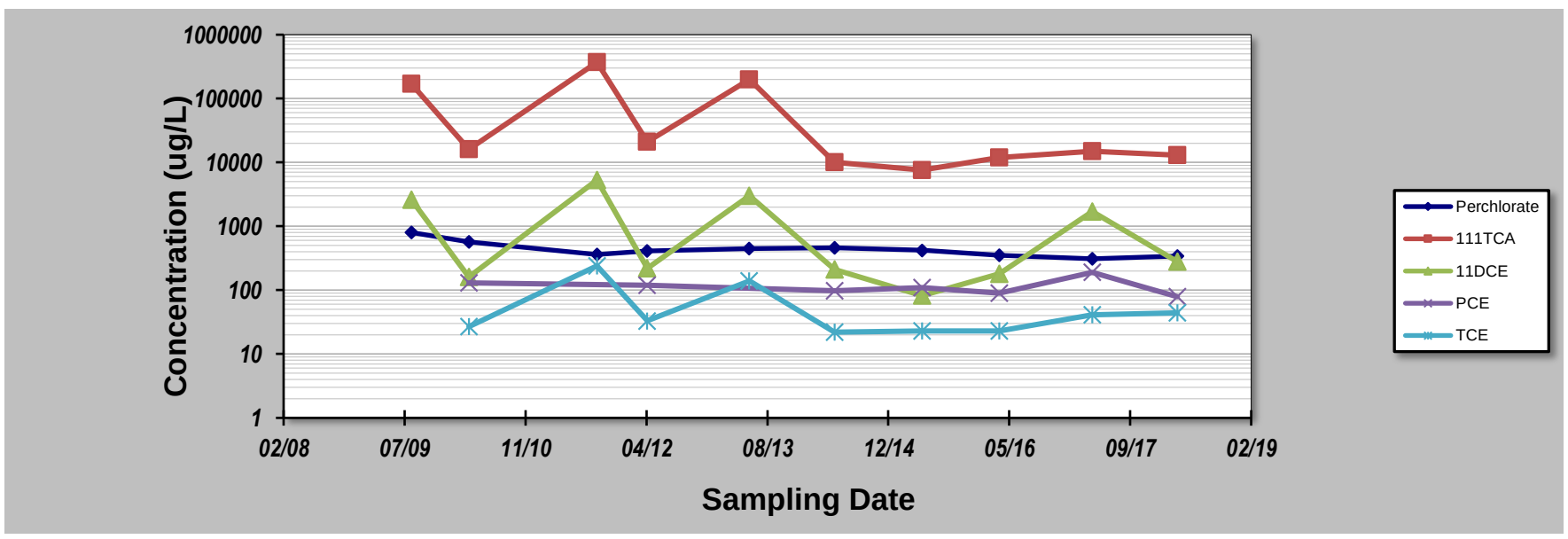
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW 5-04
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	111TCA	11DCE	PCE	TCE		
Sampling Event	**Sampling Date**	**SW 5-04 CONCENTRATION (ug/L)**					
1	3-Aug-09	800	170000	2600			
2	29-Mar-10	570	16000	160	130	*27*	
3	9-Sep-11	360	370000	5300		*240*	
4	4-Apr-12	410	21000	220	120	33	
5	31-May-13	450	200000	3000		*140*	
6	19-May-14	460	10000	210	98	22	
7	15-May-15	420	7600	82	110	23	
8	30-Mar-16	350	12000	180	90	23	
9	18-Apr-17	310	15000	1700	190	41	
10	4-Apr-18	340	13000	280	79	44	
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.32	1.48	1.29	0.31	1.14	
Mann-Kendall Statistic (S):		-27	-17	-7	-9	-1	
Confidence Factor:		99.2%	92.2%	70.0%	88.1%	50.0%	
Concentration Trend:		Decreasing	Prob. Decreasing	No Trend	Stable	No Trend	

Annual sampling since 2009 is shown; sampling prior to 2009 had an inconsistent frequency (with no samples in 2007-2008). To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. The 2009 sample Perchlorate and VOC samples were collected on different days in August.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

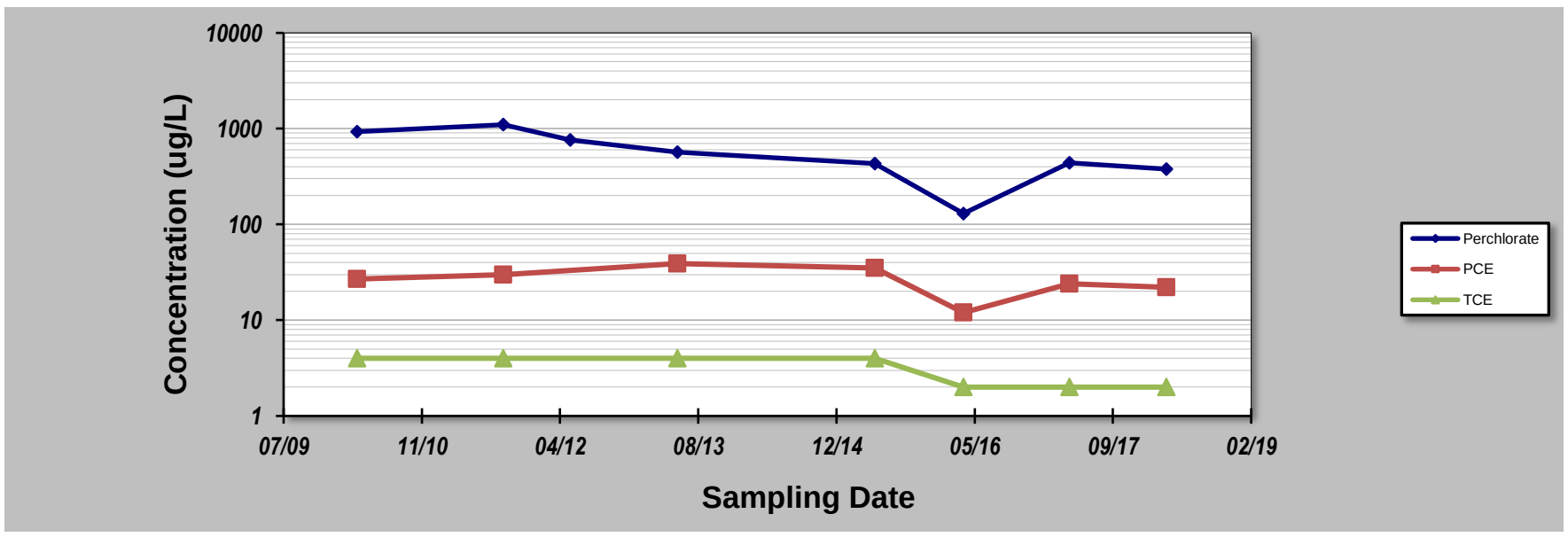
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	SW 28-41
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE				
Sampling Event	**Sampling Date**	**SW 28-41 CONCENTRATION (ug/L)**						
1	29-Mar-10	930	27	*4*				
2	9-Sep-11	1100	30	*4*				
3	8-May-12	760						
4	30-May-13	570	39	*4*				
5	14-May-15	430	35	4				
6	30-Mar-16	130	12	2				
7	18-Apr-17	440	24	2				
8	3-Apr-18	380	22	2				
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.54	0.33	0.34				
Mann-Kendall Statistic (S):		-20	-7	-12				
Confidence Factor:		99.3%	80.9%	94.9%				
Concentration Trend:		Decreasing	Stable	Prob. Decreasing				

Annual sampling since 2010 is shown; although results from 2005 to 2010 indicate a probable increaing trend for Perchlorate and PCE, when plotted since 2010, these is a decreasing or stable trend. To simplify the data set, only samples collected in May were utilized. "j" or "J" flagged results are shown in italics with gray cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

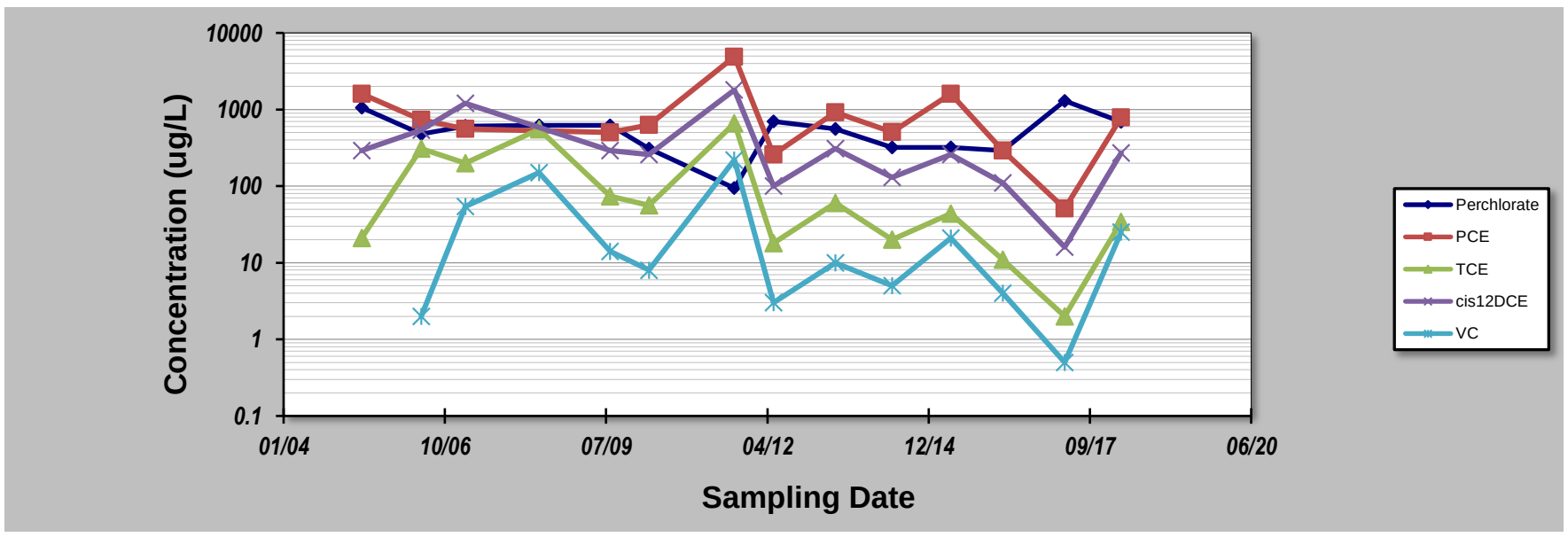
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW 40-07A
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE	cis12DCE	VC		
Sampling Event	**Sampling Date**	**SW 40-07A CONCENTRATION (ug/L)**					
1	12-May-05	1060	1600	21	290		
2	16-May-06	480	730	310	540	*2*	
3	14-Feb-07	610	560	200	1200	54	
4	16-May-08	620		*550*		*150*	
5	31-Jul-09	620	500	74	290	14	
6	29-Mar-10	310	630	56	260	8	
7	9-Sep-11	94	4900	660	1800	220	
8	9-May-12	700	260	18	100	*3*	
9	28-May-13	560	920	60	310	10	
10	14-May-14	320	510	20	130	5	
11	13-May-15	320	1600	44	260	21	
12	30-Mar-16	290	290	11	110	4	
13	18-Apr-17	1300	51	2	16	0.5	
14	3-Apr-18	690	790	34	270	25	
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.56	1.22	1.44	1.18	1.70	
Mann-Kendall Statistic (S):		-7	-17	-41	-32	-12	
Confidence Factor:		62.6%	83.2%	98.7%	97.1%	74.5%	
Concentration Trend:		Stable	No Trend	Decreasing	Decreasing	No Trend	

Annual sampling since 2005 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

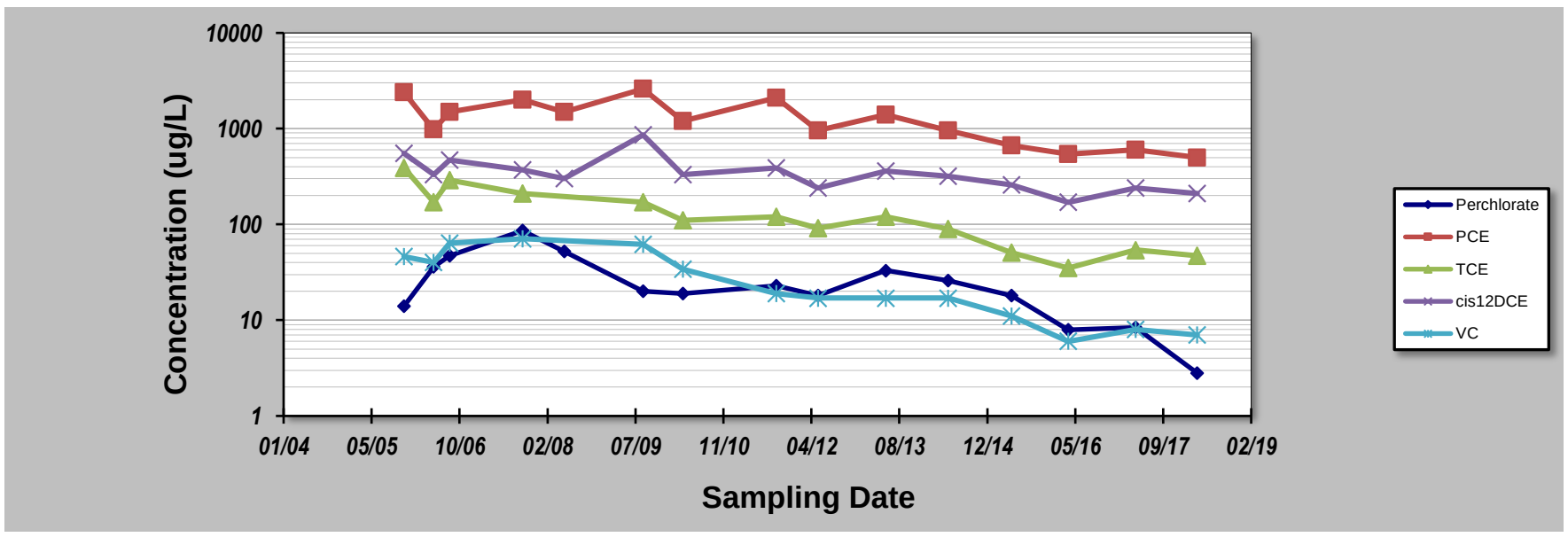
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW 40-57
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE	cis12DCE	VC		
Sampling Event	**Sampling Date**	**SW 40-57 CONCENTRATION (ug/L)**					
1	28-Nov-05	14	2400	390	550	46	
2	16-May-06	36	980	170	330	40	
3	15-Aug-06	47	1500	290	470	64	
4	3-Oct-07	86	2000	210	370	71	
5	27-May-08	*52*	*1500*		*300*		
6	18-Aug-09	20	2600	170	860	62	
7	1-Apr-10	*19*	1200	110	330	34	
8	14-Sep-11	23	2100	120	390	*19*	
9	8-May-12	*18*	960	91	240	17	
10	29-May-13	*33*	1400	120	360	17	
11	18-May-14	26	960	90	320	17	
12	13-May-15	18	670	51	260	11	
13	31-Mar-16	7.9	540	35	170	6	
14	19-Apr-17	8.4	600	54	240	8	
15	3-Apr-18	2.8	500	47	210	7	
16							
17							
18							
19							
20							
Coefficient of Variation:		0.78	0.52	0.73	0.47	0.76	
Mann-Kendall Statistic (S):		-50	-65	-73	-61	-70	
Confidence Factor:		99.3%	100.0%	>99.9%	99.9%	>99.9%	
Concentration Trend:		Decreasing	Decreasing	Decreasing	Decreasing	Decreasing	

Annual sampling since 2005 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results from 2008 are highlighted with a light blue cell color; they are not included in the calculation due to elevated detection limits.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

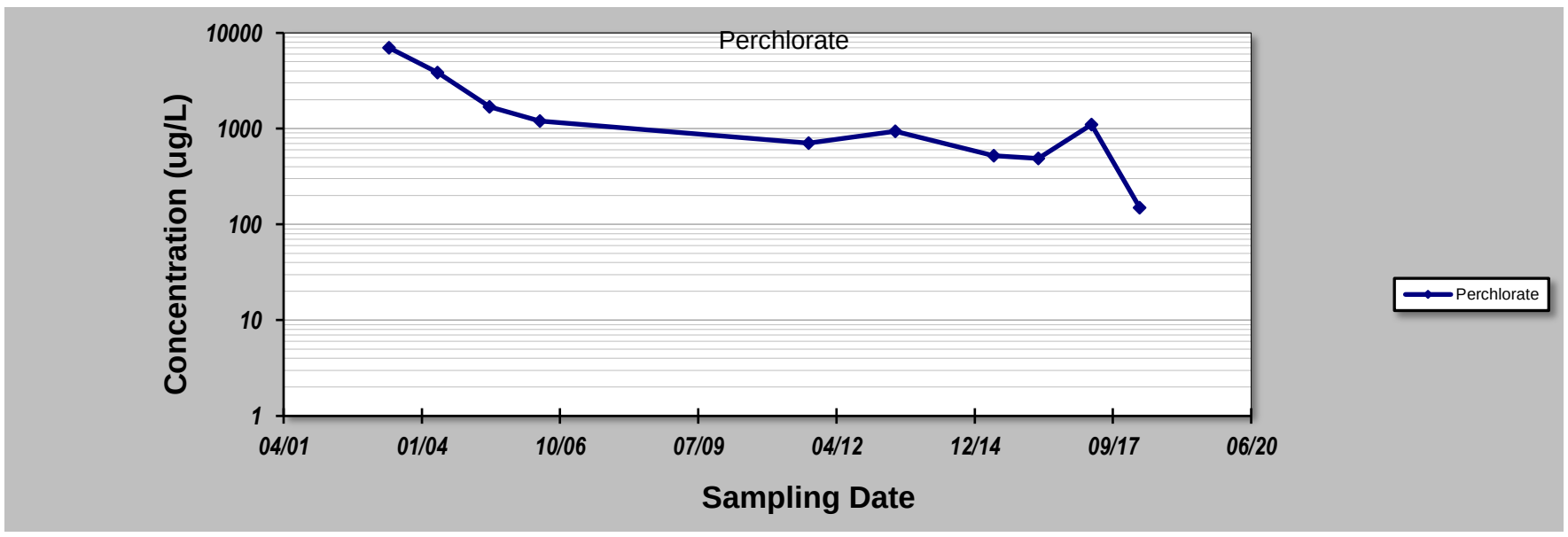
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW 42-02
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**SW 42-02 CONCENTRATION (ug/L)**						
1	20-May-03	7010						
2	7-May-04	3850						
3	18-May-05	1690						
4	17-May-06	1200						
5	13-Sep-11	710						
6	31-May-13	940						
7	13-May-15	520						
8	1-Apr-16	490						
9	19-Apr-17	1100						
10	3-Apr-18	150						
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.20						
Mann-Kendall Statistic (S):		-35						
Confidence Factor:		100.0%						
Concentration Trend:		Decreasing						

Annual and Biennial sampling since 2003 is shown. Although there is a gap of non-sampled years from 2007-2010, the pre-2011 data was included so that there would be sufficient data points for the calculation. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

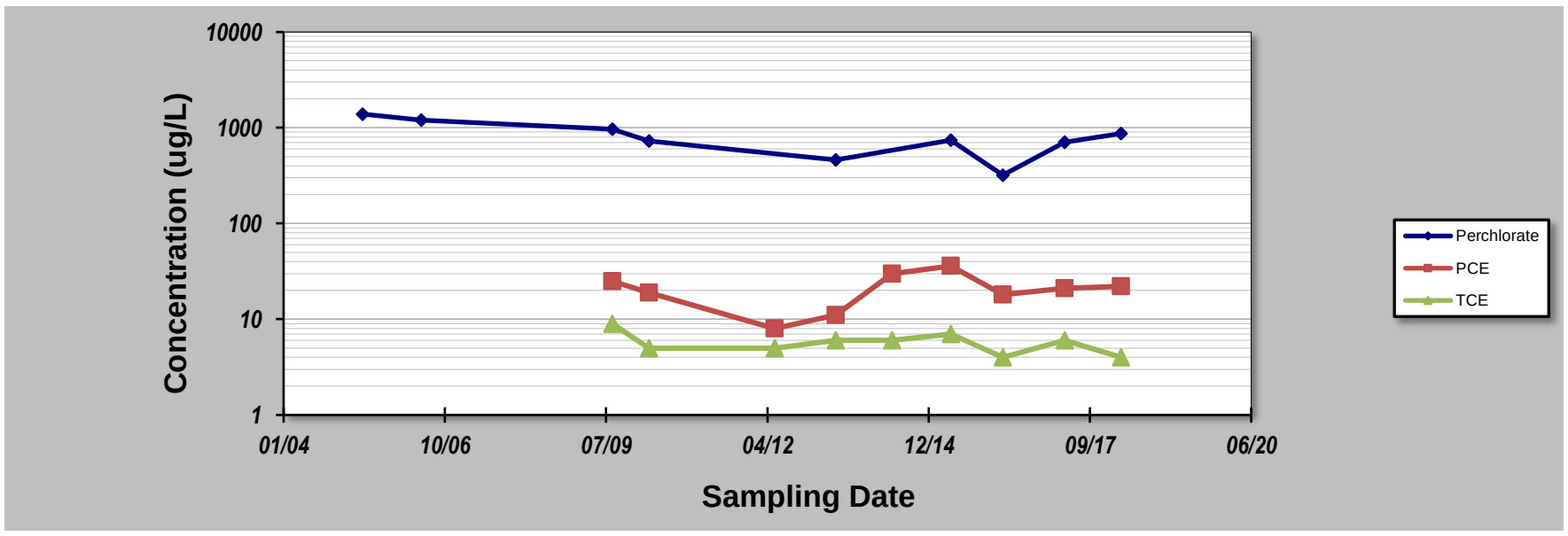
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW 47-02
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE				
Sampling Event	**Sampling Date**	**SW 47-02 CONCENTRATION (ug/L)**						
1	18-May-05	1390						
2	17-May-06	1200						
3	13-Aug-09	970	25	9				
4	29-Mar-10	730	19	5				
5	15-Sep-11							
6	16-May-12		8	*5*				
7	31-May-13	460	11	6				
8	14-May-14		30	6				
9	14-May-15	740	36	7				
10	30-Mar-16	320	18	4				
11	18-Apr-17	710	21	6				
12	3-Apr-18	870	22	4				
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.41	0.41	0.27				
Mann-Kendall Statistic (S):		-18	6	-9				
Confidence Factor:		96.2%	69.4%	79.2%				
Concentration Trend:		Decreasing	No Trend	Stable				

Annual sampling since 2005 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are not included in the calculation. The 9/15/2011 results were eliminated from the data set due to irregular low results of Perchlorate (43), PCE (2J) and TCE (non-



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

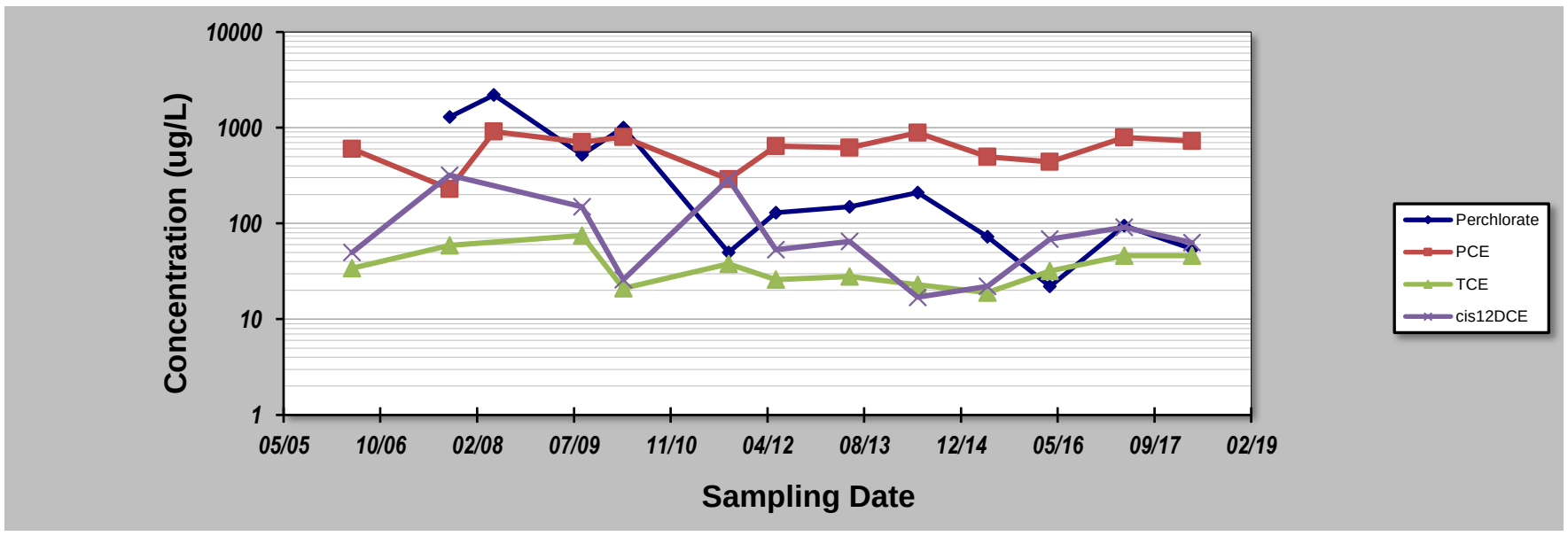
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW 74-07
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate	PCE	TCE	cis12DCE			
Sampling Event	**Sampling Date**	**SW 74-07 CONCENTRATION (ug/L)**					
1	17-May-06		600	34	50		
2	3-Oct-07	1300	230	59	320		
3	19-May-08	2200	*910*				
4	17-Aug-09	520	710	75	150		
5	18-Mar-10	1000	800	21	26		
6	14-Sep-11	50	290	38	290		
7	14-May-12	130	640	26	53		
8	31-May-13	*150*	620	28	65		
9	18-May-14	210	890	23	17		
10	14-May-15	73	500	19	22		
11	31-Mar-16	22	440	32	69		
12	19-Apr-17	95	790	46	91		
13	4-Apr-18	54	730	46	63		
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		1.41	0.34	0.45	1.00		
Mann-Kendall Statistic (S):		-38	4	-5	-8		
Confidence Factor:		99.6%	57.1%	60.6%	68.1%		
Concentration Trend:		Decreasing	No Trend	Stable	No Trend		

Annual sampling since 2006 is shown. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen. "j" or "J" flagged results are shown in italics with gray cell color. The 2008 non-detect results are highlighted with a light blue cell color; they had elevated detection limits and are not included in the calculation.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

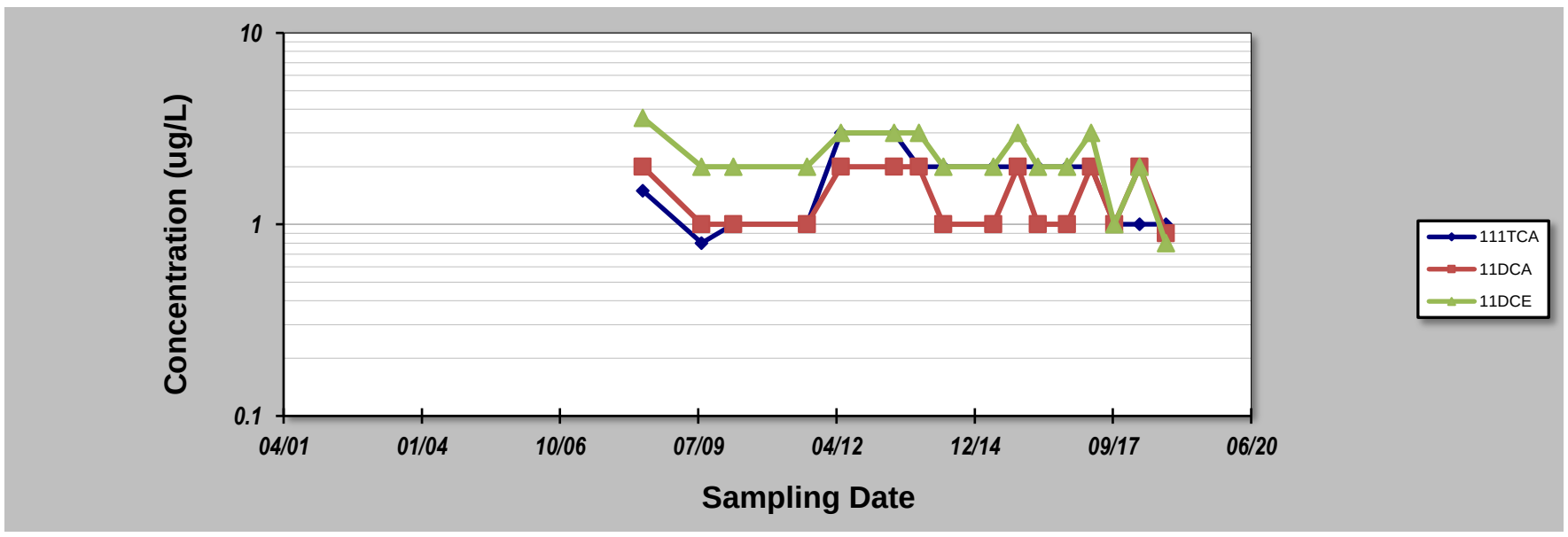
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	206707
Facility Name:	ARC Gainesville	Constituent:	SW 200-02
Conducted By:	GSK	Concentration Units:	ug/L

Sampling Point ID:		111TCA	11DCA	11DCE				
Sampling Event	Sampling Date	SW 200-02 CONCENTRATION (ug/L)						
1	5-Nov-02							
2	23-May-03							
3	31-May-08	1.5	2	3.6				
4	30-Jul-09	0.8	1	2				
5	16-Mar-10	1	1	2				
6	1-Sep-11	1	1	2				
7	2-May-12	3	2	3				
8	22-May-13	3	2	3				
9	19-Nov-13	2	2	3				
10	13-May-14	2	1	2				
11	12-May-15	2	1	2				
12	5-Nov-15	2	2	3				
13	29-Mar-16	2	1	2				
14	26-Oct-16	2	1	2				
15	17-Apr-17	2	2	3				
16	3-Oct-17	1	1	1				
17	3-Apr-18	1	2	2				
18	9-Oct-18	1	*0.9*	*0.8*				
19								
20								
Coefficient of Variation:		0.41	0.36	0.34				
Mann-Kendall Statistic (S):		-6	-13	-38				
Confidence Factor:		58.8%	70.3%	95.2%				
Concentration Trend:		Stable	Stable	Decreasing				

This is considered a sentinal well and results are below standards. Analysis starts with 2008 when consistent at least annual sampling started. Currently semi-annual sampling. Estimated "j" flagged data shown as italics and gray cell color.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

GSI Environmental Inc., www.gsi-net.com

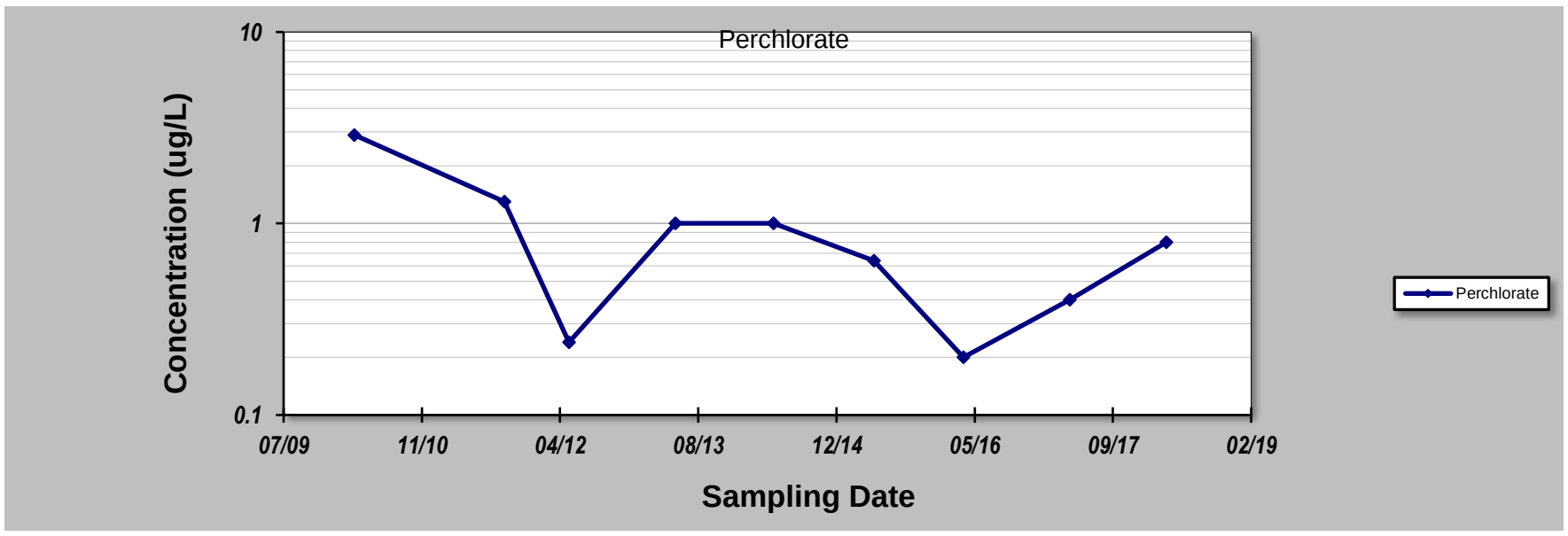
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	206707
Facility Name:	ARC Gainesville	Constituent:	SW 212-01
Conducted By:	GSK	Concentration Units:	ug/L

Sampling Point ID: Perchlorate

Sampling Event	Sampling Date	SW 212-01 CONCENTRATION (ug/L)						
1	19-Mar-10	2.9						
2	13-Sep-11	1.3						
3	3-May-12	*0.24*						
4	23-May-13	1						
5	13-May-14	1						
6	12-May-15	*0.64*						
7	30-Mar-16	0.2						
8	18-Apr-17	*0.4*						
9	3-Apr-18	*0.8*						
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.87						
Mann-Kendall Statistic (S):		-17						
Confidence Factor:		95.1%						
Concentration Trend:		Decreasing						

To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. 2003 samples (both non-detect of 4) removed due to elevated detection limits and prior to remedy initiation. "j" or "J" flagged results are shown in italics with gray cell color. Non-detect results are highlighted with a light blue cell color; they are included in the calculation at the reporting limit.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

GSI Environmental Inc., www.gsi-net.com

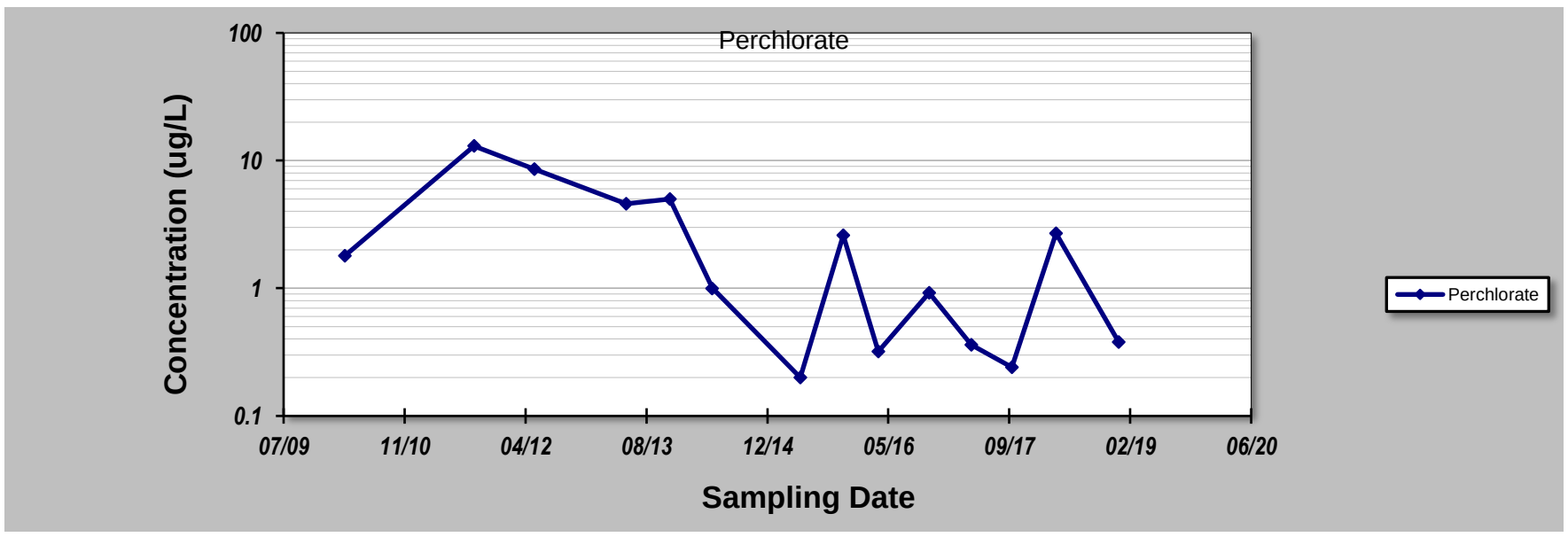
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	206707
Facility Name:	ARC Gainesville	Constituent:	SW 222-01
Conducted By:	GSK	Concentration Units:	ug/L

Sampling Point ID: Perchlorate

Sampling Event	Sampling Date	SW 222-01 CONCENTRATION (ug/L)						
1	16-Mar-10	1.8						
2	1-Sep-11	13						
3	7-May-12	8.6						
4	22-May-13	4.6						
5	19-Nov-13	5						
6	13-May-14	1						
7	12-May-15	0.2						
8	6-Nov-15	2.6						
9	29-Mar-16	0.32						
10	26-Oct-16	0.92						
11	18-Apr-17	0.36						
12	3-Oct-17	0.24						
13	3-Apr-18	2.7						
14	18-Dec-18	0.38						
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		1.26						
Mann-Kendall Statistic (S):		-39						
Confidence Factor:		98.2%						
Concentration Trend:		Decreasing						

Results since 2009. Blue highlight are non-detect "U". Gray highlight are "j" or "J" value.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

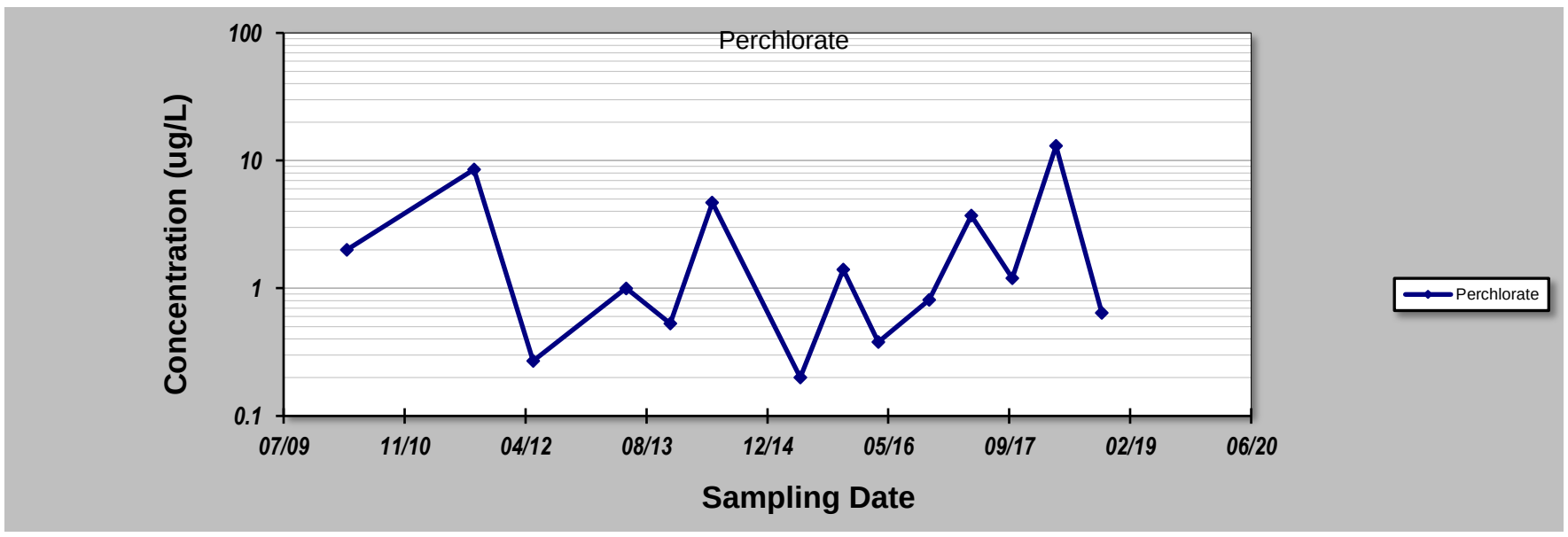
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	206707
Facility Name:	ARC Gainesville	Constituent:	SW SB-03
Conducted By:	GSK	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**SW SB-03 CONCENTRATION (ug/L)**					
1	24-Mar-10	2					
2	1-Sep-11	8.5					
3	3-May-12	*0.27*					
4	22-May-13	1					
5	20-Nov-13	*0.53*					
6	13-May-14	4.7					
7	12-May-15	0.2					
8	6-Nov-15	1.4					
9	30-Mar-16	*0.38*					
10	26-Oct-16	*0.81*					
11	18-Apr-17	3.7					
12	3-Oct-17	1.2					
13	3-Apr-18	13					
14	9-Oct-18	*0.64*					
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		1.37					
Mann-Kendall Statistic (S):		3					
Confidence Factor:		54.3%					
Concentration Trend:		No Trend					

Results since 2009. Blue highlight are non-detect "U". Gray highlight and italics are "j" or "J" value. Based on charts this is stable.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

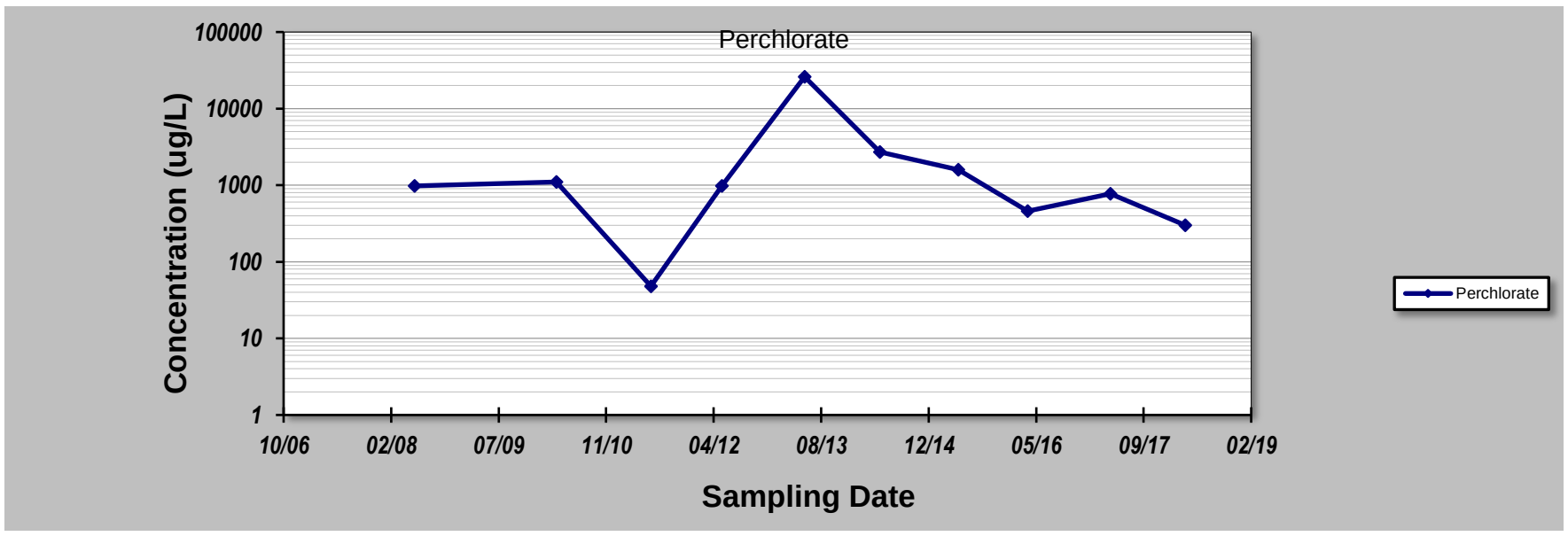
GSI Environmental Inc., www.gsi-net.com

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	229931
Facility Name:	ARC Gainesville	Constituent:	SW TTU-03
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID:	Perchlorate						
Sampling Event	**Sampling Date**	**SW TTU-03 CONCENTRATION (ug/L)**						
1	11-Jun-08	980						
2	31-Mar-10	1100						
3	15-Jun-11	48						
4	10-May-12	980						
5	29-May-13	26000						
6	15-May-14	2700						
7	14-May-15	1600						
8	1-Apr-16	460						
9	20-Apr-17	770						
10	4-Apr-18	300						
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		2.27						
Mann-Kendall Statistic (S):		-8						
Confidence Factor:		72.9%						
Concentration Trend:		No Trend						

Annual sampling since 2008 is shown. There was no 2009 sample and semi-annual samples from 2010-2014 are excluded. To simplify the data set, only samples collected in May were utilized. For years without a May sample, the closest sample by date in that year was chosen. For multiple May samples, the sample closest to May 15 was chosen.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

GSI Environmental Inc., www.gsi-net.com

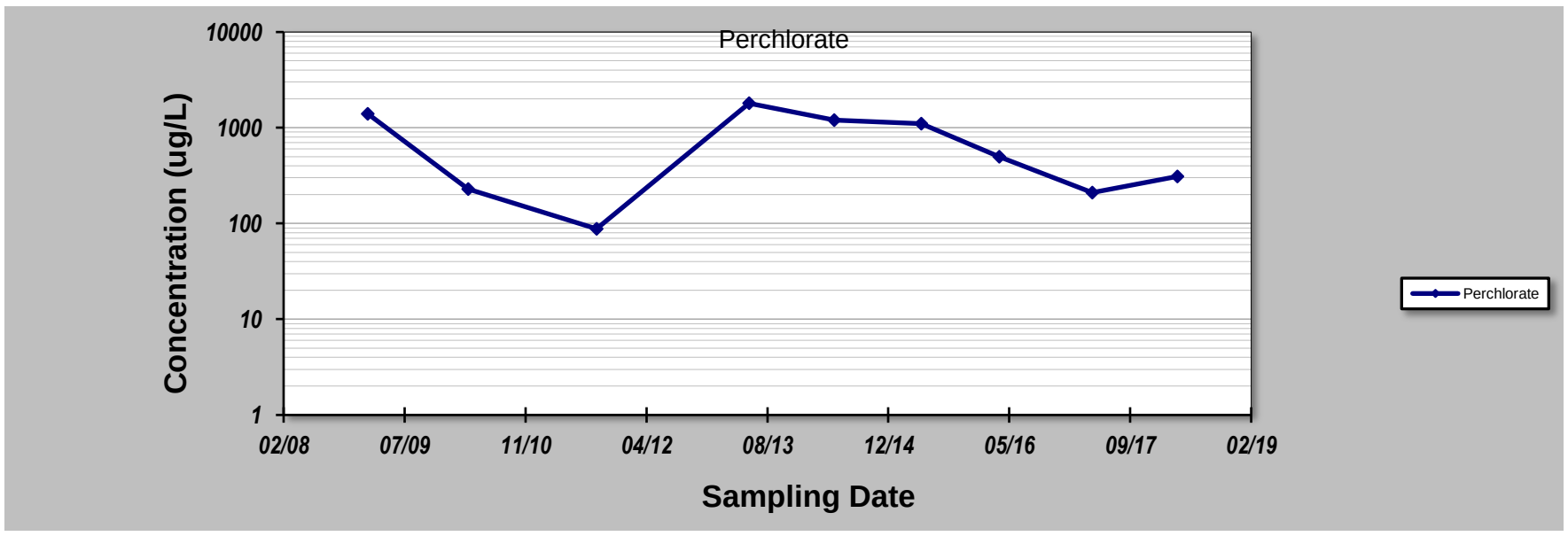
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	8-Feb-19	Job ID:	ARC Gainesville
Facility Name:	ARC Gainesville	Constituent:	West 01 (surface water)
Conducted By:	TRC	Concentration Units:	ug/L

Sampling Point ID: Perchlorate

Sampling Event	Sampling Date	WEST 01 (SURFACE WATER) CONCENTRATION (ug/L)						
1	4-Feb-09	1400						
2	26-Mar-10	230						
3	8-Sep-11	88						
4	30-May-13	1800						
5	18-May-14	1200						
6	12-May-15	1100						
7	29-Mar-16	500						
8	18-Apr-17	210						
9	4-Apr-18	310						
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.82						
Mann-Kendall Statistic (S):		-10						
Confidence Factor:		82.1%						
Concentration Trend:		Stable						

Sampling since 2009 is shown.



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

DISCLAIMER: *The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.*

GSI Environmental Inc., www.gsi-net.com