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ARCADIS Design & Consultancy for natural and built assets

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Mr. Tim Hornosky
State Remediation Section
SC Department of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201-1708

Arcadis U.S., Inc.
1450 Greene Street
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Subject:
Second Semiannual 2017 Groundwater Report
Brenntag Southeast, Charleston, South Carolina

ENVIRONMENT

Date:
16 April 2018

Contact:
Edward Hirshenson

Phone
706.828.4421

Email
Edward.hirshenson@arcadis.com

Our ref
SC000204.0017

Dear Tim Hornosky:

Brenntag Southeast, Inc. has authorized ARCADIS U.S., Inc. to forward the enclosed two copies of the Second Semiannual 2017 Groundwater Report, and an electronic pdf, for the Brenntag Southeast facility in Charleston, South Carolina.

Please call me at (706) 828-4421 if you have any questions.

Sincerely,

Arcadis U.S., Inc.

Edward Hirshenson

Senior Scientist

Copies

Mr. Bill Krecker/SCDHEC Water Pollution Enforcement (without report)
Mr. Shawn Wiram/North America/Brenntag (with report)

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ARCADIS Design & Consultancy for natural and built assets

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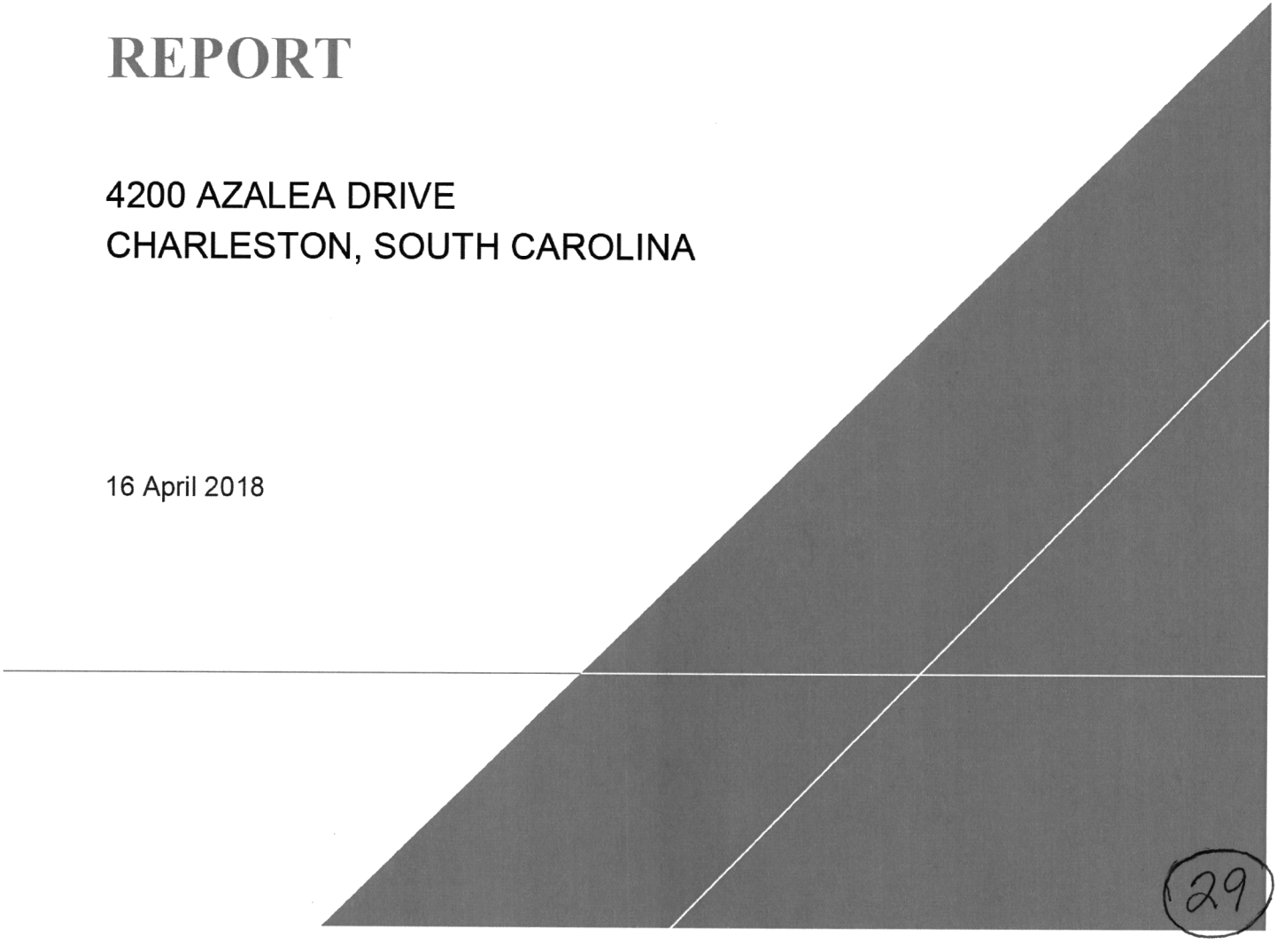
BRENNTAG SOUTHEAST, INC.

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

4200 AZALEA DRIVE
CHARLESTON, SOUTH CAROLINA

16 April 2018



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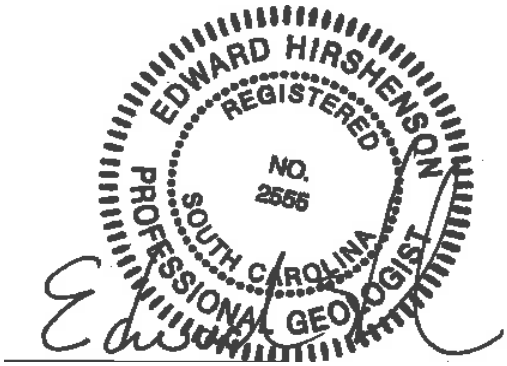
SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

Brenntag Southeast, Inc.
4200 Azalea Drive
Charleston, South Carolina

Prepared for:

Brenntag Southeast



Edward Hirshenson, P.G. #2555

Senior Scientist

Prepared by:

Arcadis U.S., Inc.
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Our Ref.:

SC000204.0017

Date:

16 April 2018

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INTRODUCTION

ARCADIS was retained by Brenntag Southeast, Inc. (Brenntag Southeast) to conduct the second semiannual 2017 sampling event for the Brenntag Southeast facility in Charleston, South Carolina. Brenntag Southeast monitors groundwater and surface water quality at the facility on a semiannual basis in accordance with a consent agreement with the South Carolina Department of Health and Environmental Control (SCDHEC). The current network of monitoring wells for the Brenntag Southeast facility includes MW-1, MW-2R, MW-5, MW-6, MW-7, MW-8, MW-13, MW-14, and MW-15 were installed to monitor groundwater impacts, from chlorinated solvents and a mixture of petroleum and solvents, in two areas, respectively; Area #1, located at the Former Solvent Storage Area and Area #2, located at the Former Above Ground Storage Tank Area, as shown on Figure 1. Monitor well MW-6 and all three surface water (SW-1, SW-2, and SW-3) locations were resampled on January 19,2018.

Bird Company monitor wells (MW-4, MW-9, MW-10, MW-11, and MW-12), located on the adjacent Bird Company property and shown on Figure 1, are not included in the monitoring program. Groundwater quality from those wells is reported to SCDHEC under a separate consent agreement with the Bird Company.

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING FIELD ACTIVITIES

SECOND SEMIANNUAL 2017 RESULTS

ARCADIS sampled Brenntag Southeast monitoring wells MW-1, MW-2R, MW-5, MW-6, MW-7, MW-8, MW-13, MW-14, MW-15, and surface water locations SW-1, SW-2, and SW-3 at the Brenntag Southeast facility on December 26 and 28, 2017 (the second semiannual 2017 sampling event). Monitor well MW-6 and all three surface water locations were resampled on January 19, 2018. Groundwater sampling was completed in accordance with standard ARCADIS sampling protocol. Sampling began by measuring the groundwater elevation of each well. Monitoring wells were purged of three well volumes while water quality indicators (pH, temperature, and conductivity) were measured to verify that representative groundwater samples were collected. Groundwater and surface water sampling locations from the second semiannual 2017 sampling event are shown on Figure 1 and listed on Table 1.

Second semiannual 2017 groundwater elevations are summarized in Table 2. Hydrographs, illustrating water level fluctuations at the monitoring wells, are included as Appendix A. Groundwater elevation data from the sampling event were used to construct a potentiometric map provided as Figure 2. The direction of groundwater flow at the facility is west towards Brickyard Creek. The Cooper Marl underlies the shallow aquifer system and is an effective regional confining unit inhibiting the deeper migration of groundwater.

Field measurements of pH and conductivity are listed in Table 3. The second semiannual 2017 field measurements are consistent with previously reported water quality measurements. It should be noted, pH for monitor well MW-6 in the last three sampling events (December 2016, June 2017, and December

2017) have been reported at 6.4, 7.5, and 7.5 respectively. Historical pH measurements for MW-6 have recorded high pH. Field sampling forms from the second semiannual 2017 sampling event are included as Appendix B.

Accutest Laboratories in Orlando, Florida (SCDHEC certification # 96038001) analyzed the second semiannual 2017 groundwater samples using EPA method SW-846 8260B. Analytical results are summarized in Table 4. The laboratory report is included as Appendix C.

Groundwater Flow

Water-level measurements were collected from all monitoring wells in December 2017, prior to groundwater sampling and are presented in Table 2. A potentiometric map is included as Figure 2. Water-level data indicate that the general direction of groundwater flow is west toward Brickyard Creek with an average velocity of 1.83 feet/day (667 feet/year). Groundwater velocity was calculated by determining the hydraulic gradient between upgradient well (MW-8) and downgradient well (MW-6). Hydraulic conductivities were calculated from rising head tests performed by General Engineering Labs in 1991 from monitoring wells MW-1, MW-2, MW-3 and MW-4 with an average hydraulic conductivity of 5.4 x 10-3 cm/sec (1.77 x 10-4 ft/sec or 15.29 ft/day). An effective porosity of 20% was assumed for the site. Groundwater flow was calculated from MW-8 (8.81) and MW-6 (4.49) with a distance of approximately 180 feet. The hydraulic gradient is calculated to be 0.024 ft/ft.

Water elevation at MW-13 was recorded at 1.50 feet mean sea level (ft msl) and MW-15 was recorded at 3.55 ft msl. It appears that groundwater, in the vicinity of MW-15, located west of Brickyard Creek, discharges to the creek, flowing in an east-southeast direction. Groundwater flow at the facility is flowing to the west.

Groundwater Quality Results

Second semiannual 2017 analyses are summarized in Table 4, with previous groundwater analyses. The "J" qualifier reported at other monitoring wells indicates that the result was between the Reporting Limit and Method Detection Limit and is, therefore, an estimated value. Hydrocarbon constituents and less commonly detected organic compounds at the Brenntag Southeast facility are listed as "others". Definitions of the organic compound abbreviations are listed at the end of the table.

The distribution of dissolved individual volatile organic compounds (VOCs) in groundwater, including trichloroethene (TCE), cis-1, 2-dichloroethene (cis-1,2-DCE), vinyl chloride, and chlorobenzene, as well as total VOCs, are included as Figures 3 through 7, respectively. Graphs of individual VOC trends are included as Appendix D. Surface water analyses are summarized in Table 5.

Area #1

The Area #1 release is an area of groundwater impacted with chlorinated solvents downgradient of the Former Solvent Storage Area (see Figure 1). Monitor Wells, MW-7 and MW-13, were installed downgradient of Area #1 to monitor impacts to groundwater from the release of chlorinated solvents. Dissolved VOCs in groundwater downgradient of the source at Area #1 have shown an overall decreasing trend since discontinuation of the air sparging/soil vapor extraction (AS/SVE) system on

September 20, 2001, but have increased from June 2007 to October 2010. A slight increase in VOC concentrations is shown for the second semiannual 2017 sampling event in wells MW-7 and MW-13. The increase is consistent with historic VOC fluctuations. Graphs showing VOC concentrations in wells MW-7 and MW-13 are shown as Figures 8 and 9, respectively.

Second semiannual 2017 groundwater analyses from monitoring well MW-7 detected TCE (7.51 mg/L), cis-1,2- DCE (55.1 mg/L), 1,1-DCA (0.359 J mg/L), 1,1-DCE (0.382 J mg/L), trans-1,2-DCE (0.150 J mg/L), chlorobenzene (0.120 J mg/L), and vinyl chloride (2.68 mg/L). The second semiannual 2017 analyses are slightly higher compared to previous VOC analyses at this well (Table 4). The relative dominance of cis-1,2-DCE and vinyl chloride in groundwater suggests that natural anaerobic biodegradation is occurring in this area.

Second semiannual groundwater analyses from monitoring well MW-13 detected TCE (0.828 mg/L), cis-1,2-DCE (26.60 mg/L), 1,1-DCA (0.145 mg/L), 1,1-DCE (0.140 mg/L), trans-1,2-DCE (0.088 mg/L), chlorobenzene (0.032 mg/L), 1,2-dichlorobenzene (0.004 mg/L), 1,4-dichlorobenzene (0.00075 J mg/L), vinyl chloride (1.67 mg/L), benzene (0.024 mg/L), ethylbenzene (0.00051 J mg/L), toluene (0.0011 mg/L), and xylenes (0.0016 J mg/L) for the December 2017 sampling event. The current and historic appearance of TCE degradation products in groundwater indicates that anaerobic biodegradation is reducing the VOCs from groundwater in the vicinity of monitoring well MW-13.

Area #2

The Area #2 release is a mix of petroleum and solvents from a former above ground storage tank area as shown with a dashed line on Figure 1. Monitoring well MW-14 was installed directly beneath the former tanks in 2003 to monitor groundwater at the Area #2 source. No remedial activities were conducted in the vicinity of monitor well MW-14. Second semiannual 2017 groundwater analyses from MW-14 detected cis-1,2-DCE (9.31 mg/L), benzene (0.700 mg/L), ethylbenzene (8.64 mg/L), toluene (110 mg/L), and xylenes (80.1 mg/L). Although a thin layer of light non-aqueous phase liquid (LNAPL) has intermittently been detected in this well, no LNAPL was detected in MW-14 during this sampling event.

Volatile Organic Compounds (VOCs) and Hydrocarbon Discussion

- Monitoring well MW-1 detected no VOCs for the December 2017 sampling event;
- Monitoring well MW-2R, located upgradient of the Area #1 and #2, detected TCE (0.00086 J mg/L), cis-1,2-DCE (0.00070 J mg/L), ethylbenzene (0.00041 J mg/L), and xylenes (0.00093 J mg/L);
- Monitoring well MW-5, located downgradient of the Bird Facility and MW-14, detected TCE (0.011 mg/L), cis-1,2-DCE (0.0048 mg/L), trans-1,2-DCE (0.00033 J mg/L), 1,1-DCE (0.0007 J mg/L), chlorobenzene (0.001 mg/L), and vinyl chloride (0.0023 mg/L) for the December 2017 sampling event;
- Monitoring well MW-6 located downgradient of Solvent Tank Farm detected TCE (0.919 mg/L), cis-1,2-DCE (25.10 mg/L), trans-1,2-DCE (0.079 mg/L), 1,1-DCE (0.015 mg/L), 1,1-DCA (0.155 mg/L), chlorobenzene (0.032 mg/L), 1,2-dichlorobenzene (0.004 mg/L), 1,1-dichlorobenzene (0.0008 J mg/L), vinyl chloride (1.87 mg/L), benzene (0.0234 mg/L), ethylbenzene (0.00048 J mg/L), toluene (0.805 mg/L), and xylenes (0.0016 J mg/L) for the December 2017 sampling event;

- Monitoring well MW-6 was resampled on 1/19/2018 due to the anomalies hits in December 2017 sampling event; results of the resampling detected chlorobenzene (0.0045 mg/L) and benzene (0.00045 J mg/L. All other constituents reported for the December 2017 sampling event were below method detection limits.
- Monitoring well MW-15 detected no VOCs for the December 2017 sampling event.

Surface Water

A number of constituents were detected in surface water samples for the December 2017 sampling event and are discussed below:

- SW-1 detected TCE (0.0072 mg/L), cis-1,2-DCE (0.027 mg/L), trans-1,2-DCE (0.0003 J mg/L), 1,1-DCE (0.00037 J mg/L), chlorobenzene (0.0004 J mg/L), and vinyl chloride (0.001 mg/L);
- SW-2 detected TCE (0.008 mg/L), cis-1,2-DCE (0.003 mg/L), trans-1,2-DCE (0.00035 J mg/L), 1,1-DCE (0.0047 J mg/L), chlorobenzene (0.0004 J mg/L), and vinyl chloride (0.001 mg/L);
- SW-3 detected TCE (0.007 mg/L), cis-1,2-DCE (0.029 mg/L), trans-1,2-DCE (0.0003 J mg/L), 1,1-DCE (0.0042 J mg/L), chlorobenzene (0.00044 J mg/L), and vinyl chloride (0.001 mg/L).

All three surface water locations were resampled on 1/19/2018 due to anomalies hits in December 2017 sampling event, results of the resampling detected are as follows:

- SW-1 detected no VOCs,
- SW-2 detected chloroform (0.00097 J mg/L); and
- SW-3 detected no VOCs.

Modeling Analysis

A linear regression modeling analysis was performed at selected monitor wells (MW-5, MW-6, MW-7, MW-8, MW-13, and MW-14) for constituents of concern at the facility. Prior to modelling, additional groundwater samples were collected for biogeochemical parameters at selected monitor wells (MW-2R, MW-5, and MW-14) for the following parameters:

- Carbon dioxide, alkalinity, chloride, sulfate, sulfide, nitrate, total iron, methane, ethane, ethene, total organic carbon;
- Field parameters consisted of pH, specific conductivity, dissolved oxygen, redox potential, and temperature.

Appendix E-Table 1 depicts historical groundwater biogeochemical analysis collected from 2001 to 2017 at selected monitor wells. The biogeochemical data suggests highly reducing conditions created by biodegradation of organic substrates, including BTEX present in groundwater at the site, results in geochemical environment that is conducive to reductive dechlorination of chlorinated compounds. Lower sulfate concentration, along with detected sulfide, at source area well MW-14, indicates strongly-reducing groundwater conditions within Area 2. In addition, methane concentrations measured in MW-14 and downgradient MW-5 are elevated with respect to unimpacted monitor well MW-2R.

Detection of the intermediate daughter products cis-1,2-DCE and vinyl chloride at monitoring wells throughout the site provides evidence that reductive dechlorination is occurring. Elevated chloride concentrations were also measured at monitor well MW-14 and downgradient well MW-5 with respect to MW-2R (upgradient well). Ethene and ethane detections at monitor wells MW-14 and MW-5 are indicators of reducing environments.

Results of the linear regression model is depicted in Appendix E-Table 2. The regression was performed from groundwater results from 1991 through 2017. The model indicated that the chlorinated compound plume at the site is stable and BTEX at monitor well MW-14 have been stable since 2013. The model could not calculate the estimate time for plume to reach MCL.

Evidence of TCE Biodegradation

The dominance of solvent biodegradation products in groundwater analyses suggests that natural anaerobic biodegradation is reducing the mass of solvents in Area #1. The dominant dissolved VOCs in groundwater at the facility are cis-1,2-DCE and vinyl chloride. Trans-1,2-DCE concentrations are significantly less than cis-1,2-DCE concentrations in groundwater analyses. The dominance of cis-1,2-DCE and vinyl chloride suggest that anaerobic biodegradation is the dominant TCE removal mechanism in groundwater. The high proportion of degradation products (80% to 100% of total VOCs) suggests that anaerobic biodegradation remains an effective mechanism in this aquifer.

CONCLUSIONS AND RECOMMENDATIONS

The results of the second semiannual 2017 groundwater analyses suggest that dissolved VOCs in groundwater continue to degrade prior to discharge to surface water. Groundwater trends over approximately the past 20 years are either decreasing or stable. The attenuation of cis-1,2-DCE and vinyl chloride suggests that biodegradation processes are effectively removing the VOCs from the groundwater.

ARCADIS recommends conducting an Aggressive Fluid Vapor Recovery (AFVR) event at monitor well MW-14 due to the high concentrations of hydrocarbons. The AFVR is recommended to be conducted prior to the first semiannual 2018 sampling event. A stinger will be placed inside monitor well MW-14 to capture fluids and vapours. A six-hour test is recommended, the fluids and vapours will be monitored. Fluids captured during the test will be manifested, transported, and disposed to a licensed facility.

ARCADIS will conduct first semiannual 2018 groundwater sampling from monitoring wells MW-1, MW-2R, MW-5, MW-6, MW-7, MW-8, MW-13, MW-14, MW-15 and surface-water locations SW-1, SW-2, and SW-3. Biogeochemical parameters will be collected once a year for the next 5 years during the December sampling events. Upon completion of biogeochemical sampling at the end of the 5 year period, a second linear regression model will be conducted in 2022.

TABLES

Table 1
Second Semiannual 2017 Groundwater Sampling Plan
Brenntag Southeast
Charleston, South Carolina

Sample Location	Purgeables Method 8260	Indicators [1]
MW-1	X	X
MW-2R	X	X
MW-5	X	X
MW-6	X	X
MW-7	X	X
MW-8	X	X
MW-13	X	X
MW-14	X	X
MW-15	X	X
SW-1	X	X
SW-2	X	X
SW-3	X	X

[1] Indicators are temperature, specific conductance, and pH.

SW-1, SW-2 & SW-3 are surface water sampling locations in Brickyard Creek
Monitor Well MW-15 installed in May 2012

Table 2
Groundwater Elevations
Brenntag Southeast
Charleston, South Carolina
(revised 12/29/2017)

ARCADIS Design & Consultancy for natural and built assets

		Date								
Monitor Well ID	Top of Casing (ft msl)	8/15/1991 (ft msl)	3/29/1993 (ft msl)	7/15/1993 (ft msl)	11/7/1994 (ft msl)	12/2/1994 (ft msl)	12/8/1994 (ft msl)	12/15/1994 (ft msl)	12/20/1994 (ft msl)	1/19/1995 (ft msl)
MW-1	11.74	8.5	9.24	7.78	8.45	8.23	8.66	8.49	8.42	9.06
MW-2R	16.5	12.08	---	---	11.38	---	---	---	---	---
MW-3	9.41	8.56	8.89	7.71	8.08	---	---	---	---	---
MW-5	12.01	0.22	0.26	-0.11	0.83	---	---	---	---	---
MW-6	10.62	5.31	6.58	5.15	5.86	6.17	6.38	6.32	6.24	6.65
MW-7	9.09	3.73	3.81	2.99	3.7	3.82	3.71	3.71	3.95	4.02
MW-8	15.16	---	10.53	8.99	9.68	9.32	9.74	9.66	9.61	10.21
MW-13	6.96	---	---	---	---	---	---	---	---	---
MW-14	15.17	---	---	---	---	---	---	---	---	---

		Date								
Monitor Well ID	Top of Casing (ft msl)	2/22/1995 (ft msl)	5/17/1995 (ft msl)	8/15/1995 (ft msl)	11/13/1995 (ft msl)	2/20/1996 (ft msl)	5/20/1996 (ft msl)	8/30/1996 (ft msl)	11/14/1996 (ft msl)	2/28/1997 (ft msl)
MW-1	11.74	8.67	7.54	7.99	8.43	7.58	7.49	8.09	7.55	8.04
MW-2R	16.5	11.89	10.69	11.1	11.48	10.83	10.79	11.19	10.85	11.17
MW-3	9.41	9.35	7.48	8.1	8.46	7.75	7.57	8.09	7.54	8.06
MW-5	12.01	0.96	0.55	---	1	0.45	0.93	1.41	1.71	1.08
MW-6	10.62	6.44	5.17	5.41	6.3	6.01	5.27	5.76	5.51	6.07
MW-7	9.09	3.7	3.33	3.4	---	3.27	3.2	3.68	3.47	3.58
MW-8	15.16	10.01	8.58	9.21	9.62	9.56	8.59	9.02	8.67	9.01
MW-13	6.96	---	---	---	---	---	---	---	---	---
MW-14	15.17	---	---	---	---	---	---	---	---	---

(ft msl) feet above mean sea level

Table 2
Groundwater Elevations
Brenntag Southeast
Charleston, South Carolina
(revised 12/29/2017)

ARCADIS Design & Consultancy for natural and built assets

		Date								
Monitor Well ID	Top of Casing (ft msl)	5/8/1997 (ft msl)	8/26/1997 (ft msl)	11/26/1997 (ft msl)	2/14/1998 (ft msl)	6/19/1998 (ft msl)	8/8/1998 (ft msl)	11/30/1998 (ft msl)	2/15/1999 (ft msl)	5/14/1999 (ft msl)
MW-1	11.74	8.26	7.7	8.18	8.38	7.51	7.48	6.95	7.89	7.83
MW-2R	16.50	11.48	---	11.39	---	10.81	---	10.28	---	11.05
MW-3	9.41	8.38	---	8.09	---	---	---	---	---	---
MW-5	12.01	1.91	---	1.75	---	0.36	---	0.39	---	1.91
MW-6	10.62	6.2	5.31	6.08	6.06	5.02	5.1	4.8	5.94	5.41
MW-7	9.09	3.87	3.33	3.57	3.78	3.21	3.56	2.91	3.71	3.59
MW-8	15.16	9.26	8.86	9.35	9.86	8.5	8.34	7.96	9.1	8.44
MW-13	6.96	---	---	---	---	---	---	---	---	---
MW-14	15.17	---	---	---	---	---	---	---	---	---

		Date								
Monitor Well ID	Top of Casing (ft msl)	9/3/1999 (ft msl)	12/27/1999 (ft msl)	3/16/2000 (ft msl)	5/31/2000 (ft msl)	8/11/2000 (ft msl)	11/10/2000 (ft msl)	3/16/2001 (ft msl)	9/20/2001 (ft msl)	2/25/2002 (ft msl)
MW-1	11.74	7.04	7.87	7.70	6.52	7.71	6.81	8.12	7.52	7.31
MW-2R	16.50	---	11.00	11.01	10.07	---	10.32	11.55	11.19	11.03
MW-3	9.41	---	---	---	---	---	---	---	---	---
MW-5	12.01	---	1.62	1.33	1.34	1.15	1.32	1.45	1.23	1.3
MW-6	10.62	4.99	5.94	5.69	4.43	5.79	4.79	6.37	5.46	5.76
MW-7	9.09	3.77	3.56	3.47	3.44	3.67	3.33	3.8	3.88	3.45
MW-8	15.16	7.85	8.75	8.72	7.68	8.38	7.91	8.65	8.45	8.22
MW-13	6.96	---	---	---	---	---	---	---	2.37	1.66
MW-14	15.17	---	---	---	---	---	---	---	---	---

(ft msl) feet above mean sea level

Table 2
Groundwater Elevations
Brenntag Southeast
Charleston, South Carolina
(revised 12/29/2017)

ARCADIS Design & Consultancy for natural and built assets

		Date								
Monitor Well ID	Top of Casing (ft msl)	9/30/2002 (ft msl)	03/17/03 (ft msl)	08/26/03 (ft msl)	02/27/04 (ft msl)	05/13/04 (ft msl)	08/26/04 (ft msl)	04/13/05 (ft msl)	07/01/05 (ft msl)	09/06/05 (ft msl)
MW-1	11.74	8.03	8.40	7.94	6.96	7.62	7.64	8.13	7.65	7.63
MW-2R	16.50	11.72	12.11	11.32	8.54	10.97	11.51	11.48	11.38	11.05
MW-3	9.41	---	---	---	---	---	---	---	---	---
MW-5	12.01	1.68	2.19	1.22	0.92	1.16	1.36	1.92	1.82	2.20
MW-6	10.62	6.35	6.59	6.24	5.33	5.40	6.04	6.26	6.16	5.35
MW-7	9.09	3.76	4.01	5.53	2.83	3.20	3.61	3.79	3.82	3.80
MW-8	15.16	8.03	8.51	8.92	7.98	8.80	9.31	9.41	9.79	8.65
MW-13	6.96	2.06	2.34	2.19	-0.55	1.53	1.97	2.09	2.25	2.24
MW-14	15.17	---	---	---	7.97	8.87	8.82	9.40	9.30	8.92

		Date								
Monitor Well ID	Top of Casing (ft msl)	12/20/05 (ft msl)	02/02/06 (ft msl)	03/30/06 (ft msl)	10/04/06 (ft msl)	1/23/2007 (ft msl)	8/1/2007 (ft msl)	3/24/2008 (ft msl)	8/27/2008 (ft msl)	3/30/2009 (ft msl)
MW-1	11.74	7.87	7.71	7.67	8.70	8.40	7.70	7.59	7.67	4.09
MW-2R	16.50	11.40	11.12	11.04	10.87	10.69	11.39	11.15	11.77	11.21
MW-3	9.41	---	---	---	---	---	---	---	---	---
MW-5	12.01	2.20	2.09	2.23	2.28	2.81	2.56	1.97	3.02	9.64
MW-6	10.62	3.24	5.96	5.47	5.08	6.41	6.04	5.94	6.36	4.73
MW-7	9.09	3.87	3.70	3.75	3.76	4.14	4.09	3.76	4.11	5.44
MW-8	15.16	9.01	9.03	8.93	9.53	9.59	8.22	8.89	9.55	6.55
MW-13	6.96	2.62	2.47	2.33	1.87	2.93	2.84	2.04	2.85	4.75
MW-14	15.17	9.29	8.75	8.74	9.13	9.47	8.47*	8.97**	---	6.58

(ft msl) feet above mean sea level

Table 2
Groundwater Elevations
Brenntag Southeast
Charleston, South Carolina
(revised 12/29/2017)

ARCADIS Design & Consultancy for natural and built assets

		Date								
Monitor Well ID	Top of Casing (ft msl)	11/5/2009 (ft msl)	04/30/10 (ft msl)	12/22/10 (ft msl)	05/04/11 (ft msl)	12/28/11 (ft msl)	05/18/12 (ft msl)	10/26/12 (ft msl)	05/24/13 (ft msl)	12/12/13 (ft msl)
MW-1	11.74	6.91	7.31	6.96	7.29	6.63	7.14	6.74	7.89	7.30
MW-2R	16.50	10.71	10.99	10.76	10.81	10.43	10.71	---	---	---
MW-2R	16.20	---	---	---	---	---	---	10.05	11.17	10.68
MW-3	9.41	---	---	---	---	---	---	---	---	---
MW-5	12.01	3.86	2.97	2.10	1.77	2.86	3.12	3.76	4.28	3.37
MW-6	10.62	5.16	5.16	5.48	5.14	5.41	4.82	4.28	4.79	5.84
MW-7	9.09	3.81	3.58	3.54	3.49	3.57	3.84	3.71	4.16	3.81
MW-8	15.16	7.95	8.88	7.75	8.38	7.61	7.86	7.74	9.07	8.12
MW-13	6.96	2.14	1.93	1.96	1.76	1.97	2.26	2.10	2.69	2.21
MW-14	15.17	7.97	9.00	7.77	8.38	6.87	7.15	---	---	---
MW-14	14.92	---	---	---	---	---	---	7.22	8.98	8.11
MW-15	9.03	---	---	---	---	---	4.65	3.66	4.70	4.07

(ft msl) feet above mean sea level

Table 2
Groundwater Elevations
Brenntag Southeast
Charleston, South Carolina
(revised 12/29/2017)

Monitor Well ID	Top of Casing (ft msl)	Date 6/30/2014 (ft msl)	12/22/14 (ft msl)	06/10/15 (ft msl)	12/08/15 (ft msl)	06/28/16 (ft msl)	12/14/16 (ft msl)	06/05/17 (ft msl)	12/26/17 (ft msl)	(ft msl)
MW-1	11.74	6.89	7.29	7.89	7.78	7.20	7.52	7.41	7.49	
MW-2R	16.50	---	---	---	---	---	---	---	---	
MW-2R ***	16.20	10.50	10.73	11.55	11.63	11.06	11.19	11.43	11.12	
MW-3	9.41	---	---	---	---	---	---	---	---	
MW-5	12.01	3.79	4.86	3.86	4.22	3.88	4.75	3.84	2.61	
MW-6	10.62	4.24	5.78	6.22	6.16	4.58	5.07	4.73	4.49	
MW-7	9.09	3.65	3.97	3.97	4.28	3.65	4.24	3.89	3.43	
MW-8	15.16	8.01	8.68	8.66	9.19	8.38	8.58	7.26	8.81	
MW-13	6.96	1.99	1.93	2.31	2.30	1.91	2.48	1.78	1.50	
MW-14	15.17	---	---	---	---	---	---	---	---	
MW-14 ***	14.92	8.08	8.27	8.79	9.49	8.77	8.84	8.33	8.57	
MW-15	9.03	5.01	4.19	6.29	4.63	4.87	6.06	5.29	3.55	

(ft msl) feet above mean sea level

*Approximately 0.1 feet of product was observed on August 1, 2007. Groundwater elevation calculated by: [Top of Casing Elevation - Depth to Water] + [free product thickness x 0.8581]

**Approximately 0.01 feet of product was observed on March 24, 2008. Groundwater elevation calculated by: [Top of Casing Elevation - Depth to Water] + [free product thickness x 0.8581]

MW-15 was installed on May 16, 2012

*** MW-2R and MW-14 were resurveyed on October 24, 2012

G:\AProject\Brenntag Southeast\SC000204.0017 services for 2017\Reports\Semiannual\Second semiannual\tables\[table2-waterlevels 2nd_2017.xlsx]Table 2

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter pH

Monitor ID Well	Date 2/6/91	8/15/91	3/29/93	7/15/93	11/7/94	12/2/94	12/15/94	12/20/94	1/19/95	2/22/95
MW-1	6.6	6.3	6.2		5.7					6.2
MW-2R		10.4			9.9					
MW-3	6.8	6.5	6.1							
MW-5		7.1	7.0							
MW-6		11.9	11.6		9.2					
MW-7		6.8			6.1					7.1
MW-8										6.2
MW-13										
MW-14										

Field Parameter pH

Monitor ID Well	Date 5/17/95	8/15/95	11/13/95	2/20/96	5/20/96	8/30/96	11/14/96	2/28/97	5/8/97	8/26/97
MW-1	5.6	5.8	6.1	6.0	6.2	6.2	6.2	5.9	6.6	5.4
MW-2R	11.6		11.5		12.0		12.4		11.2	
MW-3	5.1		6.4		6.1		6.2		6.1	
MW-5	6.6		7.1		6.8		6.9		6.7	
MW-6										
MW-7	6.8	7.0	7.1	6.8	6.9	7.0	6.6	6.7	7.3	7.5
MW-8	7.5	6.8	6.6	7.6	7.6	7.3	7.2	7.2	7.8	7.5
MW-13										
MW-14										

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter pH

Monitor ID Well	Date 11/26/97	2/14/98	6/19/98	8/8/98	11/30/98	2/15/99	5/14/99	9/3/99	12/27/99	3/16/00
MW-1	6.3	6.7	6.4	5.7	5.9	6.2	6.0	5.9	6.3	6.0
MW-2R	10.8		10.3		10.6		10.4		10.8	
MW-3	6.0									
MW-5	6.7		7.0		6.8		6.7		6.8	
MW-6									12.2	11.7
MW-7	6.7	7.0	7.2	7.1	7.0	6.9	6.9	6.7	6.7	6.7
MW-8	6.6	6.3	6.9	7.3	7.6	7.1	7.3	7.1	7.5	7.3
MW-13										
MW-14										

Field Parameter pH

Monitor ID Well	Date 5/31/00	8/11/00	11/10/00	3/16/01	9/20/01	2/25/02	9/30/02	3/17/03	8/26/03	2/27/04
MW-1	6.1	6.0	6.1	7.1	6.5	6.4	5.8	6.1	9.8	6.9
MW-2R	9.7		9.8	9.7	9.9	10.1	9.7	10.58	11.99	12.86
MW-3										
MW-5	6.4		6.6	6.8	7.7	6.9	7	7.31	11.56	7.72
MW-6	11.2	11.5	11.9	8.7	10.1	9.7	10.4	9.81	14.03	8.78
MW-7	6.6	6.7		6.8	7.5	7	7.1	7.19	11.36	7.84
MW-8	7.1	7.5	7.2	6.7	7.4	6.6	6.2	5.54	9.26	7.85
MW-13					7.5	6.9	6.9	7.18	10.34	7.76
MW-14										7.43

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter pH

Monitor ID Well	Date 5/13/04	8/26/04	12/2/04	4/13/05	7/1/05	9/6/05	12/20/05	2/2/06	3/30/06	10/4/06
MW-1	6.42	6.2	5.92	6.71	6.69	6.65	6.70	6.75	6.36	5.97
MW-2R		10.07		10.05		9.85		10.11	10.21	9.86
MW-3										
MW-5		6.79		6.95		6.79		7.22	7.56	6.63
MW-6		10.08		9.96		9.57		9.73	9.24	9.20
MW-7	7.05	6.93	6.35	6.92	6.99	6.98	7.04	7.15	6.61	6.54
MW-8		6.31		6.39		6.47		7.19	6.42	6.29
MW-13	6.80	6.73	6.37	6.72	6.72	6.59	7.1	7.22	7.12	7.02
MW-14		7.02		6.79		6.81		6.98	6.62	6.43

Field Parameter pH

Monitor ID Well	Date 1/23/07	8/1/07	3/24/08	8/27/08	3/30/09	11/5/09	4/30/10	12/22/10	5/4/11	12/28/11
MW-1	6.02	6.73	7.38	6.54	7.27	6.7	7.26	7.0	6.89	7.2
MW-2R	9.06	9.60	10.56	9.75	10.56	10.03	11.36	7.7	10.30	7.25
MW-3										
MW-5	6.68	6.81	7.86	6.85	7.01	6.96	7.60	7.21	6.84	7.03
MW-6	9.30	11.59	10.9	9.23	8.06	10.1	10.51	7.49	11.20	12.31
MW-7	6.62	7.11	7.47	6.73	7.43	6.92	7.24	7.05	6.81	7.2
MW-8	6.26	6.59	7.2	6.38	6.75	6.14	6.79	6.54	6.14	6.72
MW-13	7.26	6.87	7.4	7.18	7.45	7.09	7.37	7.03	6.84	7.17
MW-14	6.47	NA	NA	NA	7.20	6.81	7.15	6.95	5.75	6.99

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter pH

Monitor ID Well	Date 5/18/12	10/26/12	5/24/13	12/12/13	6/30/14	12/22/14	6/10/15	12/8/15	6/28/16	12/14/16
MW-1	6.96	6.4	6.22	6.65	6.38	6.50	6.45	6.8	7.24	6.48
MW-2R	10.47	8.71	10.23	7.19	10.19	8.73	7.91	9.89	10.13	6.85
MW-3										
MW-5	7.01	6.99	6.97	7.53	6.78	6.95	6.67	6.87	7.36	6.63
MW-6	12.81	8.74	8.7	12.28	11.4	11.76	10.4	6.87	12.6	6.40
MW-7	7.14	6.72	6.75	6.91	7.54	6.55	6.79	6.92	7.21	6.74
MW-8	5.90	6.43	6.08	6.03	6.11	5.42	6.1	6.3	6.12	6.13
MW-13	7.06	6.85	6.59	6.92	6.93	6.68	6.9	6.89	7.31	6.68
MW-14	6.92	6.90	6.68	6.89	6.63	6.62	6.72	6.92	7.17	6.68
MW-15	7.17	6.88	6.39	6.35	6.44	5.92	6.65	6.52	7.25	6.46

Field Parameter pH

Monitor ID Well	Date 6/5/17	12/26/17
MW-1	5.98	6.11
MW-2R	7.4	6.79
MW-3		
MW-5	7.57	6.74
MW-6	7.54	7.54
MW-7	6.72	6.79
MW-8	5.75	6.53
MW-13	7.19	7.82
MW-14	7.36	6.58
MW-15	7.54	6.66

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 2/6/91	8/15/91	3/29/93	7/15/93	11/7/94	12/2/94	12/15/94	12/20/94	1/19/95	2/22/95
MW-1	2044	1610	2140		2680					3080
MW-2R		1410			3400					
MW-3	1669	21800	880							
MW-5		324	2720							
MW-6		268	1850		1560					
MW-7		225			2860					4210
MW-8			3980							2770
MW-13										
MW-14										

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 5/17/95	8/15/95	11/13/95	2/20/96	5/20/96	8/30/96	11/14/96	2/28/97	5/8/97	8/26/97
MW-1	5580	1440	1032	1600	735	976	1250	798	392	958
MW-2R	4390		2940		3070		2920		1750	
MW-3	1630		1171	719			1297		977	
MW-5	16100		3900		6030		12370		6970	
MW-6										
MW-7	4010	>20000	3200	2900	2610	2760	2460	4120	3320	4040
MW-8	4600	2360	2480	2730	2430	2510	2500	2790	2830	2610
MW-13										
MW-14										

µmhos/cm = micromhos/centimeter

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 11/26/97	2/14/98	6/19/98	8/8/98	11/30/98	2/15/99	5/14/99	9/3/99	12/27/99	3/16/00
MW-1	769	465	1062	1052	1264	5070	1123	1486	1259	1065
MW-2R	2080		1621		1356		1325		1953	
MW-3	1085									
MW-5	4040		5450		7160		8600		8690	
MW-6									2720	2440
MW-7	3540	3530	2850	2490	2330	2700	2610	2220	2790	2460
MW-8	2640	1810	2330	2560	2060	1832	1990	1790	2440	1937
MW-13										
MW-14										

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 5/31/00	8/11/00	11/10/00	3/16/01	9/20/01	2/25/02	9/30/02	3/17/03	8/26/03	2/27/04
MW-1	2650	981	1797	220	634	1780	130	122	870	1632
MW-2R	1186		867	762	770	519	99	185	1080	1411
MW-3										
MW-5	14850		10260	9450	775	1560	1370	297	5010	5693
MW-6	2570	2380	2610	892	1343	1060	90	102	1310	1107
MW-7	2200	1915	2060	2520	2975	2940	245	265	2630	2872
MW-8	1806	1897	1904	187	357	198	260	16	491	122
MW-13					2800	2340	211	199	2160	1968
MW-14										1130

µmhos/cm = micromhos/centimeter

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 5/13/04	8/26/04	12/2/04	4/13/05	7/1/05	9/6/05	12/20/05	2/2/06	3/30/06	10/4/06
MW-1	1477	2783	1530	2590	50	3450	1470	2210	1820	770
MW-2R		815		1075		1071		1020	1350	1300
MW-3										
MW-5		1326		3720		3470		8100	6930	13730
MW-6		943		766		647		790	880	960
MW-7	1974	2578	2300	1930	40	1750	2080	2230	2330	2300
MW-8		454		229		326		1130	560	960
MW-13	1536	2333	2600	1357	1420	1296	790	1100	1170	1190
MW-14		1790		1354		1401		1900	1810	1250

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 1/23/07	8/1/07	3/24/08	8/27/08	3/30/09	11/5/09	4/30/10	12/22/10	5/4/11	12/28/11
MW-1	840	903	3000	3200	1120	2050	1080	2630	2160	3190
MW-2R	1220	754	1500	663	860	756	1950	609	1590	440
MW-3										
MW-5	8760	15500	6100	15700	1140	23700	10300	19300	12100	30000
MW-6	970	2550	910	950	1050	669	712	20200	1230	1940
MW-7	2570	2280	1900	2470	2120	1870	2060	1690	2090	2400
MW-8	140	415	1000	459	434	271	770	573	385	741
MW-13	930	1940	1800	880	2380	1960	2080	1670	2200	7.17
MW-14	1230	NA	NA	NA	1360	1980	1960	1770	2050	1.77

µmhos/cm = micromhos/centimeter

Table 3
Summary of Measured Field Parameters
Brenntag Southeast
Charleston, South Carolina
(revised 12/28/2017)

ARCADIS Design & Consultancy for natural and built assets

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 5/18/12	10/26/12	5/24/13	12/12/13	6/30/14	12/22/14	6/10/15	12/8/15	6/28/16	12/14/16
MW-1	1500	6	701	479	605	331	291	979	513	6.48
MW-2R	951	557	1310	10	1430	898	562	1190	692	489
MW-3										
MW-5	28100	18800	18000	21000	20500	13900	11000	5890	13400	9350
MW-6	3210	1160	1020	2550	1890	2260	556	5660	2130	9370
MW-7	2120	2080	1840	1990	2	1970	1990	2300	1800	1880
MW-8	94	383	1	159	371	252	300	1060	398	515
MW-13	6150	1840	688	1760	2400	1840	1610	1870	1880	2070
MW-14	1650	2240	1460	2030	1790	2200	2020	1690	1860	2140
MW-15	565	812	434	470	685	1080	1030	978	750	783

Field Parameter Specific Conductance (µmhos/cm)

Monitor ID Well	Date 6/5/17	12/26/17
MW-1	307	300
MW-2R	335	388
MW-3		
MW-5	15900	13600
MW-6	15600	1410
MW-7	1950	2109
MW-8	236	291
MW-13	15000	1350
MW-14	1970	1980
MW-15	199	668

µmhos/cm = micromhos/centimeter

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-1	2/6/91	0.064		0.087	<0.020	0.098	0.316	0.054	<0.020	<0.020	<0.020	<0.020	<0.020	0.638	B(0.233), T(0.068)
	8/15/91	0.121		0.127	<0.020	0.165	0.286	0.053	<0.020	<0.020	0.032	<0.020	<0.020	0.971	B(0.525), T(0.040)
	3/30/93	0.020	1.390	0.016	<0.005	0.061	0.007	<0.005	<0.005	0.046	0.003	<0.005	<0.005	0.094	B(0.047), T(0.006)
	11/7/94	0.007	0.016	0.001	0.024	0.036	0.011	0.002	<0.001	0.016	<0.001	<0.001	<0.001	0.020	
	2/22/95	0.006	0.012	<0.001	0.024	0.020	0.010	0.003	<0.001	0.008	<0.001	<0.001	<0.001	0.026	
	5/18/95	0.007	0.016	<0.005	0.032	0.060	0.006	<0.005	<0.005	0.037	<0.005	<0.005	<0.005	0.052	B(0.003), T(0.120), X(0.006)
	8/15/95	0.003	0.007	0.002	0.006	0.033	0.006	0.002	<0.001	0.020	<0.001	<0.001	<0.001	0.016	
	11/13/95	<0.005	0.007	<0.005	<0.005	0.013	<0.005	<0.005	<0.005	0.011	<0.005	<0.005	<0.005	<0.010	T(0.018)
	2/20/96	<0.001	0.086	0.004	0.006	0.024	0.006	0.002	<0.001	0.013	<0.001	<0.001	<0.001	0.060	B(0.006), T(0.067), X(0.003)
	5/20/96	<0.001	0.038	<0.001	<0.001	0.011	<0.001	<0.001	<0.001	0.005	<0.001	<0.001	<0.001	0.014	B(0.001), T(0.007)
	8/30/96	<0.001	0.018	0.003	<0.001	0.024	0.003	<0.001	<0.001	0.009	<0.001	<0.001	<0.001	0.036	
	11/14/96	<0.001	0.099	0.005	0.005	0.027	0.006	0.002	<0.001	0.005	<0.001	<0.001	<0.001	0.067	B(0.008), T(0.043), X(0.001)
	2/28/97	<0.001	0.020	<0.001	<0.001	0.010	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.014	
	5/8/97	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/26/97	<0.001	0.012	0.009	0.002	0.034	0.002	<0.001	<0.001	0.009	<0.001	<0.001	<0.001	0.245	
	11/26/97	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.010	
	2/14/98	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	
	6/19/98	<0.005	0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	0.015	
	8/8/98	<0.005	0.014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	0.019	
	11/30/98	<0.005	0.129	<0.005	<0.005	0.015	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	0.135	B(0.009)
	2/15/99	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.002	
	5/15/99	<0.005	0.015	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.018	
	9/3/99	<0.005	0.066	<0.005	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.190	T(0.006)
	12/27/99	<0.002	0.037	<0.002	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.027	
	3/16/00	<0.001	0.067	<0.001	0.001	0.011	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.064	B(0.005), T(0.002)
	5/31/00	0.009	0.650	0.013	<0.001	0.037	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.033), T(0.018), X(0.0046)
	8/11/00	0.009	0.032	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.003)
	11/10/00	0.002	0.210	<0.002	<0.002	0.021	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.350	B(0.015), T(0.009)
	3/16/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.010	
	9/20/01	<0.002	0.007	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.008	
	10/24/01	<0.002	0.007	<0.002	<0.002	0.003	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.013	
	11/19/01	0.003	0.420	0.006	<0.002	0.022	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.580	B(0.023) T(0.006)
	12/20/01	<0.002	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.012	
	1/30/02	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.009	
	2/25/02	<0.002	0.011	<0.002	<0.002	0.003	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.014	
	9/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.004	
	3/17/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.002	
	8/26/03	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.006	
	2/27/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.005	
	5/13/04	<0.002	0.003	<0.002	<0.002	0.003	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.014	
	8/26/04	<0.002	0.040	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.240	B(0.009), T(0.003)
	12/3/04	<0.001	0.002	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.010	<0.010	<0.010	0.022	B(0.0013)
	4/13/05	<0.001	0.004	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.031	B(0.0027), 2CHT(0.0025), T(0.001), X(0.002)
	7/1/05	<0.002	0.170	<0.002	<0.002	0.006	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.220	B(0.0063), T(0.0038)
	9/6/05	<0.001	0.069	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	0.004	0.002	<0.001	<0.001	0.260	X(0.0046)
	12/20/05	<0.001	0.042	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.100	2-CHT(0.0016), T(0.0013), X(0.0021)
	2/2/06	<0.001	0.0028	0.0012	<0.001	<0.001	0.0059	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	(0.0088)
	3/30/06	<0.005	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.033	B(0.0012)
	10/4/06	<0.001	0.027	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	
	1/23/07	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	
	8/1/07	<0.001	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0045	
	3/24/08	0.002	0.026	<0.001	<0.001	<0.001	0.120	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.021	2-CHT(0.0011), T(0.0055)
	8/27/08	0.006	0.280	0.003	<0.001	0.004	0.110	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.036	B(0.001), 2-CHT(0.0011), T(0.0014)
	3/30/09	0.002	0.119	<0.001	<0.001	<0.001	0.042	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.009	1,2-DCE(0.127)
	11/5/09	0.004 J	0.232	<0.005	<0.005	0.0022 J	0.0648	<0.005	0.0013 J	<0.010	<0.005	<0.005	<0.005	0.0182	
	4/30/10	0.001	0.082	0.0005 J	<0.001	0.0007 J	0.0324	<0.001	0.0021	<0.002	0.0003 J	<0.001	<0.001	0.0056	T(0.00053 J)

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

ARCADIS Design & Consultancy for natural and built assets

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-1	12/22/10	0.007	0.391	0.0021	<0.001	0.004	0.0991	<0.001	0.0023	<0.002	0.0017	<0.001	<0.001	0.0281	B(0.00088), EB(0.00047J), T(0.0017), X(0.0023J)
(cont'd)	5/4/11	<0.001	0.0016	<0.001	<0.001	0.0004 J	<0.001	<0.001	<0.001	<0.002	0.00099 J	<0.001	<0.001	0.0058	B(0.0004J), X(0.0014J)
	12/28/11	<0.001	0.00092	<0.001	<0.001	0.001 J	<0.001	<0.001	<0.001	<0.002	0.0013	<0.001	0.00029 J	0.0054	B(0.00054J)
	5/18/12	0.0097	0.42500	0.0034	<0.001	0.00420	0.0235	<0.001	0.0039	<0.002	0.0014	<0.001	<0.001	0.4000	B(0.00099), EB(0.00048), T(0.0022), X(0.00083)
	10/26/12	0.0060	0.43500	0.0024 J	<0.005	0.0034 J	0.0397	<0.005	0.0031 J	<0.010	0.0017 J	<0.005	<0.005	0.0375	T (0.0018J),
	5/24/13	0.0010	0.11400	0.00067 J	<0.002	0.0009 J	0.0078	<0.002	<0.002	<0.004	<0.002	<0.002	<0.002	0.0066	
	12/12/13	<0.001	0.09370	<0.001	<0.001	0.0008 J	0.0035	<0.001	<0.001	<0.002	0.0003 J	<0.001	<0.001	0.0038	
	6/30/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	0.00035	
	12/22/14	<0.001	0.00085 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/10/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/8/15	<0.001	0.00046 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	0.00045 J	<0.001	<0.001	0.00096 J	
	6/28/16	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/14/16	<0.001	0.00041 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	0.00046 J	<0.001	<0.001	0.00049 J	T (0.00055 J)
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/28/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
MW-2R	8/15/91	<0.010		<0.010	<0.010	<0.010	0.192	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	EB(0.119), X(0.381)
	11/7/94	<0.005	0.033	0.032	<0.005	<0.005	0.553	<0.005	<0.005	<0.010				0.003	EB(0.031), X(0.099)
	5/18/95	<0.005	0.035	0.032	<0.005	<0.005	0.477	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.010	EB(0.039), X(0.122)
	11/13/95	<0.005	0.028	0.022	<0.005	<0.005	0.412	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.010	EB(0.057), X(0.196)
	5/20/96	<0.010	0.022	0.030	<0.010	<0.010	0.390	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	EB(0.011), X(0.044)
	11/14/96	<0.001	0.022	0.023	<0.001	<0.001	0.295	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	EB(0.005), X(0.020)
	5/8/97	<0.001	0.021	0.022	<0.001	<0.001	0.192	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	EB(0.035), X(0.098)
	11/26/97	<0.005	0.020	0.012	<0.005	<0.005	0.124	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.010	EB(0.042), X(0.126)
	6/19/98	<0.005	0.016	0.019	<0.005	<0.005	0.121	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	EB(0.008), X(0.037)
	11/30/98	<0.005	0.016	0.020	<0.005	<0.005	0.188	<0.005	<0.005	<0.010	<0.005	<0.005	<0.005	<0.002	EB(0.018), X(0.074)
	5/15/99	<0.005	0.009	0.011	<0.005	<0.005	0.109	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	P-IP(0.024), N(0.063), (0.015)
	12/27/99	<0.002	0.011	0.013	<0.002	<0.002	0.102	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	EB(0.0037), X(0.014)
	5/31/00	<0.001	0.007	0.007	<0.001	<0.001	0.041	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	P-IP(0.016), N(0.039)
	11/10/00	<0.002	0.004	0.003	<0.002	<0.002	0.020	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.010	EB(0.002),P-IP(0.016),N(0.026)
	3/16/01	<0.002	0.003	0.002	<0.002	<0.002	0.020	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.010	N(0.024), X(0.005)
	9/20/01	<0.002	0.003	0.003	<0.002	<0.002	0.017	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	EB(0.004),P-IP(0.021),N(0.032)
	2/25/02	<0.002	0.004	0.003	<0.002	<0.002	0.025	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	P-IP(0.023), N(0.025), X(0.009)
	9/30/02	<0.002	0.004	0.003	<0.002	<0.002	0.021	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	EB(0.006), P-IP(0.043), N(0.053)
	3/17/03	<0.002	0.006	0.005	<0.002	<0.002	0.030	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	P-IP(0.027), X(0.017)
	8/26/03	<0.002	0.003	0.002	<0.002	<0.002	0.016	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	P-IP(0.039), N(0.038), X(0.006)
	2/27/04	<0.002	0.004	0.002	<0.002	<0.002	0.016	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	8/26/04	<0.002	0.006	0.002	<0.002	<0.002	0.012	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	EB(0.0032), N(0.031), P-IP(0.022), X(0.0079)
	4/13/05	<0.001	0.003	0.001	<0.001	<0.001	0.009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	EB(0.039), IP(0.001), P-IP(0.0097), N(0.0019)
	9/6/05	<0.001	0.003	<0.001	<0.001	<0.001	0.010	<0.001	<0.001	<0.001	0.008	<0.001	0.002	<0.001	T(0.170), 1,2,4-TMB(0.003), 1,3,5-TMB(0.0014)
	2/2/06	<0.001	0.0026	0.0012	<0.001	<0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	EB(0.0064), P-CY(0.022), N(0.029)
	3/30/06	<0.005	<0.005	<0.005	<0.005	<0.005	0.0085	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00045	EB(0.0071), P-IP(0.012), N(0.020), 1,2,4-TMB(0.0012),
	10/4/06	<0.001	0.003	0.0018	<0.001	<0.001	0.0062	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	1/23/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	EB(0.013), P-IP(0.0066), N(0.014), 1,2,4-TMB,
	8/1/07	<0.001	0.0017	<0.001	<0.001	<0.001	0.0033	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	EB(0.030), P-IP(0.011), N(0.027),
	3/24/08	<0.001	0.0049	0.0024	<0.001	<0.001	0.0071	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1,2,4-TMB(0.0018), X(0.068)
	8/27/08	<0.001	0.0130	<0.001	<0.001	<0.001	0.0071	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	EB(0.0055), P-IP(0.0023), N(0.0081), X(0.013)
	3/30/09	<0.001	0.0032	0.0016	<0.001	<0.001	0.0039	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1,2-DCE(0.00489), EB(0.00375), P-IP(0.00847),
	11/5/09	<0.001	0.0029	0.0013	<0.001	<0.001	0.0027	<0.001	<0.001	<0.002	0.0003 J	<0.001	<0.001	<0.001	EB(0.00059 J), IPB(0.00024 J), T(0.00046 J),
	4/30/10	0.0007 J	0.0227	0.0046	<0.001	<0.001	0.0166	<0.001	<0.001	<0.002	0.0017	<0.001	<0.001	0.0038	B(0.00027 J), CS_2(0.00085 J), EB(0.0542), IPB
	12/22/10	<0.001	0.0163	<0.001	<0.001	<0.001	0.0059	<0.001	0.0004 J	<0.002	<0.001	<0.001	<0.001	0.0013	EB(0.00032J)
	5/4/11	<0.001	0.0052	0.0026	<0.001	<0.001	0.0040	<0.001	0.0008 J	<0.002	0.0004 J	<0.001	<0.001	0.0011	EB(0.0029), X(0.009)
	12/28/11	0.0008 J	0.0522	0.0004 J	<0.001	0.0004 J	0.0086	<0.001	0.0006 J	<0.002	0.0003 J	<0.001	<0.001	0.0037	EB(0.00032J), T(0.00021J), X(0.00078J)
	5/18/12	<0.001	0.0060	0.0014	<0.001	<0.001	0.0025	<0.001	0.0014	<0.200	0.0003 J	<0.001	<0.001	<0.001	EB(0.0039), IPB(0.00029J), X(0.0129)
	10/26/12	<0.001	0.0035	0.0005 J	<0.001	<0.001	0.0014	<0.001	0.0005 J	<0.001	<0.001	<0.001	<0.001	<0.001	EB(0.00049J), T(0.00053J), X(0.0014J)
	5/24/13	<0.001	0.0087	0.0023	<0.001	<0.001	0.0049	<0.001	<0.001	<0.002	0.0005 J	<0.001	<0.001	0.0009	EB(0.0234), IPB (0.0014), X (0.0343)
	12/12/13	<0.001	0.0080	<0.001	<0.001	<0.001	0.0019	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/30/14	<0.001	0.0061	0.0027	<0.001	<0.001	0.0032	<0.001	<0.001	<0.002	0.0005 J	<0.001	<0.001	0.0009 J	EB(0.0044), IPB(0.00026J), X(0.0071)
	12/22/14	<0.001	0.0027	0.0008 J	<0.001	<0.001	0.0016	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	EB(0.0033), X(0.004)
	6/10/15	<0.001	0.0025	0.0010 J	<0.001	<0.001	0.0018	<0.001	<0.001	<0.002	0.0002 J	<0.001	<0.001	<0.001	EB(0.0034), IPB(0.00022J), X(0.009)
	12/8/15	<0.001	0.0021	0.0010	<0.001	<0.001	0.0019	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	EB(0.0076), IPB (0.00026J), X(0.0091)
	6/28/16	<0.001	0.0022	0.0009 J	<0.001	<0.001	0.0014	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	EB(0.0008J), T(0.00029J), X(0.0016J)
	12/14/16	<0.001	0.00099 J	<0.001	<0.001	<0.001	0.0010 J	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/5/17	<0.001	0.0007 J	0.0003 J	<0.001	<0.001	0.0009 J	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/26/17	<0.001	0.0007 J	<0.001	<0.001	<0.001	0.0009 J	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	EB(0.00041J), X(0.00093 J)

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-3	2/6/91	0.022		<0.010	<0.010	0.017	0.029	<0.010	0.051	<0.010	0.013	<0.010	0.048	0.058	B(0.052), T(0.064)
	8/15/91	0.070		0.010	0.025	0.025	0.045	0.010	0.085	<0.010	0.080	<0.010	0.020	0.085	B(0.015), EB(0.015), T(0.015)
	3/30/93	0.014	0.081	0.005	0.010	0.012	0.025	<0.005	0.060	<0.010	0.034	0.003	0.013	0.020	B(0.042), EB(0.005), T(0.011), X(0.020)
	5/18/95	0.007	0.063	0.040	0.004	0.008	0.019	<0.005	0.074	<0.010	0.031	<0.005	0.017	0.027	B(0.038), EB(0.002), T(0.002)
	11/13/95	<0.005	0.020	<0.005	<0.005	0.004	0.005	<0.005	0.057	<0.010	0.029	<0.005	0.014	0.018	B(0.029)
	5/20/96	0.003	0.023	0.003	<0.001	0.004	0.009	<0.001	0.040	<0.001	0.020	0.002	0.010	0.013	B(0.019), EB(0.002), T(0.002), X(0.004)
	11/14/96	0.003	0.038	0.002	<0.001	0.005	0.007	<0.001	0.059	<0.001	0.020	0.010	0.002	0.015	B(0.025)
	5/8/97	0.004	0.051	<0.001	<0.001	<0.001	0.008	<0.001	0.040	<0.001	0.015	0.002	0.008	0.017	B(0.018)
	11/26/97	<0.005	0.023	<0.005	<0.005	<0.005	<0.005	<0.005	0.063	<0.010	0.014	<0.005	0.011	0.014	B(0.028)
MW-5	8/15/91	<0.002		0.002	<0.002	<0.002	<0.002	<0.002	0.051	<0.002	0.019	<0.002	0.004	0.089	B(0.004), T(0.003)
	3/30/93	<0.005	0.096	0.002	<0.005	<0.005	<0.005	<0.005	0.003	<0.010	0.004	<0.005	<0.005	0.079	B(0.002)
	5/18/95	<0.005	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.010	0.003	<0.005	<0.005	0.005	
	11/13/95	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	<0.010	<0.005	<0.005	<0.005	<0.010	
	5/20/96	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.021	<0.001	0.010	<0.001	0.002	0.039	B(0.001)
	11/14/96	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.426	0.002	0.271	0.015	0.062	0.062	B(0.017), EB(0.004), T(0.004), X(0.014)
	5/8/97	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	
	11/26/97	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	<0.005	0.016	<0.005	<0.010	
	6/19/98	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	<0.010	<0.005	<0.005	<0.005	<0.002	
	11/30/98	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.010	<0.005	<0.005	<0.005	<0.002	
	5/15/99	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	
	12/27/99	<0.002	0.011	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	
	5/31/00	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	11/10/00	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.010	
	3/16/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.010	
	9/20/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	2/25/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	9/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	3/17/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	8/26/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.002	
	2/27/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	8/26/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	4/13/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	
	9/6/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	CM(0.0016)
	2/2/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/30/06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/4/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	1/23/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/1/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/24/08	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/27/08	<0.001	0.020	<0.001	<0.001	<0.001	0.0074	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	0.0011	
	3/30/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	N(0.00561)
	11/5/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	T(0.00055 J)
	4/30/10	<0.001	0.0089	<0.001	<0.001	<0.001	0.0057	<0.001	0.00065 J	<0.002	<0.001	<0.001	<0.001	0.00061 J	EB(0.00054 J), X(0.0015 J)
	12/22/10	0.0012	0.0706	0.00039J	<0.001	0.00065J	0.0204	<0.001	0.0055	<0.002	0.00044	<0.001	<0.001	0.0036	B(0.00027J), EB(0.00026J), T(0.00046J)
	5/4/11	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0064	<0.002	<0.001	<0.001	<0.001	<0.001	B(0.0003J)
	12/28/11	0.0022	0.1180	0.00086J	<0.001	0.0011	0.0189	<0.001	0.0017	<0.002	0.00031J	<0.001	<0.001	0.0089	B(0.00021J), T(0.00040J)
	5/18/12	<0.001	0.0023	<0.001	<0.001	<0.001	0.00026	<0.001	0.0028	<0.002	<0.001	<0.001	<0.001	<0.001	B(0.00023J)
	10/26/12	<0.001	0.0085	<0.001	<0.001	<0.001	0.00048J	<0.001	0.0016	<0.002	<0.001	<0.001	<0.001	<0.001	T(0.0032J), X(0.00072J)
	5/24/13	<0.001	0.0078	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/12/13	<0.001	0.0384	0.00037 J	<0.001	<0.001	0.0028	<0.001	0.0087	<0.002	<0.001	<0.001	<0.001	0.00065 J	B(0.00088J), CS_2(0.00062 J), T(0.00026 J)
	6/30/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/22/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	T(0.00038 J)
	6/10/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00021 J	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/8/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/28/16	<0.001	0.0030	<0.001	<0.001	<0.001	0.0004 J	<0.001	0.0011	<0.002	<0.001	<0.001	<0.001	<0.001	T(0.00022J)
	12/14/16	<0.001	0.0158	<0.001	<0.001	<0.001	0.0034	<0.001	0.00025 J	<0.002	<0.001	<0.001	<0.001	0.00075 J	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/26/17	0.00068 J	0.0048	0.00033 J	<0.001	<0.001	0.0109	<0.001	0.001	<0.002	<0.001	<0.001	<0.001	0.0023	

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

ARCADIS Design & Consultancy for natural and built assets

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-6	8/15/91	<0.002		<0.002	<0.002	<0.002	<0.002	<0.002	0.045	<0.002	<0.002	<0.002	<0.002	0.047	B(0.023), EB(0.003), T(0.004)
	3/30/93	<0.005	0.044	<0.005	<0.005	<0.005	<0.005	<0.005	0.063	<0.010	0.002	<0.005	<0.005	0.027	B(0.032), EB(0.003), T(0.004), X(0.003)
	11/7/94	<0.001	0.151	<0.001	<0.001	<0.001	<0.001	<0.001	0.119	<0.002	<0.001	<0.001	<0.001	0.017	
	12/27/99	<0.002	0.025	<0.002	<0.002	<0.002	<0.002	<0.002	0.103	<0.002	<0.002	<0.002	<0.002	0.023	B(0.041), EB(0.0029), P-IP(0.002), T(0.005) 1,2,4-TMB(0.006), X(0.003)
	3/16/00	<0.001	0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.072	<0.001	0.002	<0.001	<0.001	0.019	B(0.026), EB(0.001), P-IP(0.002) MC(0.003), T(0.003), X(0.002)
	5/31/00	<0.001	0.042	<0.001	<0.001	<0.001	<0.001	<0.001	0.071	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.030)
	8/11/00	<0.001	0.023	<0.001	<0.001	<0.001	<0.001	<0.001	0.087	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.029), EB(0.0017), T(0.0035) X(0.0057)
	11/10/00	<0.002	0.018	<0.002	<0.002	<0.002	<0.002	<0.002	0.077	<0.005	<0.010	<0.010	<0.010	0.027	B(0.033), EB(0.002), T(0.004)
	3/16/01	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	0.034	<0.005	<0.010	<0.010	<0.010	<0.010	B(0.007)
	9/20/01	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.003	B(0.007)
	10/24/01	<0.002	0.013	<0.002	<0.002	<0.002	<0.002	<0.002	0.080	<0.005	<0.010	<0.010	<0.010	0.009	B(0.029), EB(0.002), T(0.004)
	11/19/01	<0.002	0.014	<0.002	<0.002	<0.002	<0.002	<0.002	0.065	<0.005	<0.010	<0.010	<0.010	0.008	B(0.029), EB(0.002), T(0.005)
	12/20/01	<0.002	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	0.065	<0.005	<0.010	<0.010	<0.010	0.005	B(0.021), T(0.003)
	1/30/02	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.037	<0.005	<0.010	<0.010	<0.010	0.003	B(0.011)
	2/25/02	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	0.044	<0.005	<0.010	<0.010	<0.010	0.003	B(0.012)
	9/30/02	<0.002	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	0.055	<0.005	<0.010	<0.010	<0.010	0.005	B(0.020), T(0.002)
	3/17/03	<0.002	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	0.058	<0.005	<0.010	<0.010	<0.010	0.004	B(0.017),T(0.003)
	8/26/03	<0.002	0.009	<0.002	<0.002	<0.002	<0.002	<0.002	0.083	<0.005	<0.010	<0.010	<0.010	0.004	B(0.026),T(0.004),EB(0.002)
	2/27/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	8/26/04	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.036	<0.005	<0.010	<0.010	<0.010	0.003	B(0.012)
	4/13/05	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.056	<0.001	0.001	<0.001	<0.001	0.003	B(0.016), EB(0.0016), T(0.0025), X(0.0027)
	9/6/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	2/2/06	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	0.038	<0.001	0.001	<0.001	<0.001	<0.001	B(0.0088), EB (0.001), T(0.0013), X(0.0029)
	3/30/06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/4/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	1/23/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/1/07	<0.001	0.0033	<0.001	<0.001	<0.001	<0.001	<0.001	0.079	<0.001	0.0016	<0.001	<0.001	0.0025	B(0.029), EB(0.0019), P-IP(0.0011), T(0.003),
	3/24/08	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	0.047	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.015), T(0.0014)
	8/27/08	<0.001	0.0150	<0.001	<0.001	<0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	T(1.5)
	3/30/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	N(0.00553)
	11/5/09	<0.001	0.00066 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0196	<0.002	0.0006 J	<0.001	<0.001	<0.001	X(0.0019 J)
	4/30/10	0.003 J	0.6790	<0.010	<0.010	0.0046 J	0.156	<0.010	0.0307	<0.020	<0.010	<0.010	<0.010	0.0141	B(0.0128)
	12/22/10	0.001	0.0772	<0.001	<0.001	0.00069J	0.022	<0.001	0.0048	<0.002	0.00033J	<0.001	0.00025J	0.0050	T(0.0038J)
	5/4/11	<0.001	0.00068 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0122	<0.002	<0.001	<0.001	<0.001	0.00045 J	Ac(0.0148 J), B (0.0032), T(0.00039J)
	12/28/11	0.008	0.48900	0.0031	<0.001	0.0042	0.076	<0.001	0.0454	<0.002	0.0014	<0.001	0.00042 J	0.0358	Ac(0.0114J), B(0.0096), EB(0.00057) T(0.0021), X(0.0013J)
	5/18/12	<0.001	0.01450	<0.001	<0.001	<0.001	0.0040J	<0.001	0.0923	<0.002	0.0012	<0.001	0.00083J	0.0029	B(0.0243), EB(0.0017), T(0.0025), X(0.0028J)
	10/26/12	<0.001	0.02260	<0.001	<0.001	<0.001	0.00045J	<0.001	0.0735	<0.002	0.00074 J	<0.001	0.00055J)	0.0026	Ac(0.0158J), B(0.0185), CS2(0.00076J) EB(0.0012), T(0.0019J), X(0.0022J)
	5/24/13	<0.001	0.00690	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/12/13	0.00035 J	0.04110	<0.001	<0.001	0.00037 J	0.003	<0.001	0.0833	<0.002	0.0012	<0.001	0.00065 J	0.0018	Ac(0.0197J), B(0.013), CS_2(0.00055 J), EB(0.0011), T(0.0014), X(0.0015 J)
	6/30/14	<0.001	0.00085 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0274	<0.002	<0.001	<0.001	<0.001	<0.001	Ac(0.0248J), B(0.0089), EB(0.00046J), T(0.00081J)
	12/22/14	<0.001	0.00079 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0536	<0.002	0.00063 J	<0.001	0.00044 J	<0.001	B(0.0116), EB(0.00068 J), T(0.0014), X(0.00087 J)
	6/10/15	<0.001	0.00035 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0201	<0.002	0.00029 J	<0.001	<0.001	<0.001	Ac(0.0124J), B(0.0034), MEK(0.0018J), EB(0.00039J) T(0.00049J), X(0.00064J)
	12/8/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	EB(0.0025J)
	6/28/16	<0.001	0.0037	<0.001	<0.001	<0.001	0.00031 J	<0.001	0.0021	<0.002	<0.001	<0.001	<0.001	<0.001	B(0.00037J), T(0.00021J)
	12/14/16	0.00028 J	0.0199	<0.001	<0.001	<0.001	0.004	<0.001	0.00031 J	<0.002	<0.001	<0.001	<0.001	0.001	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/26/17	0.015	25.1000	0.0793	<0.001	0.1550	0.919	<0.001	0.0318	<0.002	0.004	<0.001	0.00081 J	1.870	B(0.0234), EB(0.00048J), T(0.011), X(0.0016J)
	1/19/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0045	<0.002	<0.001	<0.001	<0.001	<0.001	B(0.00045J)
MW-7	8/15/91	1.550		<1	<1	3.300	10.500	<1	<1	<1	<1	<1	<1	1.500	
	3/30/93	0.673	81.000	0.194	<0.1	3.080	1.910	0.032	0.035	<0.2	<0.1	<0.1	<0.1	7.610	B(0.041), EB(0.096), T(0.805), X(0.052)
	11/7/94	0.527	51.000	0.109	<0.1	2.220	0.184	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	4.990	
	2/22/95	0.254	37.500	0.072	<0.050	1.890	0.155	<0.050	<0.050	<0.1	<0.050	<0.050	<0.050	7.680	

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-7	5/18/95	0.471	76.400	0.115	<0.050	3.530	0.176	<0.050	0.034	<0.1	<0.050	<0.050	<0.050	16.000	B(0.069), EB(0.030), T(0.577), X(0.013)
(cont'd)	8/15/95	0.375	47.200	0.143	<0.1	1.340	0.383	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	3.800	
	11/13/95	0.261	37.400	0.064	<0.050	1.300	0.144	<0.050	<0.050	<0.1	<0.050	<0.050	<0.050	6.010	T(0.244)
	2/20/96	0.160	27.900	0.052	<0.001	1.240	0.140	<0.001	0.024	<0.001	0.003	<0.001	<0.001	4.570	B(0.026), EB(0.026), T(0.210), (X(0.014)
	5/20/96	0.345	36.560	0.096	<0.001	1.720	0.090	<0.001	0.023	<0.001	0.005	<0.001	0.001	8.200	B(0.025), EB(0.023), T(0.330), X(0.013)
	8/30/96	0.511	53.870	0.093	<0.001	1.885	0.112	4.762	<0.001	<0.001	<0.001	<0.001	<0.001	8.560	
	11/14/96	0.274	48.745	0.080	<0.050	1.615	0.130	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	8.700	T(0.294)
	2/28/97	0.453	49.400	0.067	<0.001	2.500	0.110	<0.001	0.008	<0.001	<0.001	<0.001	<0.001	4.420	
	5/8/97	0.077	45.030	0.021	<0.001	0.358	0.007	<0.001	0.006	<0.001	<0.001	<0.001	<0.001	2.731	B(0.007), EB(0.004), T(0.055)
	8/26/97	0.233	35.500	0.062	0.004	1.310	0.073	<0.001	0.025	0.007	0.004	0.001	0.001	8.610	
	11/26/97	0.191	53.100	0.110	0.007	1.560	0.162	<0.005	0.022	<0.010	<0.005	<0.005	<0.005	11.800	B(0.020), EB(0.012), T(0.228)
	2/14/98	0.098	9.938	0.134	<0.005	0.392	0.091	0.002	0.008	<0.005	<0.005	<0.005	<0.005	3.000	
	6/19/98	0.521	39.300	0.157	<0.005	2.180	0.299	<0.005	0.017	<0.010	<0.005	<0.005	<0.005	9.870	B(0.017), EB(0.014), T(0.183)
	8/8/98	0.295	60.100	0.121	<0.005	1.510	0.524	<0.005	0.030	<0.010	<0.005	<0.005	<0.005	10.700	
	11/30/98	0.289	40.900	0.170	<0.005	0.995	0.846	<0.005	0.030	<0.010	<0.005	<0.005	<0.005	7.150	B(0.025), EB(0.023), T(0.128)
	2/15/99	0.110	15.900	0.032	<0.005	0.349	0.245	<0.005	0.007	<0.010	<0.005	<0.005	<0.005	0.054	B(0.006), T(0.069)
	5/15/99	0.039	7.040	0.023	<0.005	0.254	0.145	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	2.350	T(0.043), X(0.016)
	9/3/99	<0.005	36.000	0.510	<0.005	1.100	0.520	<0.005	0.029	0.039	<0.005	<0.005	<0.005	9.300	B(0.025), EB(0.024), T(0.250), X(0.017)
	12/27/99	0.235	37.300	0.107	<0.002	1.000	1.030	<0.002	0.020	<0.002	0.005	<0.002	<0.002	3.760	B(0.018), CS_2(0.007), T(0.153) CM(0.037), EB(0.014),
	3/16/00	0.677	25.000	<0.001	0.003	1.130	0.919	<0.001	0.026	0.019	0.003	<0.001	<0.001	5.880	B(0.024), EB(0.017), T(0.151) X(0.006)
	5/31/00	0.297	21.230	0.132	0.003	1.170	1.140	<0.001	0.018	<0.001	<0.001	<0.001	<0.001	3.590	EB(0.0142), T(0.135), X(0.0085)
	8/11/00	<0.001	54.300	0.435	<0.001	0.617	0.925	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	10.600	B(0.0225), EB(0.018), T(0.130) X(0.009)
	11/10/00	0.410	60.000	0.130	<0.100	1.100	1.600	<0.100	<0.500	<0.250	<0.500	<0.500	<0.500	11.000	T(0.160)
	3/16/01	<0.200	21.000	<0.200	<0.200	0.580	0.720	<0.200	<1.000	<0.500	<1.000	<1.000	<1.000	4.300	
	9/20/01	0.360	46.000	<0.200	<0.200	1.100	1.900	<0.200	<1.000	<0.500	<1.000	<1.000	<1.000	6.300	
	10/24/01	<0.400	19.000	<0.400	<0.400	0.410	0.500	<0.400	<2.000	<1.000	<2.000	<2.000	<2.000	3.900	
	11/19/01	<0.400	44.000	1.800	<0.400	0.870	1.200	<0.400	<2.000	<1.000	<2.000	<2.000	<2.000	5.400	
	12/20/01	0.140	17.000	0.180	<0.100	0.440	0.370	<0.100	<0.500	<0.250	<0.500	<0.500	<0.500	3.600	
	1/30/02	0.051	6.600	0.047	<0.040	0.150	<0.040	<0.040	<0.200	<0.100	<0.200	<0.200	<0.200	1.700	
	2/25/02	<0.050	7.400	<0.050	<0.050	0.180	0.068	<0.050	<0.250	<0.050	<0.250	<0.250	<0.250	1.500	
	9/30/02	<0.020	2.700	<0.020	<0.020	0.059	0.053	<0.020	<0.100	<0.050	<0.100	<0.100	<0.100	0.460	
	3/17/03	0.120	17.000	0.048	0.040	0.380	0.500	0.040	0.200	0.100	0.200	0.200	0.200	2.900	T(0.057)
	8/26/03	0.400	22.000	<0.400	<0.400	0.450	0.910	<0.400	<2.00	<1.00	<2.00	<2.00	<2.00	2.700	
	2/27/04	<0.002	0.015	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.013	
	5/13/04	0.044	5.600	0.038	<0.002	0.140	0.150	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.920	T(0.018), B(0.004)
	8/26/04	<0.002	0.067	<0.002	<0.002	0.005	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.022	
	12/3/04	0.200	30.000	0.210	<0.200	0.520	0.380	<0.200	<0.200	<0.200	<0.010	<0.010	<0.010	4.200	
	4/13/05	<0.200	14.000	<0.200	<0.200	0.270	0.470	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	1.500	
	7/1/05	0.094	18.000	0.140	<0.020	0.240	0.050	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
	9/6/05	0.074	12.000	0.071	<0.050	0.200	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.600	
	12/20/05	<0.200	23.000	<0.200	<0.200	0.380	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	3.300	
	2/2/06	<0.1	8.8	<0.1	<0.1	0.14	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.2	
	3/30/06	<0.5	19	<0.5	<0.5	<0.5	0.680	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	T(0.030 J), MC(0.055 JB)
	10/4/06	<0.025	3.200	<0.025	<0.025	0.073	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.770	
	1/23/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/1/07	0.240	45.000	0.140	<0.025	0.560	4.000	<0.025	0.029	<0.025	<0.025	<0.025	<0.025	3.200	B(0.049), EB(0.200), T(3.300), X(1.400), 1,1,1-
	3/24/08	<0.005	52.000	<0.005	<0.005	0.660	4.700	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	3.300	
	8/27/08	0.280	34.000	<0.250	<0.250	0.440	2.000	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	2.400	
	3/30/09	0.362	38.800	2.230	<0.001	0.579	3.900	<0.001	0.024	<0.001	0.006	<0.001	0.001	3.330	DCE (42.6)
	11/5/09	0.521	60.000	<0.500	<0.500	0.743	4.220	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	5.130	T(0.723)
	4/30/10	0.349 J	61.100	<1.000	<1.000	0.64 J	4.980	<1.000	<1.000	<2.000	<1.000	<1.000	<1.000	3.870	
	12/22/10	0.529J	67.200	<1.000	<1.000	0.850J	4.690	<1.000	<1.000	<2.000	<1.000	<1.000	<1.000	5.800	
	5/4/11	0.296J	39.900	<1.000	<1.000	0.412J	1.560	<1.000	<1.000	<2.000	<1.000	<1.000	<1.000	3.510	
	12/28/11	0.217J	35.000	<0.500	<0.500	0.347J	0.816	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	2.980	
	5/18/12	<0.500	32.900	<0.500	<0.500	0.302J	0.459J	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	3.500	
	10/26/12	0.289 J	40.600	<0.500	<0.500	0.398 J	0.922	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	4.090	
	5/24/13	0.283 J	34.500	<0.500	<0.500	0.308 J	2.530	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	2.550	

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-7	12/12/13	0.365 J	48.500	<0.500	<0.500	0.460 J	3.640	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	3.500	
(cont'd)	6/30/14	0.291	32.800	0.148 E	0.00053 J	0.339	1.260	<0.001	0.047	<0.002	0.009	0.00033 J	0.001	3.440	B(0.0188), CS_2(0.0003J), CHX(0.00062J), EB(0.0042),
	12/22/14	0.361 J	45.800	<0.500	<0.500	0.414 J	2.930	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	2.260	
	6/10/15	0.298 J	44.800	<0.500	<0.500	0.330 J	2.470	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	2.950	MC (1.420)
	12/8/15	0.544	52.200	0.159 J	<0.250	0.491	4.900	<0.250	0.131 J	<0.500	<0.250	<0.250	<0.250	3.600	MC(0.691 JB)
	6/28/16	0.323 J	42.600	<0.500	<0.500	0.360 J	3.300	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	3.360	
	12/14/16	0.272 J	42.300	<0.500	<0.500	0.311 J	3.750	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	2.510	
	6/5/17	0.191 J	29.200	<0.500	<0.500	0.198 J	1.630	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	2.770	
	12/28/17	0.382 J	55.100	0.150 J	<0.500	0.359 J	7.510	<0.500	0.120 J	<1.000	<0.500	<0.500	<0.500	2.680	
MW-8	3/30/93	<0.050	0.172	<0.050	<0.050	0.010	2.470	0.034	0.012	<0.1	0.008	<0.050	0.006	<0.1	
	2/22/95	<0.025	0.392	<0.025	<0.025	<0.025	5.130	<0.025	<0.025	<0.050	<0.025	<0.025	<0.025	<0.050	
	5/18/95	0.003	0.131	0.003	<0.005	0.007	1.650	0.004	0.055	<0.010	0.026	<0.005	0.029	0.003	B(0.022), T(0.003), X(0.003)
	8/15/95	<0.050	0.253	<0.050	<0.050	<0.050	2.240	<0.050	<0.050	<0.10	<0.050	<0.050	<0.050	<0.1	
	11/13/95	0.004	0.227	<0.005	<0.005	0.006	3.650	0.015	0.026	<0.010	0.012	<0.005	0.013	<0.010	
	2/20/96	0.004	0.900	0.002	<0.001	0.005	1.140	0.004	0.043	<0.001	0.013	0.003	0.015	0.002	B(0.009)
	5/20/96	0.002	0.376	<0.001	<0.001	0.005	1.694	0.003	0.049	<0.001	0.018	0.005	0.027	0.002	B(0.014), X(0.002)
	8/30/96	<0.001	0.233	<0.001	<0.001	0.007	1.750	0.003	0.065	<0.001	0.033	0.006	<0.001	0.001	
	11/14/96	<0.001	0.356	0.002	<0.001	0.007	3.475	0.006	0.045	<0.001	0.017	0.006	0.032	<0.001	B(0.012), X(0.003)
	2/28/97	0.006	0.474	<0.001	<0.001	<0.001	3.695	0.008	0.031	<0.001	0.009	0.004	<0.001	0.005	
	5/8/97	0.002	0.186	0.003	<0.001	<0.001	0.631	<0.001	0.039	<0.001	0.013	0.004	0.018	0.008	B(0.019)
	8/26/97	<0.001	0.520	0.001	<0.001	0.006	3.920	0.012	0.018	<0.001	0.006	0.003	0.003	0.003	
	11/26/97	0.006	0.632	<0.005	<0.005	<0.005	5.950	0.012	0.007	<0.010	<0.005	<0.005	<0.005	<0.010	
	2/14/98	<0.005	0.458	<0.005	<0.005	<0.005	3.170	0.019	0.012	<0.005	<0.005	<0.005	<0.005	<0.002	
	6/19/98	0.008	0.358	<0.005	<0.005	<0.005	4.010	0.007	0.023	<0.010	0.008	<0.005	0.011	0.034	B(0.012)
	8/8/98	<0.005	0.236	<0.005	<0.005	0.008	2.080	<0.005	0.041	<0.010	0.025	<0.005	0.023	0.138	
	11/30/98	<0.005	0.179	<0.005	<0.005	0.009	2.180	<0.005	0.033	<0.010	0.102	0.010	0.036	0.182	B(0.077), T(0.008)
	2/15/99	<0.005	0.028	<0.005	<0.005	<0.005	2.420	<0.005	<0.005	<0.010	0.010	<0.005	<0.005	0.022	
	5/15/99	<0.005	0.243	<0.005	<0.005	0.013	2.580	<0.005	0.024	0.006	0.138	0.052	0.010	0.296	B(0.061), X(0.027)
	9/3/99	<0.005	0.150	<0.005	<0.005	0.008	0.990	<0.005	0.019	<0.005	0.140	0.013	0.041	0.140	B(0.130), T(0.010), X(0.016)
	12/27/99	0.008	0.182	<0.002	<0.002	0.015	1.190	0.005	0.008	<0.002	0.031	0.008	0.019	0.175	B(0.041)
	3/16/00	0.021	0.095	<0.001	<0.001	0.013	1.170	0.003	0.007	0.001	0.041	0.006	0.018	0.222	B(0.060), 2-CHT(0.014), 4-CHT(0.012), T(0.001), 1,2,4-B(0.001), X(0.003)
	5/31/00	0.005	0.290	0.003	<0.001	0.023	2.050	0.003	0.010	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.166), X(0.0079)
	8/11/00	0.006	0.283	0.003	<0.001	0.021	0.924	<0.001	0.010	<0.001	<0.001	<0.001	<0.001	<0.001	B(0.049), T(0.002)
	11/10/00	<0.010	0.300	<0.010	<0.010	0.018	0.940	<0.010	<0.050	<0.025	0.062	<0.050	<0.050	0.140	B(0.019)
	3/16/01	<0.002	0.079	<0.002	<0.002	<0.002	0.140	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.010	
	9/20/01	0.004	0.270	<0.002	<0.002	0.002	0.210	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.078	B(0.005)
	2/25/02	<0.002	0.180	<0.002	<0.002	<0.002	0.009	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.008	
	9/30/02	0.002	0.085	<0.002	<0.002	<0.002	0.027	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.046	
	3/17/03	0.003	0.230	<0.002	<0.002	<0.002	0.095	<0.200	<0.010	<0.005	<0.010	<0.010	<0.010	0.009	
	8/26/03	<0.002	0.089	<0.002	<0.002	0.005	0.004	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.038	B(0.025),T(0.004)
	2/27/04	<0.002	0.007	<0.002	<0.002	<0.002	0.004	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	
	8/26/04	<0.002	0.099	<0.002	<0.002	0.003	0.034	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.094	B(0.005)
	4/13/05	<0.001	0.053	<0.001	<0.001	<0.001	0.017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.040	
	9/6/05	<0.001	0.037	<0.001	<0.001	<0.001	0.002	<0.001	0.008	0.003	0.002	<0.001	0.001	0.015	Ac(0.034), B(0.0042), 2-But(0.016)
	2/2/06	<0.001	0.019	<0.001	<0.001	<0.001	0.0066	<0.001	0.037	<0.001	0.0047	<0.001	0.0061	0.0044	X(0.0029)
	3/30/06	<0.005	0.0099	<0.005	<0.005	<0.005	<0.005	<0.005	0.015	0.0032	<0.005	<0.005	<0.005	0.018	B(0.0037)
	10/4/06	<0.001	0.0380	0.00230	<0.001	0.0014	<0.001	<0.001	0.017	<0.001	0.0034	<0.001	0.0047	0.079	B(0.0041), T(0.0035)
	1/23/07	<0.001	0.012	<0.001	<0.001	<0.001	0.0025	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0035	2-CHT(0.0018)
	8/1/07	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	0.0083	<0.001	<0.001	<0.001	0.0016	0.0018	T(0.0032)
	3/24/08	0.0042	0.150	0.0024	<0.001	0.001	<0.001	<0.001	0.071	0.0041	0.027	0.0021	0.0099	0.140	B(0.0028), T(0.002), X(0.001)
	8/27/08	0.002	0.130	0.001	<0.001	0.002	0.035	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.016	
	3/30/09	<0.001	0.094	0.001	<0.001	0.002	0.024	<0.001	0.006	<0.001	0.007	<0.001	0.003	0.017	T(0.00197), B(0.00211), 1,2-DCE(0.0996)
	11/5/09	0.0018 J	0.163	0.0011 J	<0.002	0.0017 J	0.034	<0.002	0.0069	<0.004	0.003	0.00052 J	0.002	0.0106	B(0.003), T(0.00099 J)
	4/30/10	<0.005	0.192	<0.005	<0.005	0.0086	0.0197	<0.005	0.0053	<0.010	0.024	0.0018 J	0.0062	0.5900	B(0.0347), MCH (0.0024 J), T(0.0043 J)
	12/22/10	0.0052J	0.476	<0.010	<0.010	0.0045J	0.0942	<0.010	0.0360	<0.020	0.004	<0.010	<0.010	0.0196	B(0.0067J), T(0.0037J)
	5/4/11	<0.001	0.0282	0.00067J	<0.001	0.0015	0.0018	<0.001	0.0125	0.003	0.0028	0.00064J	0.0024	0.0788	B(0.0097), CS_2(0.00058J), T(0.001)
	12/28/11	0.00058 J	0.0346	0.00051 J	<0.001	0.0011	0.0063	0.0008	0.0280	0.0013 J	0.0201	0.0028	0.0089	0.0144	B(0.0031), MCH(0.00048J)
	5/18/12	0.0036	0.1960	0.0014	<0.001	0.0018	0.0128	0.0007J	0.0041	<0.002	0.0015	0.00029J	0.00083J	0.0141	B(0.0007J), T(0.00093J)
	10/26/12	0.0026	0.1870	0.0014 J	<0.002	0.0023	0.0174	<0.002	0.0085	<0.004	0.0012 J	<0.002	0.0014 J	0.0357	B(0.0014J), T(0.0014J)
	5/24/13	0.0048	0.2600	0.0024	<0.002	0.0030	0.0275	0.00096 J	0.0042	<0.004	0.0046	0.00075 J	0.0024	0.1070	B(0.001J), T(0.00041 J)
	12/12/13	<0.001	0.0693	<0.001	<0.001	0.0075 J	0.0078	0.0009 J	0.0108	<0.002	0.0014	0.00081 J	0.0031	0.0051	B(0.00074J), T(0.00042J)

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-8	6/30/14	<0.001	0.0212	0.00035 J	<0.001	0.0013	0.0026	0.00056 J	0.0015	0.0011 J	0.00065 J	<0.001	0.0005 J	0.0453	B(0.0028), CS_2(0.00032J), T(0.00053J)
(cont'd)	12/22/14	<0.001	0.0022	<0.001	<0.001	<0.001	0.0026	0.00076 J	0.00097 J	<0.002	<0.001	<0.001	0.00075 J	0.0004 J	Ac(0.0113 J)
	6/10/15	<0.001	0.0097	<0.001	<0.001	0.001	0.0020	0.00063 J	0.0016	0.0011 J	0.001	0.00030 J	0.0010	0.0458	Ac(0.0129), B(0.0028), MEK(0.0033), T(0.0021)
	12/8/15	0.0017	0.1460	0.003	<0.001	0.003	0.0098	0.00074 J	0.0129	<0.002	0.008	0.001	0.0050	0.1470	B(0.002), MCH (0.00047J), T(0.0007J)
	6/28/16	0.00043 J	0.0677	0.00081 J	<0.001	0.0015	0.0154	0.0017	0.0031	<0.002	0.0035	0.00043 J	0.0012	0.0345	Ac(0.0215J), B(0.00098J), MEK(0.0035J), T(0.0005J)
	12/14/16	0.0016	0.1140	0.001	<0.001	0.0022	0.0240	0.00039 J	0.0099	<0.002	0.0144	0.002	0.0057	0.1250	B(0.002), MCH (0.00066J), T(0.00086J)
	6/5/17	<0.001	0.0049	<0.001	<0.001	0.0020	0.0012	0.00027 J	0.0073	<0.002	0.0035	0.0007 J	0.0025	0.0170	B(0.0022), T(0.00054J)
	12/28/17	0.00047 J	0.0341	0.00027 J	<0.001	0.00054 J	0.0037	<0.001	0.0124	<0.002	0.0024	0.0012	0.0041	0.0154	B(0.00051J, MCH (0.00047J)
MW-13	9/20/01	0.310	33.000	0.260	<0.100	0.630	1.400	<0.100	<0.500	<0.250	<0.500	<0.500	<0.500	1.900	
	10/24/01	<1.000	59.000	<1.000	<1.000	1.300	1.600	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	6.400	
	11/19/01	<1.000	52.000	2.300	<1.000	1.300	2.000	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	7.200	
	12/20/01	0.420	44.000	0.790	<0.100	1.500	1.700	<0.100	<0.500	0.330	<0.500	<0.500	<0.500	7.900	T(0.230)
	1/30/02	<1.000	36.000	<1.000	<1.000	1.000	1.300	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	8.200	
	2/25/02	<0.400	43.000	<0.400	<0.400	1.100	1.800	<0.400	<2.000	<0.400	<2.000	<2.000	<2.000	6.700	
	9/30/02	<1.000	41.000	<1.000	<1.000	1.100	2.000	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	7.300	
	3/17/03	<1.000	44.000	<1.000	<1.000	<1.000	2.200	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	4.200	
	8/26/03	<0.500	31.000	<0.500	<0.500	0.600	1.500	<0.500	<2.500	<1.300	<2.500	<2.500	<2.500	3.700	
	2/27/04	<1.000	53.000	<1.000	<1.000	<1.000	2.400	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	7.500	
	5/13/04	<1.000	23.000	<1.000	<1.000	<1.000	1.000	<1.000	<5.000	<2.500	<5.000	<5.000	<5.000	4.200	
	8/26/04	<0.002	0.075	<0.002	<0.002	<0.002	0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	0.012	
	12/3/04	<0.200	24.000	<0.200	<0.200	0.420	0.470	<0.200	<0.200	0.220	<0.010	<0.010	<0.010	4.200	CH(0.220)
	4/13/05	<0.200	19.000	<0.200	<0.200	0.350	0.720	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	2.100	
	7/1/05	0.093	11.000	0.160	<0.020	<0.020	0.490	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.970	
	9/6/05	0.038	5.700	0.029	<0.020	0.096	0.110	<0.020	<0.020	0.036	<0.020	<0.020	<0.020	0.910	
	12/20/05	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	2/2/06	0.0013	0.19	0.0015	<0.001	0.0026	0.0046	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.011	
	3/30/06	<0.00020	0.0018	<0.00020	<0.00020	0.00029	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	MC(0.00080 JB)
	10/4/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	1/23/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/1/07	<0.001	0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	
	3/24/08	<0.200	24.000	<0.200	<0.200	0.260	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	1.5000	
	8/28/08	<0.001	0.013	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/30/09	0.166	14.400	0.122	<0.001	0.193	1.370	<0.001	0.011	<0.001	0.004	<0.001	<0.001	1.1800	DCE (18.6)
	11/5/09	<0.001	0.00053 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0153	<0.002	0.00046 J	<0.001	<0.001	<0.001	X(0.0018 J)
	4/30/10	0.156 J	24.800	<0.250	<0.250	0.235 J	0.484	<0.250	<0.250	<0.500	<0.250	<0.250	<0.250	2.3200	
	12/22/10	0.241J	34.000	0.0931J	<0.250	0.372	2.100	<0.250	<0.250	<0.500	<0.250	<0.250	<0.250	2.4200	
	5/4/11	0.290J	39.200	<0.500	<0.500	0.431J	1.530	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	3.4400	
	12/28/11	0.227 J	27.100	<0.500	<0.500	0.280	0.492 J	<0.500	<0.500	<1.000	<0.500	<0.500	<0.500	3.8600	
	5/18/12	0.146J	18.400	<0.200	<0.200	<0.200	0.350	<0.200	<0.200	<0.400	<0.200	<0.200	<0.200	1.8100	MC(0.800)
	10/26/12	0.151 J	23.500 [b]	0.0718 J	<0.200	0.210	0.502	<0.200	<0.200	<0.400	<0.200	<0.200	<0.200	2.6600	
	5/24/13	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/12/13	0.183 E	19.600	0.078	<0.001	0.193	0.451	<0.001	0.032	0.0006	0.004	<0.001	0.0009	1.7100	B(0.020), EB(0.0006), MC(0.00069), T(0.016), X(0.0013)
	6/30/14	0.128 J	15.800	0.181 E	0.00026 J	0.149 J	0.357	<0.001	0.031	<0.002	0.004	0.00023 J	0.00084 J	1.8900	B(0.0191), EB(0.0007), MC(0.0036), T(0.0138), X(0.0017J)
	12/22/14	0.164 J	20.100	<0.250	<0.250	0.176 J	0.591	<0.250	0.0834 J	<0.500	<0.250	<0.250	<0.250	1.9600	CS_2(0.247 J)
	6/10/15	0.107 J	15.500	0.0469 J	<0.200	0.115 J	0.482	<0.200	<0.200	<0.400	<0.200	<0.200	<0.200	1.3800	
	12/8/15	0.172 J	18.400	<0.250	<0.250	0.164 J	1.680	<0.250	0.0825 J	<0.500	<0.250	<0.250	<0.250	1.4000	MC(0.652 JB)
	6/28/16	0.123 J	15.900	<0.200	<0.200	0.126 J	0.672	<0.200	0.0401 J	<0.400	<0.200	<0.200	<0.200	1.8600	
	12/14/16	0.133 J	18.000	0.070 J	<0.200	0.132 J	0.739	<0.200	<0.200	<0.400	<0.200	<0.200	<0.200	1.9500	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/26/17	0.140	26.600	0.088	<0.001	0.145	0.828	<0.001	0.032	<0.002	0.004	<0.001	0.00075 J	1.6700	B(0.024), EB(0.00051J), T(0.0011), X(0.0016J)
MW-14	10/13/03	<0.100	0.840	<0.100	<0.100	<0.100	0.730	<0.100	<0.100	<0.100	NA	NA	NA	<0.100	TCA (0.130), T (19.0), EB (1.9), X (21.0)
	12/11/03	0.097	2.900	0.027	0.150	0.200	1.800	<0.005	<0.005	0.015	NA	NA	NA	0.100	MEK (6.7), 4-m-2-p (2.2), Ace (3.1), EB (4.4), X (40.0), MC (0.200), T (65.0)
	2/27/04	<0.020	4.800	<0.020	0.160	0.150	6.100	0.020	0.110	<0.050	0.450	<0.100	<0.100	0.130	Ac(2.2), B(0.630), 2-But(9.1), EB(6.1) MC(0.095), 4-M-2-Pent(1.7), T(96) 1,1,1-T(0.780), 1,2,4-TMB(0.130) X(57)
	8/26/04	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.010	<0.010	<0.010	<0.002	EB(0.004), T(0.070), X(0.042)
	4/13/05	<1.000	3.400	<1.000	<1.000	<1.000	1.100	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	EB(5.700), T(60.000), X(54.000)
	9/6/05	<0.500	3.500	<0.500	<0.500	<0.500	1.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	EB(6.800), T(71.000), X(67.000)
	2/2/06	<1.0	2.6	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	EB(9.1), T(90)
	3/30/06	<2.5	3.800	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	B(0.610), EB(9.5), T(81.000), X(84.000)
	10/4/06	<1.000	6.200	<1.000	<1.000	<1.000	3.100	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	EB(6.700), T(90.000), X(66.000)
	1/23/07	0.090	9.100	0.035	<1.000	<1.000	2.400	<1.000	0.110	0.012	<1.000	0.023	0.065	<1.000	EB(9.000), T(96.000), X(91.000), CHL (0.0014), IPB
	8/1/07	<250	330	<250	<250	<250	350	<250	<250	<250	1200	76	220	<250	EB(4.0), T(17.0), X(36.0)

Table 4
Summary of Groundwater Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Well Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	1,2-DB mg/L	1,3-DB mg/L	1,4-DB mg/L	VC mg/L	Others mg/L
MW-14	3/24/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
(cont'd)	8/27/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	3/30/09	0.046	8.240	0.019	<0.001	0.188	1.560	<0.001	0.128	0.010	0.328	0.019	0.054	0.878	Ac(1.760), B(0.532), 2-But(5.350), T-BB(0.00135), S-BB(0.00315), CS2(0.00161), CHL(0.00138), EB(6.160), IPB(0.0556), P-IP(0.0221), MC(0.0393), 4-M-2-Pent(2.420), N(0.0167), N-PB(0.0309), T(86.800), 1,1,1-TCA(0.514), 1,1,2-T(0.010), X(75.6), 1,2-DCE(8.860), 1,3,5-TMB(0.053), 1,2,4-TMB(0.122)
	11/5/09	0.0633 J	8.290	<0.100	0.142	0.198	0.650	<0.100	<0.100	<0.200	0.190	<0.100	0.0366 J	0.414	Ac(1.370 J), B(0.784), 2-But.(2.270), EB(5.580),
	4/30/10	<1.000	14.700	<1.000	<1.000	<1.000	1.670	<1.000	<1.000	<2.000	0.542 J	<1.000	<1.000	<1.000	B(0.943 J), CHL(0.462 J), EB(8.540), 4-M-2-Pent(2.480
	12/22/10	<2.000	9.000	<2.000	<2.000	<2.000	1.470J	<2.000	<2.000	<4.000	<2.000	<2.000	<2.000	0.522J	B(0.630J), EB(5.820), MEK(7.220J), 1,1,1-
	5/4/11	<2.000	10.600	<2.000	<2.000	<2.000	1.600J	<2.000	<2.000	<4.000	<2.000	<2.000	<2.000	0.753J	B(0.747J), CS_2(2.22J), EB(6.280) 1,1,1-TCA(0.753J), T(101), X(56.4)
	12/28/11	<1.000	8.830	<1.000	<1.000	<1.000	1.240	<1.000	<1.000	<2.000	<1.000	<1.000	<1.000	0.697J	B(0.639J), EB(5.420), MCH(2.850J) MEK(5.290), T(126), X(51.1)
	5/18/12	<2.000	10.300	<2.000	<2.000	<2.000	1.870	<2.000	<2.000	<4.000	<2.000	<2.000	<2.000	<2.000	B(0.827J), EB(5.920), MEK(8.630) T(113.000), X(52.900)
	10/26/12	<0.500	9.890	<0.500	0.145 J	0.202 J	0.810	<0.500	<0.500	<1.000	0.121 J	<0.500	<0.500	0.590	B(0.805), EB(4.570), MCH(2.520), 1,1,1-TCA(0.582)
	5/24/13	<2.000	11.000	<2.000	<2.000	<2.000	1.980	<2.000	<2.000	<4.000	0.494 J	<2.000	<2.000	<2.000	B(0.812), EB(8.300), 1,1,1-TCA(0.745), T(119.000) X(77.600)
	12/12/13	<2.000	7.540	<2.000	<2.000	<2.000	0.889 J	<2.000	<2.000	<4.000	0.689 J	<2.000	<2.000	<2.000	B(0.641 J), EB(8.620), T(135), X(86.6)
	6/30/14	<2.000	11.500	<2.000	<2.000	<2.000	1.260 J	<2.000	<2.000	<4.000	0.770 J	<2.000	<2.000	<2.000	B(0.866J), EB(8.980), 1,1,1-TCA(0.904J), T(124.000), X(84.1)
	12/22/14	<1.000	10.800	<1.000	<1.000	<1.000	0.551 J	<1.000	<1.000	<2.000	0.927 J	<1.000	<1.000	0.421 J	B(0.863 J), EB(9.65), 1,1,1-TCA(0.578 J), T(80.1), X(80.3)
	6/10/15	<1.000	10.800	<1.000	<1.000	0.233 J	0.266 J	<1.000	<1.000	<2.000	0.725 J	<1.000	<1.000	0.547 J	B(0.745), EB(8.020), MC(3.450J), 4-M-2-Pent(1.670J) T(116.000), 1,1,1-TCA(0.399J), X(76.700)
	12/8/15	0.0563 J	10.600	<1.000	0.143	0.243	0.539	<1.000	<1.000	<2.000	1.170	0.0623J	0.204	0.564	B(0.770), 2-But(1.270), EB(9.760), IPB(0.0778 J) MC(0.294JB), 4-M-2-Pent(1.380), Sy(0.176), 1,1,1-TCA(0.421), T(114.000), X(86.900)
	6/28/16	<1.000	12.600	<1.000	<1.000	<1.000	0.444 J	<1.000	0.217 J	<2.000	1.000	<1.000	<1.000	0.672 J	B(0.877J), EB(9.630), 4-M-2-Pent(2.000J) T(125.000[a]), 1,1,1-TCA(0.436J), X(86.100)
	12/14/16	<2.000	9.650	<2.000	<2.000	<2.000	0.634 J	<2.000	<2.000	<4.000	1.510	<2.000	<2.000	<2.000	B(0.940J), EB(10.4), T(103.000), 1,1,1-TCA(0.426J) X(82.400)
	6/5/17	<2.000	7.540	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<4.000	<2.000	<2.000	<2.000	<2.000	B(0.648J), EB(7.110), T(101.000), X (67.600)
	12/26/17	<2.000	9.310	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<4.000	<2.000	<2.000	<2.000	<2.000	B(0.700), EB(8.640), T(110.000), X(80.100)
MW-15	5/18/12	<0.001	0.0044	<0.001	<0.001	<0.001	<0.001	<0.001	0.0048	<0.002	<0.001	<0.001	<0.001	<0.001	B(0.00035J), T(0.00026J)
	10/26/12	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.00082 J	<0.002	<0.001	<0.001	<0.001	<0.001	T(0.00022J)
	5/24/13	<0.001	0.008	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/12/13	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/30/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/22/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/10/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/8/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/28/16	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	T(0.0015), X(0.0015J)
	12/14/16	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	
	12/28/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	

LIST OF ABBREVIATIONS

Acetone	Ac	1,2-Dichloroethane	1,2-DCA	trans-1,2-Dichloroethene	t-1,2-DCE
Benzene	B	Ethylbenzene	EB	1,2,4-Trimethylbenzene	1,2,4-TMB
Bromobenzene	BB	Hydrocarbons (Mineral Spirits)	H-MIN	1.3,5-Trimethylbenzene	1,3,5-TMB
2-Butanone	2-But.	Isopropylbenzene	IPB	Toluene	T
Chlorobenzene	CB	Methyl Chloride	MC	Styrene	Sy
Chloroethane	CH	Methyl ethyl ketone	MEK	Vinyl Chloride	VC
Carbon Disulfide	CS_2	4-Methyl-2-Pentanone	4-M-2-Pent	Xylenes	X
Chloroform	CHL	Methylcyclohexane	MCH	Not Sampled	NS
Chloromethane	CM	milligrams/Liter	mg/L	Estimated value (result is between Reporting	J
cis-1,2-Dichloroethene	c-1,2-DCE	Naphthalene	N	Limit and Method Detection Limit)	
Cyclohexane	CHX	N-Propylbenzene	N-PB	Result is from Run# 2	[a]
1,2-Dichlorobenzene (O-DB)	1,2-DB	P-CY	p-Cymene	Analyte found in associated method blank	[b]
1,3-Dichlorobenzene M-DB)	1,3-DB	P-Isopropyltoluene	P-IP		
1,4-Dichlorobenzene (P-DB)	1,4-DB	sec-Butylbenzene	S-BB		
1,1-Dichloroethene	1,1-DCE	tert-Butylbenzene	T-BB		
1,2,4-Trichlorobenzene	1,2,4-B	Tetrachloroethene	PCE		
2-Chlorotoluene	2-CHT	Trichloroethene	TCE		
4-Chlorotoluene	4-CHT	1,1,1-Trichloroethene	1,1,1-TCE		
1,1-Dichloroethane	1,1-DCA	1,1,1-Trichloroethane	1,1,1-TCA		

Table 5
Summary of Surface Water Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Sample Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	VC mg/L	Others mg/L
SW-1	11/19/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	12/20/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	1/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	2/25/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	9/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	3/17/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	8/26/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	2/27/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	5/13/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	8/26/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	12/3/04	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	
	4/13/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	7/1/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	Chl (0.0016)
	9/6/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	CM(0.001)
	12/20/05	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	2/2/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/30/06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/4/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	1/23/07	<0.001	0.0015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	8/1/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	3/24/08	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	8/27/08	<0.001	0.0089	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	ND
	3/30/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	11/5/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00034 J	<0.001	<0.001	
	4/30/10	<0.001	0.0086	<0.001	<0.001	<0.001	0.0049	<0.001	0.00050 J	<0.002	<0.001	EB(0.00037), X(0.001)
	12/22/10	0.001	0.0282	<0.001	<0.001	0.00027J	0.0090	<0.001	0.00083J	<0.002	0.002	T(0.00021J)
	5/4/11	0.004	0.1590	0.0019	<0.001	0.0016	0.0299	<0.001	0.00160	<0.002	0.013	B(0.00036J) 1,2DCB(0.00041J) MC(0.0412J) T(0.001)
	12/28/11	<0.001	0.00031J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	5/18/12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	10/26/12	<0.001	0.00064 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	T(0.00022J)
	5/24/13	<0.001	0.0050	<0.001	<0.001	<0.001	0.00094 J	<0.001	<0.001	<0.002	<0.001	
	12/12/13	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00069 J	<0.002	<0.001	
	6/30/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/22/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	6/10/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	CS^2(0.00053J)
	12/8/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	6/28/16	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00021 J	<0.002	<0.001	Ac(0.0136J), T(0.00065J)
	12/14/16	<0.001	0.0060	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.002	<0.001	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/26/17	0.00037 J	0.0272	0.0003 J	<0.001	<0.001	0.0072	<0.001	0.00040 J	<0.002	0.001	
	1/19/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	

Table 5
Summary of Surface Water Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Sample Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	VC mg/L	Others mg/L
SW-2	11/19/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	12/20/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	1/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	2/25/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	9/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	3/17/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	8/26/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	2/27/04	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	5/13/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	8/26/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	12/3/04	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	
	4/13/05	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	7/1/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	Chl (0.0015)
	9/6/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	12/20/05	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	2/2/06	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/30/06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/4/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	Chl(0.0014)
	1/23/07	<0.001	0.0016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	8/1/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	3/24/08	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	8/27/08	<0.001	0.0082	<0.001	<0.001	<0.001	0.0027	<0.001	<0.001	<0.001	<0.001	ND
	3/30/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	11/5/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00039 J	<0.001	<0.001	
	4/30/10	<0.001	0.0086	<0.001	<0.001	<0.001	0.0049	<0.001	0.00047 J	<0.002	0.00051 J	EB(0.00042J), X(0.0011J)
	12/22/10	0.00056J	0.0278	<0.001	<0.001	<0.001	0.009	<0.001	0.00074J	<0.002	0.0016	T(0.00021J)
	5/4/11	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	ND
	12/28/11	0.0018	0.0954	0.00074J	<0.001	0.00099J	0.0169	<0.001	0.0034	<0.002	0.0086	B(0.00026J), o-DCB(0.00033J) T(0.00038J)
	5/18/12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	10/26/12	<0.001	0.013	<0.001	<0.001	<0.001	0.00047 J	<0.001	0.004	<0.002	0.00050 J	B(0.00047J), T(0.00036J)
	5/24/13	<0.001	0.004	<0.001	<0.001	<0.001	0.00088 J	<0.001	<0.001	<0.002	<0.001	
	12/12/13	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00041 J	<0.002	<0.001	
	6/30/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/22/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	6/10/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	CS^2(0.00062J)
	12/8/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	6/28/16	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00025 J	<0.002	<0.001	T(0.00068J)
	12/14/16	<0.001	0.004	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.002	<0.001	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/26/17	0.0047 J	0.003	0.00035 J	<0.001	<0.001	0.008	<0.001	0.00042 J	<0.002	0.001	
	1/19/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	CHl(0.00097J)

Table 5
Summary of Surface Water Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Sample Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	VC mg/L	Others mg/L
SW-3	11/19/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	12/20/01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	1/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	2/25/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	9/30/02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	3/17/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	8/26/03	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	2/27/04	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	5/13/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	8/26/04	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.010	<0.005	<0.002	ND
	12/3/04	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	
	4/13/05	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	7/1/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	Chl (0.0016)
	9/6/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	12/20/05	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	2/2/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/30/06	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/4/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	1/23/07	<0.001	0.0096	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	8/1/07	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	3/24/08	<0.001	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	ND
	8/27/08	<0.001	0.0070	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	ND
	3/30/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	Chl(0.0071)
	11/5/09	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00034 J	<0.001	<0.001	
	4/30/10	<0.001	0.0064	<0.001	<0.001	<0.001	0.004	<0.001	0.00041 J	<0.002	<0.001	EB(0.00037J), X(0.00077J)
	12/22/10	0.0045J	0.0305	<0.001	<0.001	<0.001	0.008	<0.001	0.00067J	<0.002	0.002	ND
	5/4/11	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0054	<0.002	<0.001	B(0.00048J)
	12/28/11	0.001	0.0873	0.0046J	<0.001	0.00057J	0.012	<0.001	0.0014	<0.002	0.005	T(0.00030J)
	5/18/12	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	10/26/12	<0.001	0.0099	<0.001	<0.001	<0.001	0.00034 J	<0.001	0.001	<0.002	<0.001	T(0.00034J)
	5/24/13	<0.001	0.0039	<0.001	<0.001	<0.001	0.00088 J	<0.001	<0.001	<0.002	<0.001	
	12/12/13	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00032 J	<0.002	<0.001	
	6/30/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/22/14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	6/10/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/8/15	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	6/28/16	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00034 J	<0.002	<0.001	T(0.00066J)
	12/14/16	<0.001	0.004	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.002	<0.001	
	6/5/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	
	12/26/17	0.0042 J	0.029	0.00029 J	<0.001	<0.001	0.007	<0.001	0.00044 J	<0.002	0.001	
	1/19/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	

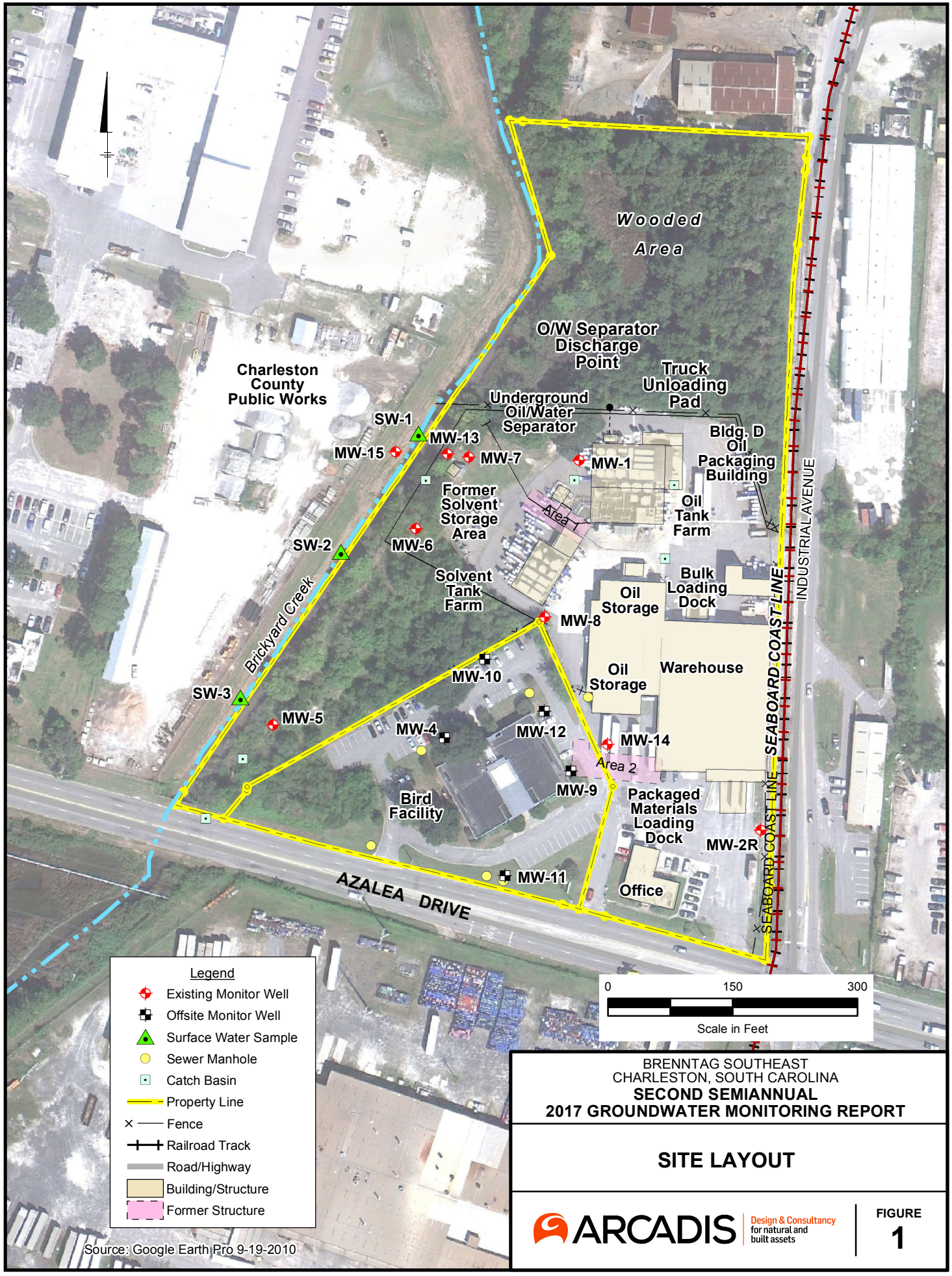
Table 5
Summary of Surface Water Analyses
Brenntag Southeast
Charleston, South Carolina
(revised 2/13/2018)

Sample Number	Date Sampled	1,1-DCE mg/L	c-1,2-DCE mg/L	t-1,2-DCE mg/L	1,2-DCA mg/L	1,1-DCA mg/L	TCE mg/L	PCE mg/L	CB mg/L	CH mg/L	VC mg/L	Others mg/L

LIST OF ABBREVIATIONS

1,1-DCE = 1,1-Dichloroethene
c-1,2-DCE = cis-1,2-Dichloroethene
t-1,2-DCE = trans-1,2-Dichloroethene
1,2-DCA = 1,2-Dichloroethane
1,1-DCA = 1,1-Dichloroethane
TCE = Trichloroethene
PCE = Tetrachloroethene
CB = Chlorobenzene
CH = Chloroethane
VC = Vinyl chloride
Chl = Chloroform
CM=Chloromethane
MC = Methylene chloride
mg/L = Milligrams per liter
o-DCB= 1,2-Dichlorobenzene
Carbon Disulfide=CS^2
ND = Not detected
J = Estimated value (result is between Reporting Limit and Method Detection Limit)
Ac=Acetone
T=Toluene

FIGURES



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BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

SITE LAYOUT

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: AUGUSTA DIV/GROUP: ENV/GIS DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
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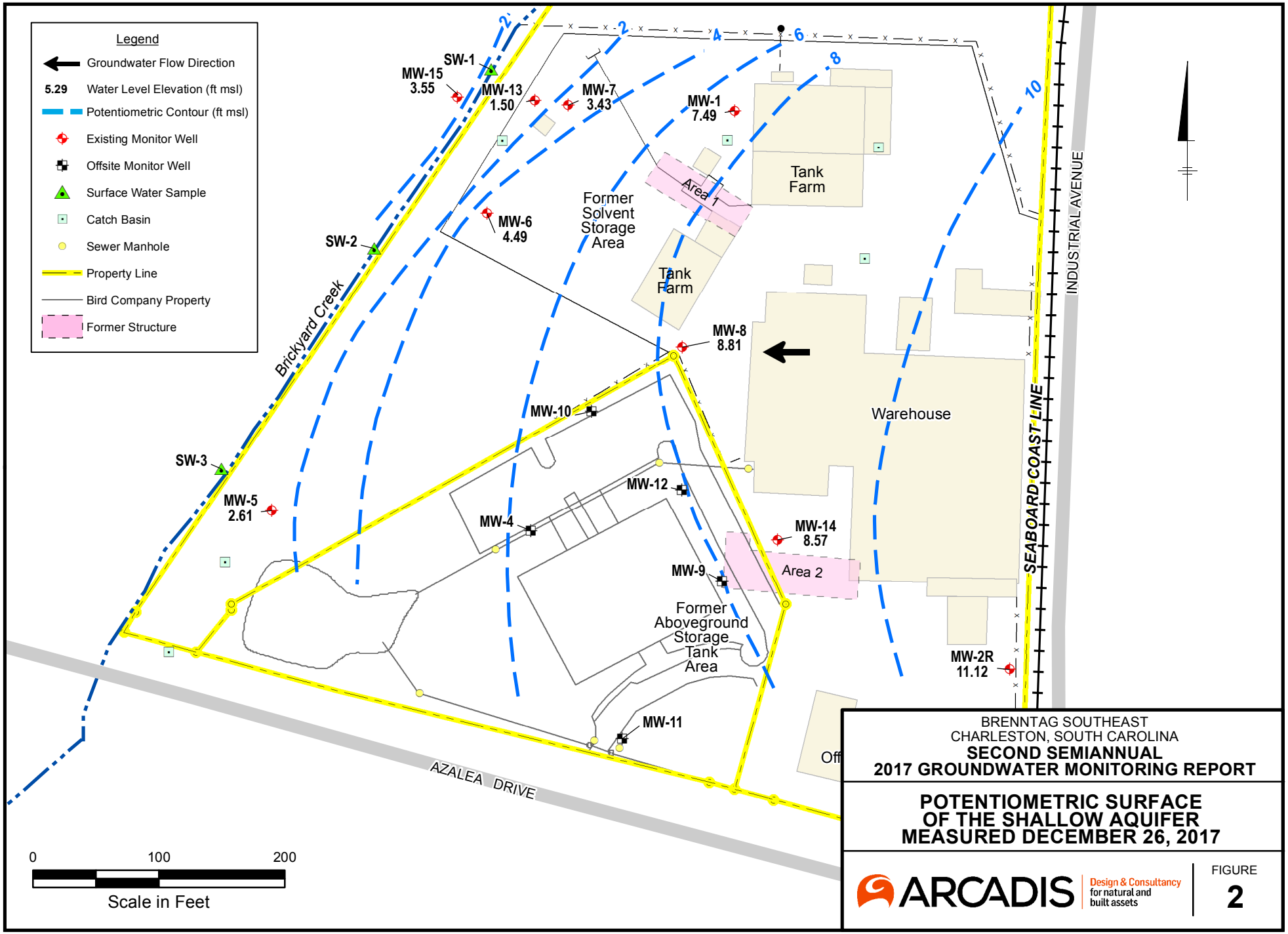

BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

POTENTIOMETRIC SURFACE OF THE SHALLOW AQUIFER MEASURED DECEMBER 26, 2017

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FIGURE 2

CITY: AUGUSTA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
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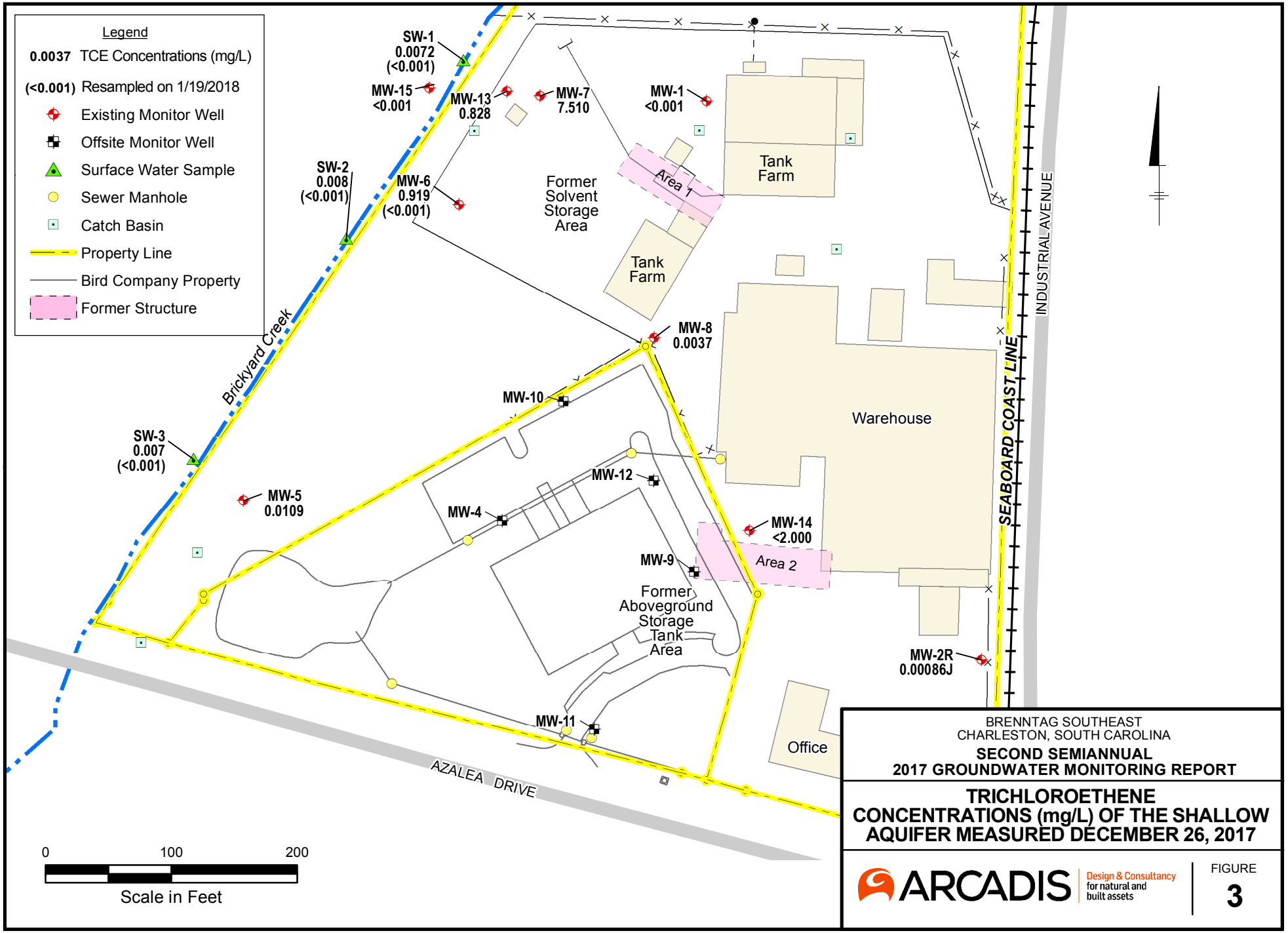

BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

TRICHLOROETHENE CONCENTRATIONS (mg/L) OF THE SHALLOW AQUIFER MEASURED DECEMBER 26, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: AUGUSTA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
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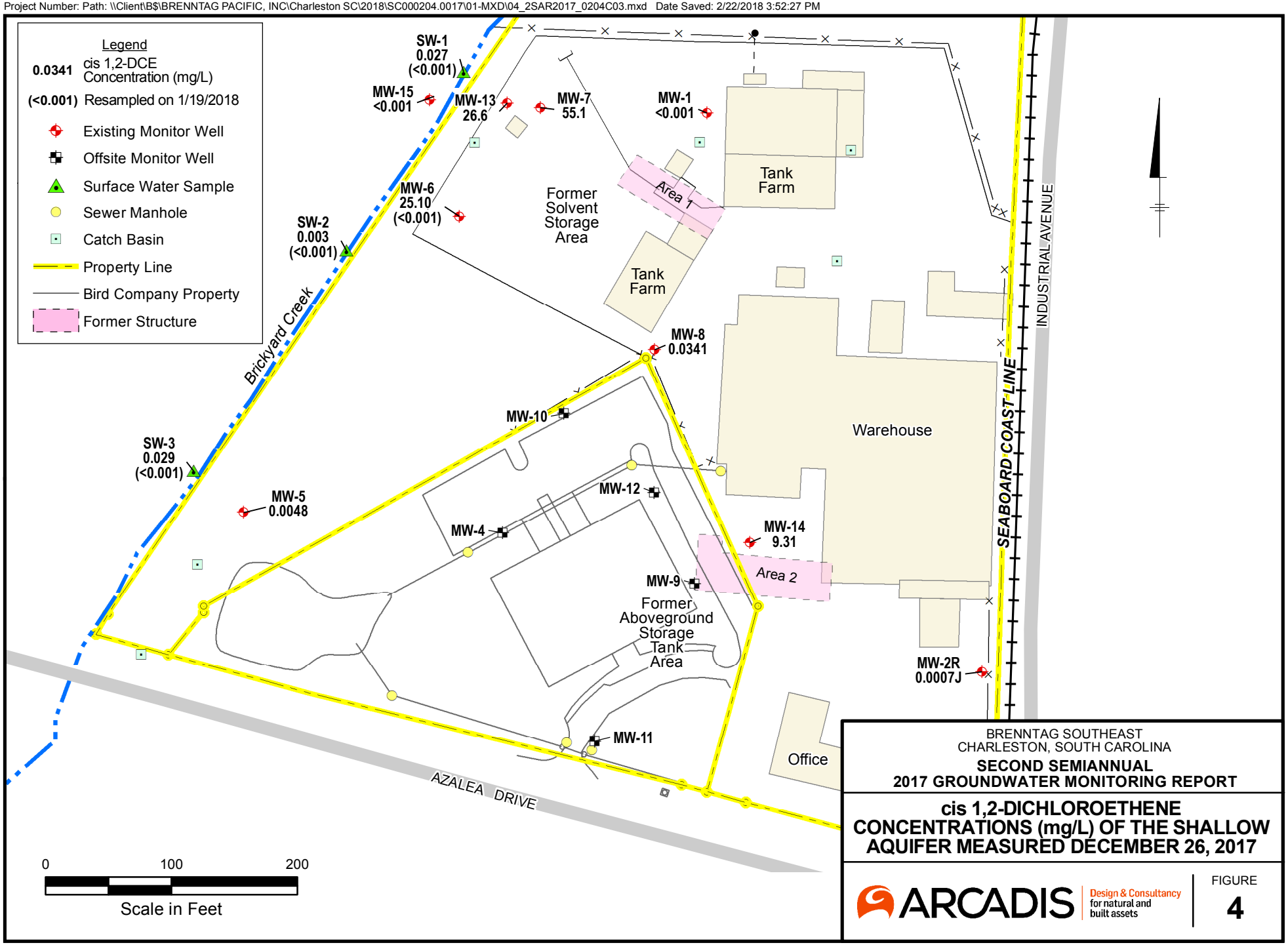

BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

cis 1,2-DICHLOROETHENE CONCENTRATIONS (mg/L) OF THE SHALLOW AQUIFER MEASURED DECEMBER 26, 2017

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FIGURE 4

CITY: AUGUSTA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
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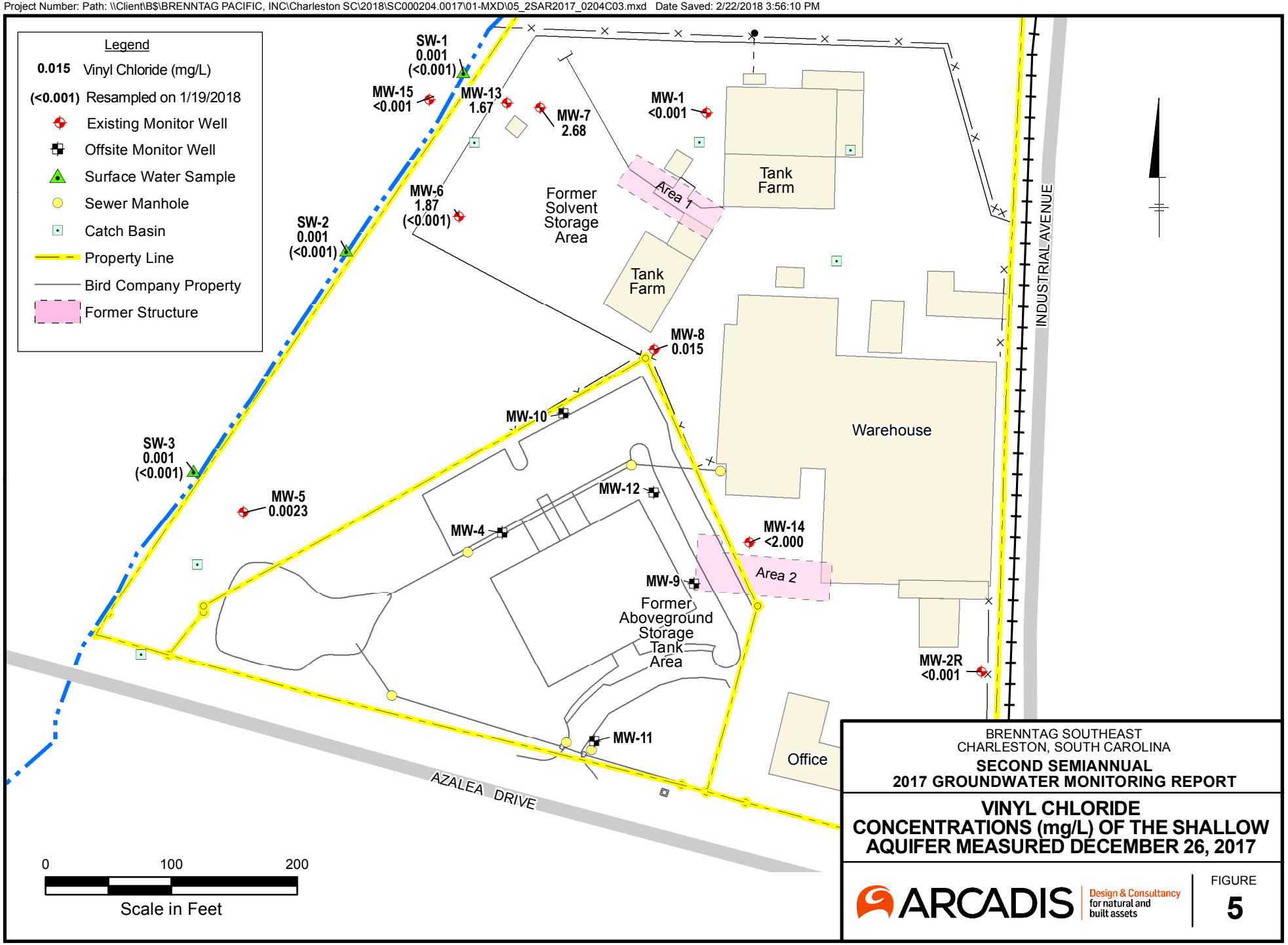

BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

VINYL CHLORIDE CONCENTRATIONS (mg/L) OF THE SHALLOW AQUIFER MEASURED DECEMBER 26, 2017

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FIGURE 5

CITY: AUGUSTA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
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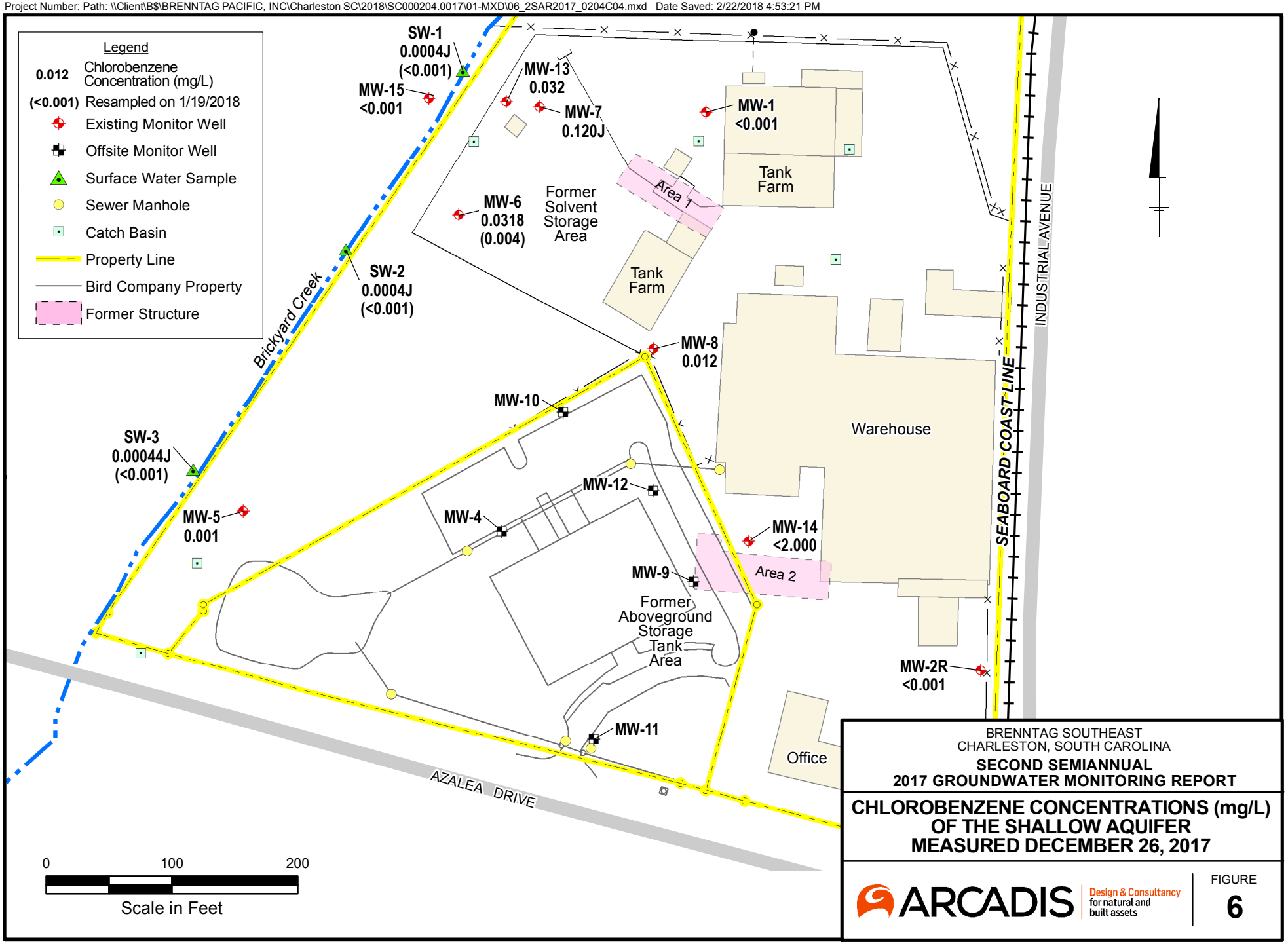

BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

CHLOROBENZENE CONCENTRATIONS (mg/L) OF THE SHALLOW AQUIFER MEASURED DECEMBER 26, 2017

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FIGURE 6

CITY: AUGUSTA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
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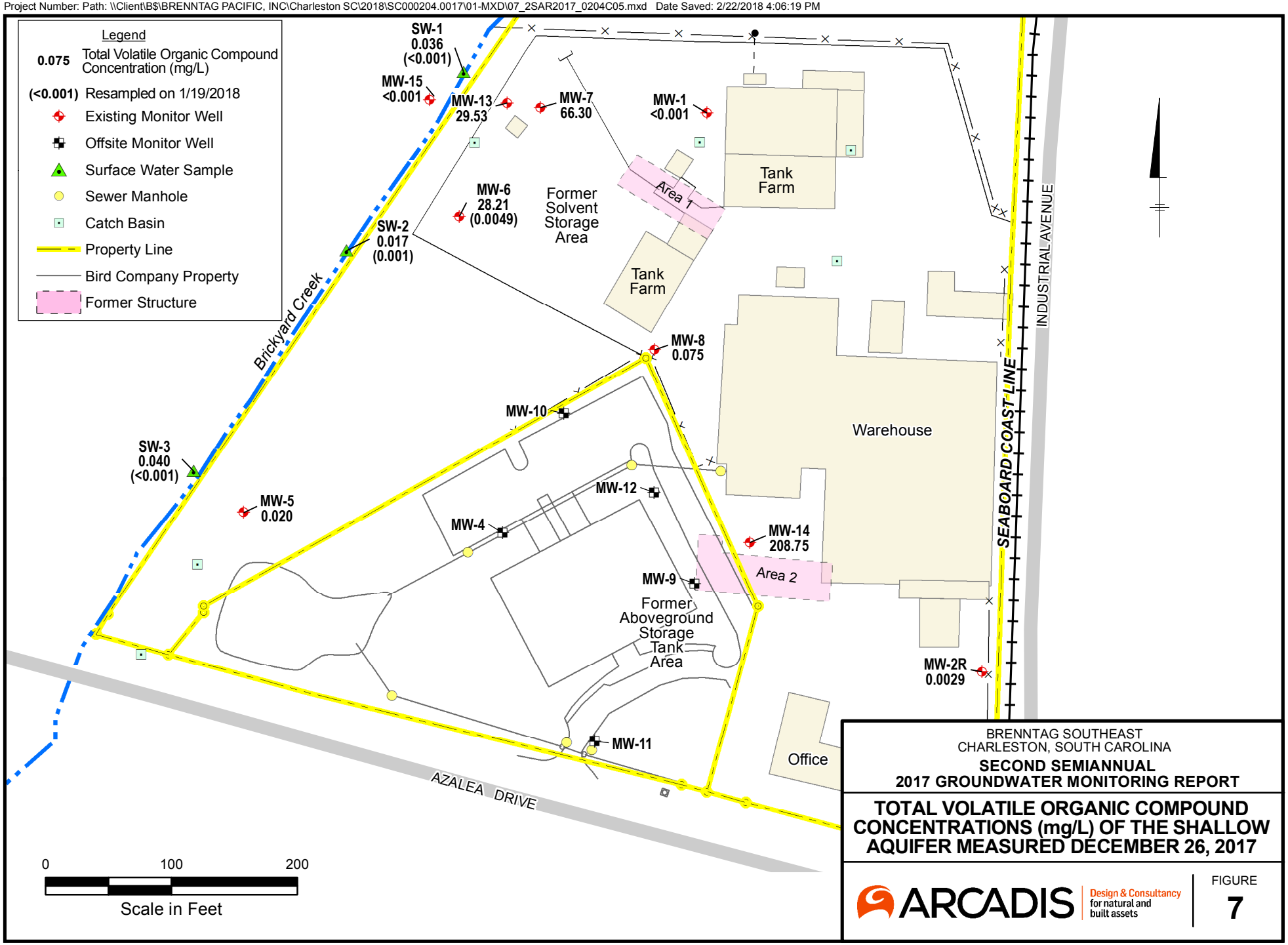

BRENNTAG SOUTHEAST
CHARLESTON, SOUTH CAROLINA

SECOND SEMIANNUAL 2017 GROUNDWATER MONITORING REPORT

TOTAL VOLATILE ORGANIC COMPOUND CONCENTRATIONS (mg/L) OF THE SHALLOW AQUIFER MEASURED DECEMBER 26, 2017

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FIGURE 7

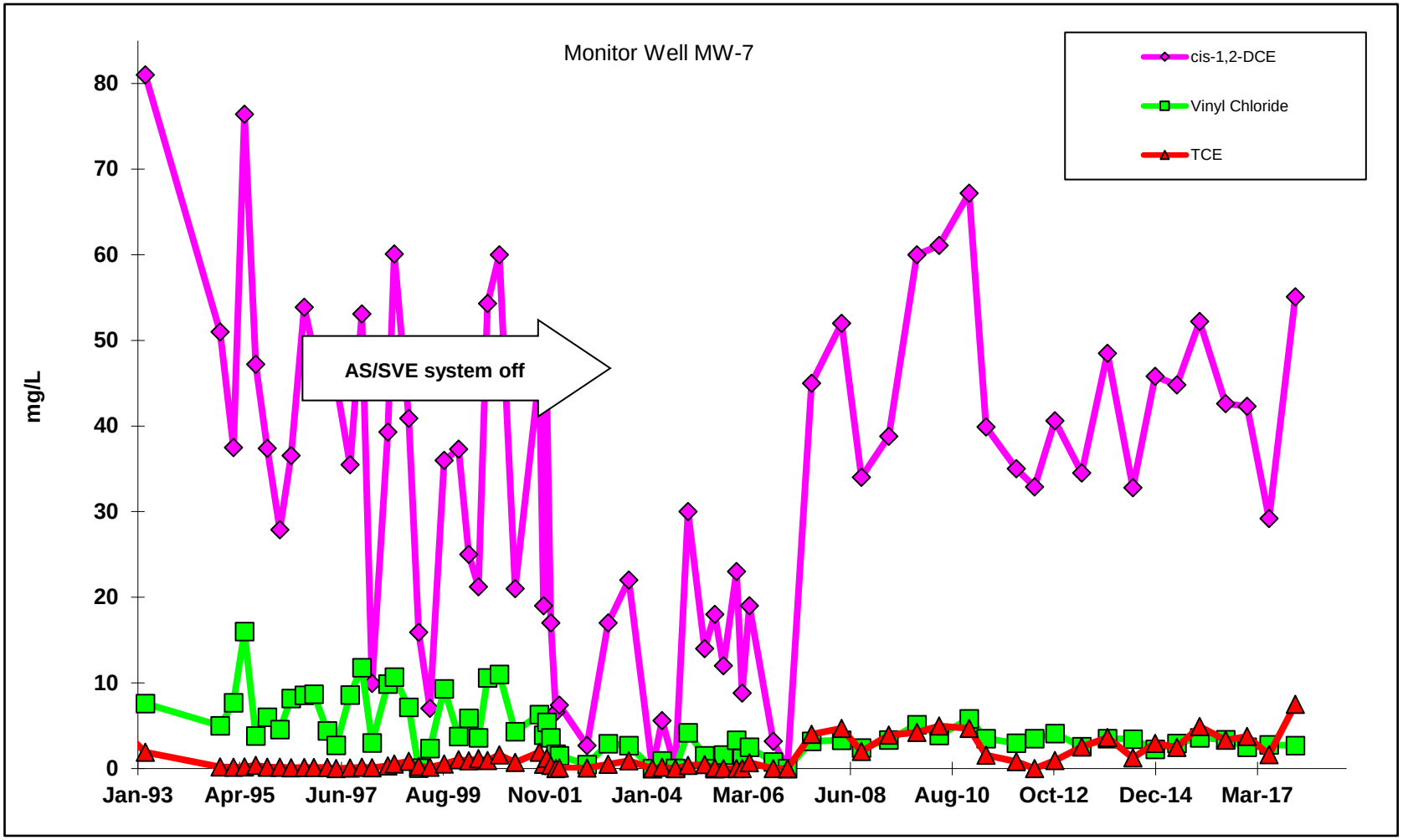


Figure 8. TCE and Degradation Product Trends at Monitor Well MW-7

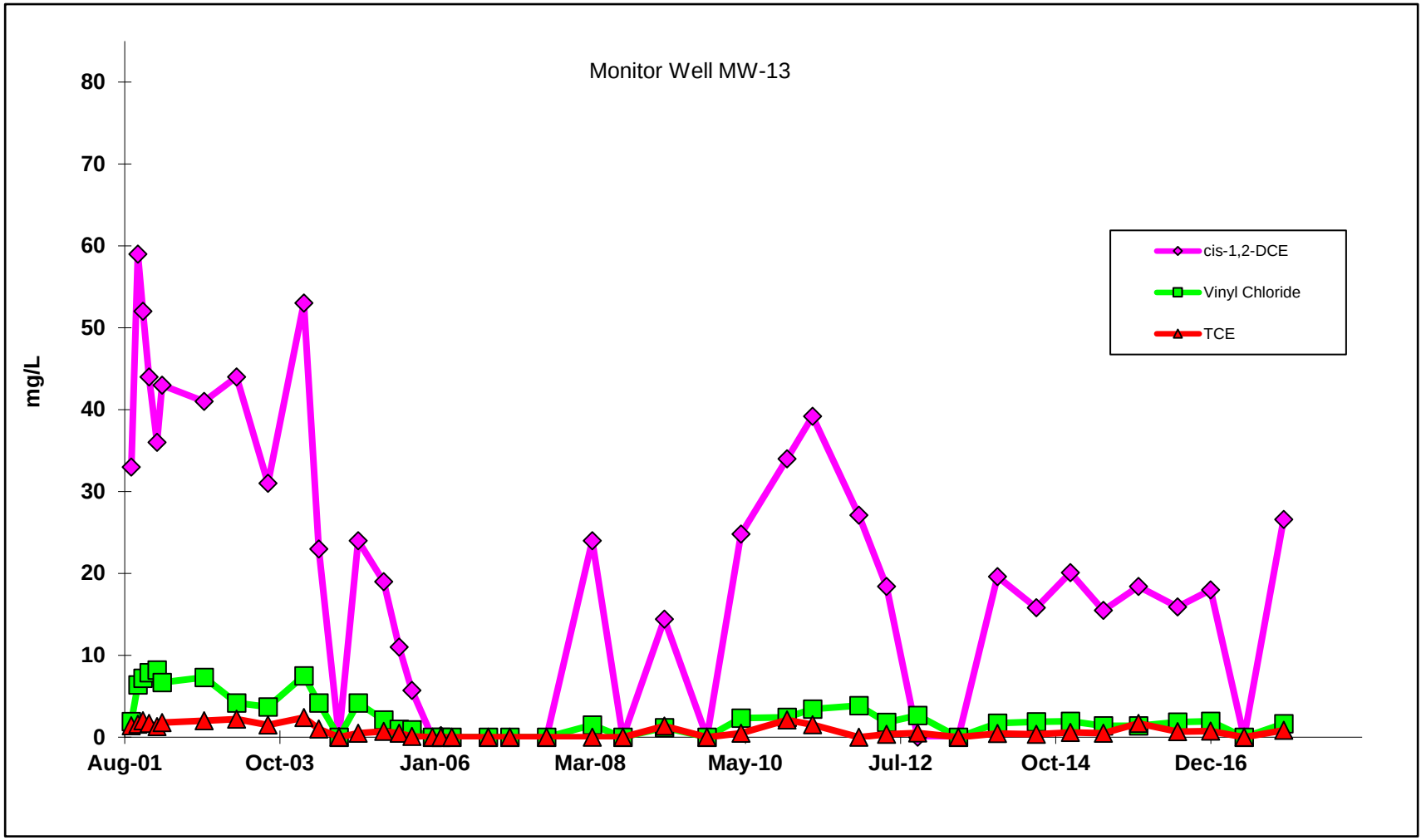
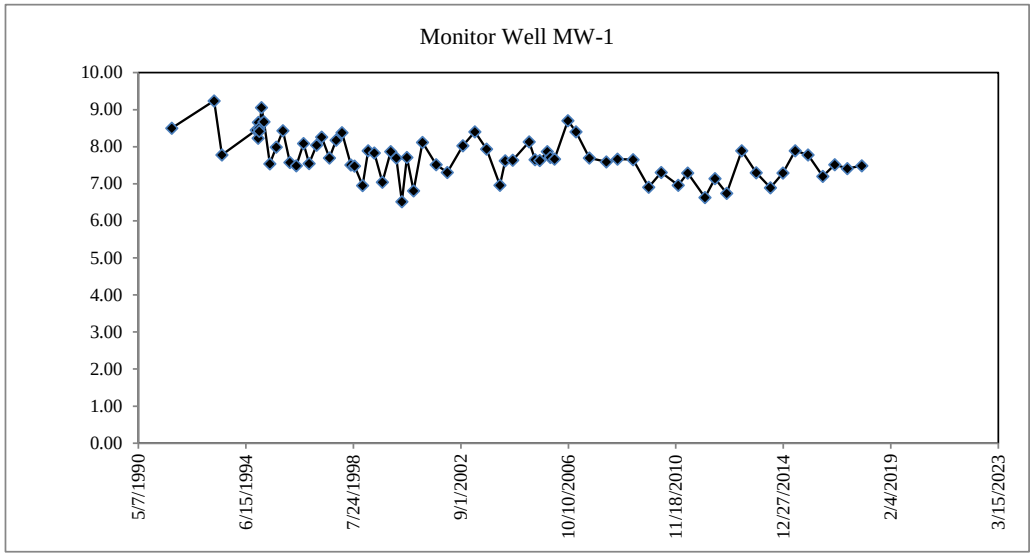


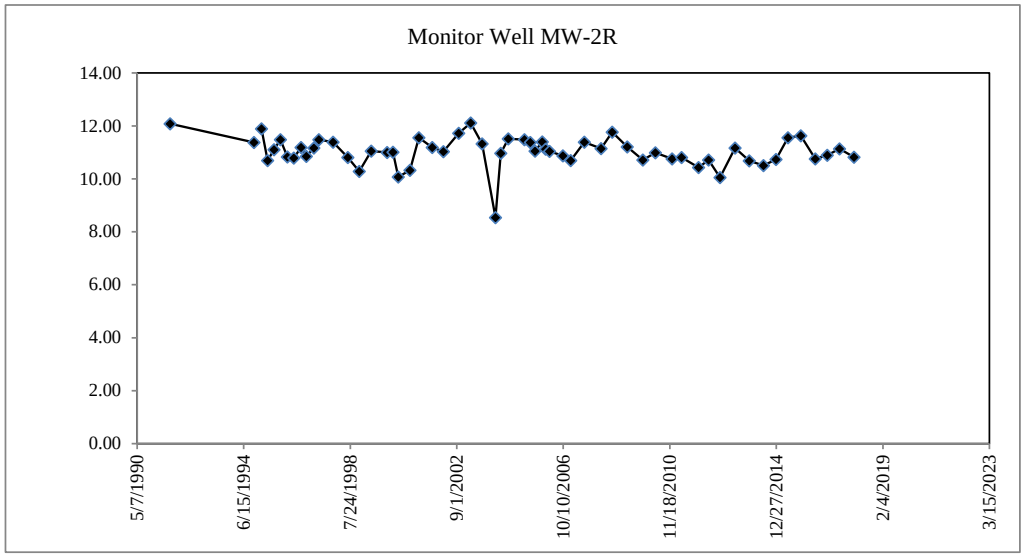
Figure 9. TCE and Degradation Product Trends at Monitor Well MW-13

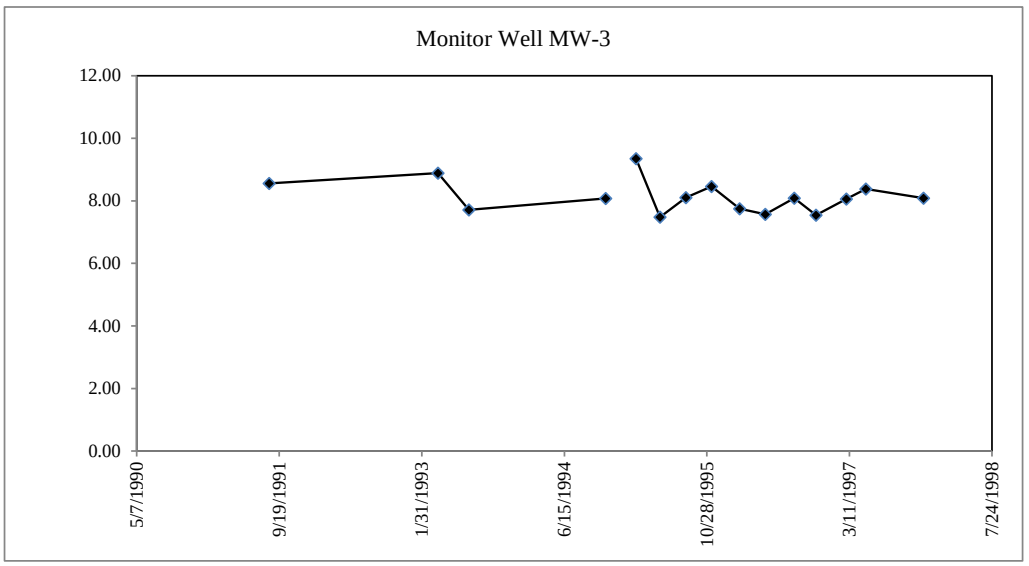
APPENDIX A

Groundwater Elevation Hydrographs

Appendix A. Groundwater Elevation Hydrographs
Brenntag Southeast,
Charleston, South Carolina
(revised 12/29/2017)

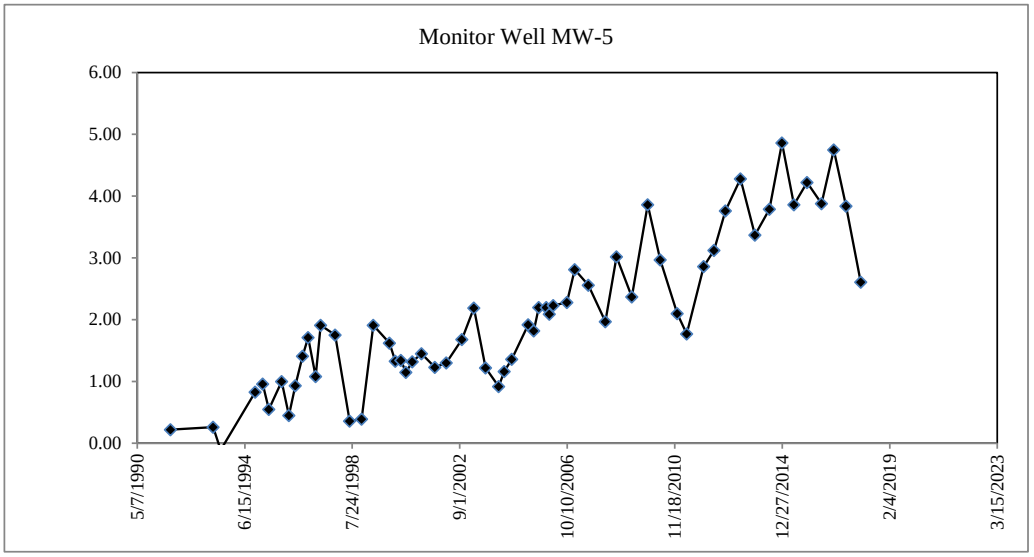


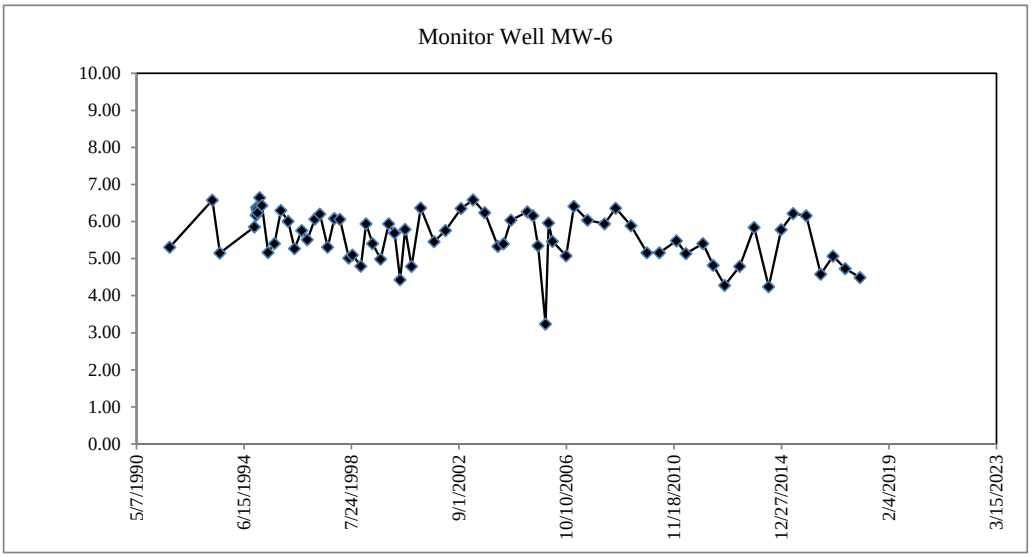


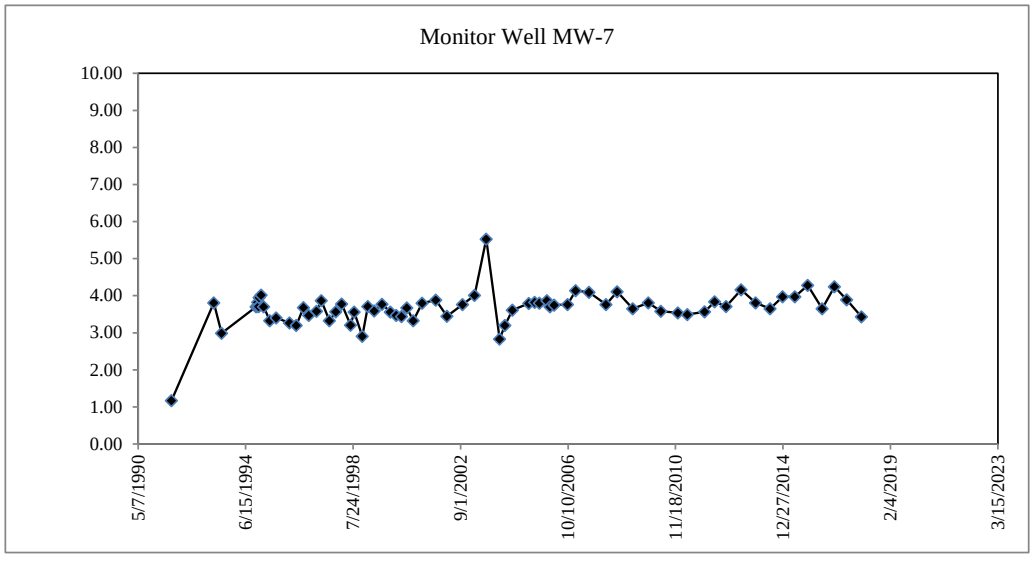


ft msl=feet above mean sea level

Appendix A. Groundwater Elevation Hydrographs
Brenntag Southeast,
Charleston, South Carolina
(revised 12/29/2017)

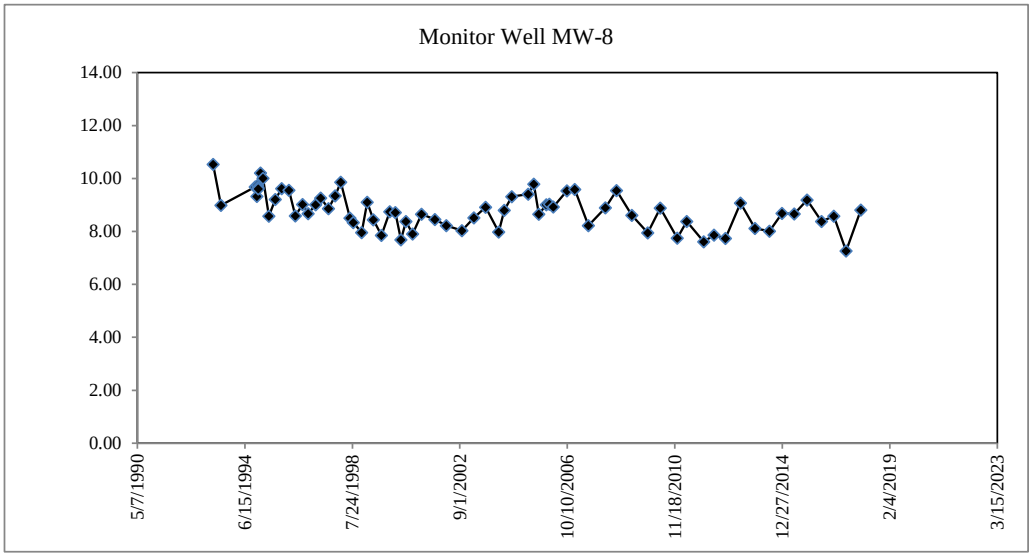


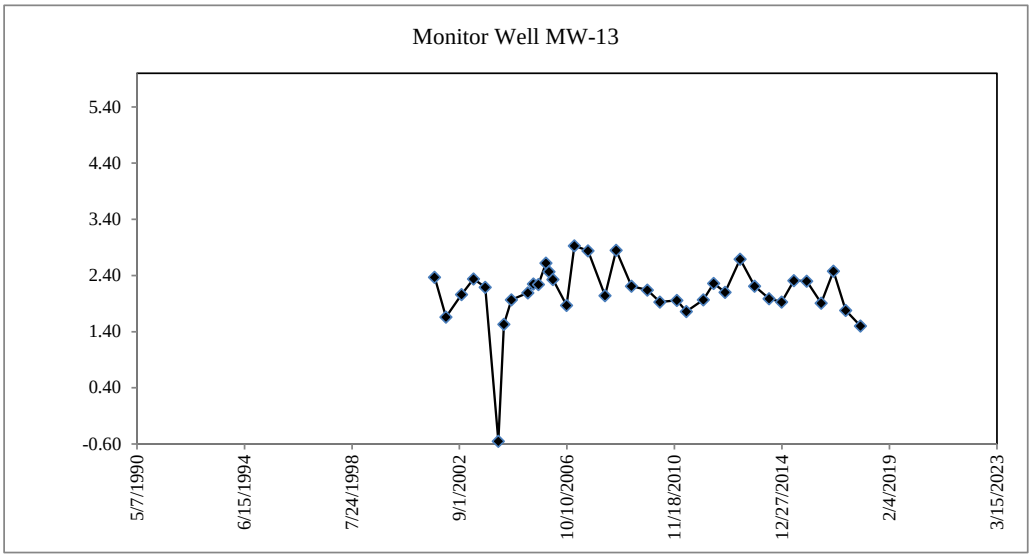


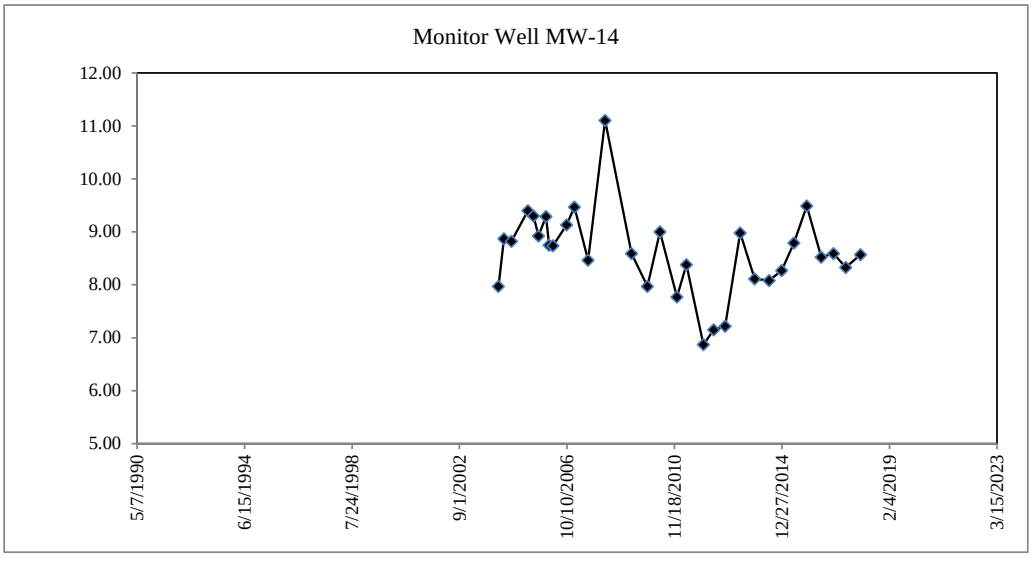


ft msl=feet above mean sea level

Appendix A. Groundwater Elevation Hydrographs
Brenntag Southeast,
Charleston, South Carolina
(revised 12/29/2017)

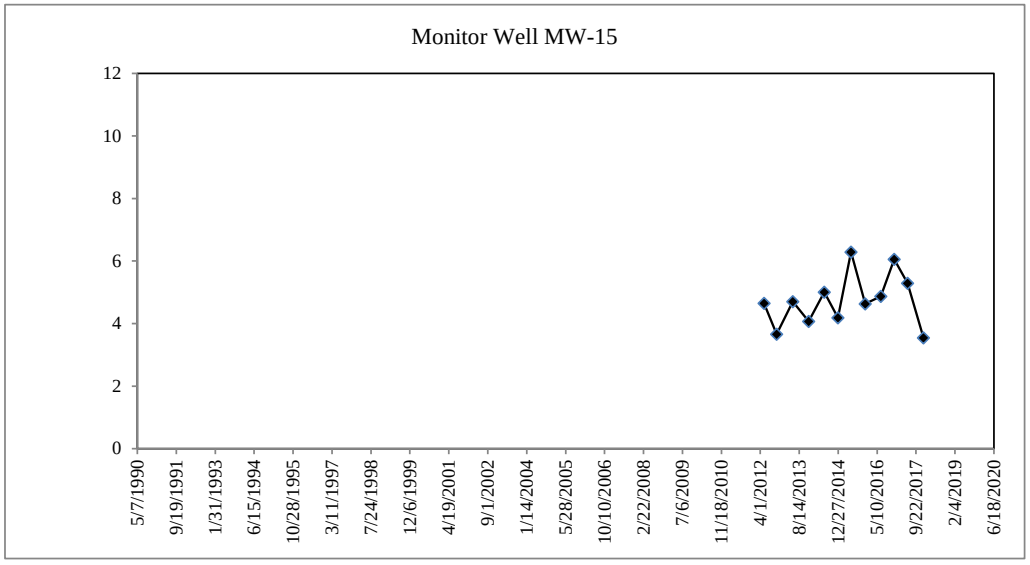






ft msl=feet above mean sea level

Appendix A. Groundwater Elevation Hydrographs
Brenntag Southeast,
Charleston, South Carolina
(revised 12/29/2017)



ft msl=feet above mean sea level

APPENDIX B

Field Sampling Logs

ARCADIS

Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-1 Date 12/28/17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather Cloudy 40's

Measuring Pt. Description Top of PVC Screen Setting (ft-bmp) Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 4.25 Total Depth (ft-bmp): 14.75 Water Column/ Gallons in Well

MP Elevation 11.74 Pump Intake (ft-bmp): Purge Method: Low Flow Centrifugal Submersible Other Peristaltic Sample Method Reverse Flow

Pump On/Off Volumes Purged 1 1/2 Gallon

Sample Time: Label 9:25 Start 9:20 End 9:45 Replicate/ Code No.

Sampled by [illegible]

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (uMhos/cm) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (C) (F)	Redox (mV)	Appearance Color	Appearance Odor
9:30		400	4.29		6.09	2	6.1	1.1	19.7	47	LT. Gray	Yes
9:35		400	4.31		6.11	30	6.2	1.0	20.9	45	"	"
9:40		400	4.33		6.10	301	6.4	0.9	20.4	48	"	"
9:45		400	4.33		6.11	300	6.5	0.8	20.4	48	"	"
				1 1/2 Gallon								

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location: Well Locked at Arrival: Yes / No

Condition of Well: Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well:

ARCADIS Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-2R Date 12.26.17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather Sun 50°F

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 4.68 Total Depth (ft-bmp): 20.59 Water Column/ Gallons in Well 15.91/2.5

MP Elevation 16.5 Pump Intake (ft-bmp): 15.59 Purge Method: Low Flow / Centrifugal / Submersible / Other Peristaltic Sample Method Reverse Flow

Pump On/Off 1225 Volumes Purged 1.5 gal

Sample Time: Label 1255 Start 1255 End 1305 Replicate/ Code No. _____ Sampled by J. OBrien

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (~~µMhos~~) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (~~°F~~)	Redox (mV)	Appearance Color	Appearance Odor
1235	10	0.05	4.70	0.5	6.79	0.387	2.1	0.0	19.96	-198	Clear	NO
1245	10	0.05	4.71	0.5	6.80	0.385	2.3	0.0	19.99	-200	Clear	NO
1255	10	0.05	4.73	0.5	6.79	0.388	2.2	0.0	20.02	-202	Clear	NO

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:	0	Well Locked at Arrival:	Yes / No
Condition of Well:	good	Well Locked at Departure:	Yes / No
Well Completion:	Flush Mount / Stick Up	Key Number To Well:	

ARCADIS Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-5 Date 12-26-17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather SW 45°F

Measuring Pt. Description | Screen Setting (ft-bmp) | Casing Diameter (in.) 2 | Well Material X PVC ___ SS

Static Water Level (ft-bmp) 9.40 | Total Depth (ft-bmp): 22.75 | Water Column/ Gallons in Well 13.35/2.1

MP Elevation 12.01 | Pump Intake (ft-bmp): 17.75 | Purge Method: Low Flow / Centrifugal / Submersible / Other Peristaltic | Sample Method Reverse Flow

Pump On/Off 1025 | Volumes Purged 1.5 gal

Sample Time: Label 1015 Start 1055 End 1105 | Replicate/ Code No. ___

Sampled by J. O'Brien

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance	
											Color	Odor
1035	10	0.05	9.41	0.5	6.75	13.6	0.0	0.0	12.64	-299	clear	none
1045	10	0.05	9.41	0.5	6.76	13.6	0.0	0.0	12.62	-300	clear	none
1055	10	0.05	9.42	0.5	6.74	13.6	0.0	0.0	12.61	-301	clear	none

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location: 0 Well Locked at Arrival: (Yes) / No

Condition of Well: good Well Locked at Departure: (Yes) / No

Well Completion: Flush Mount / (Stick Up) Key Number To Well: ___

ARCADIS Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-6 Date 12.26.17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather SW 44°F

Measuring Pt. Description — Screen Setting (ft-bmp) — Casing Diameter (in.) 2 — Well Material X PVC ___ SS

Static Water Level (ft-bmp) 5.52 — Total Depth (ft-bmp): 8.08 — Water Column/ Gallons in Well 2.56/0.4

MP Elevation 10.62 — Pump Intake (ft-bmp): 7.08 — Purge Method: Low Flow / Centrifugal / Submersible / Other Peristaltic — Sample Method Reverse Flow

Pump On/Off 0945 — Volumes Purged 1.0 gal

Sample Time: Label 1015 Start 1015 End 1018 — Replicate/ Code No. —

Sampled by J. O'Brien

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
0955	10	0.05	5.54	0.5	7.60	1.40	0.0	0.69	10.15	-209	clear	none
1005	10	0.05	5.55	0.5	7.56	1.41	0.0	0.60	10.07	-206	clear	none
1015	10	0.05	5.57	0.5	7.54	1.41	0.0	0.59	10.05	-204	clear	none

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot: 1" = 0.04; 1.25" = 0.06; 1.5" = 0.09; 2" = 0.16; 2.5" = 0.26; 3" = 0.37; 3.5" = 0.50; 4" = 0.65; 6" = 1.47

Well Information

Well Location:	0	Well Locked at Arrival:	Yes / No
Condition of Well:	good	Well Locked at Departure:	Yes / No
Well Completion:	Flush Mount / Stick Up	Key Number To Well:	

ARCADIS Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-7 Date 12/29/17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather cloudy 40's

Measuring Pt. Description Top of PVC Screen Setting (ft-bmp) Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 5.66 Total Depth (ft-bmp): 21.95 Water Column/ Gallons in Well

MP Elevation 9.09 Pump Intake (ft-bmp): Purge Method: Low Flow Centrifugal Submersible Other Peristaltic Sample Method Reverse Flow

Pump On/Off Volumes Purged 1½ gallons

Sample Time: Label 9:49 Replicate/ Start 9:50 Code No. End 9:05 Sampled by Ute

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
9:50		400	5.93		6.78	2110	1.3	1.5	19.9	-40	Lt. Gray	Septic
9:55		400	5.94		6.80	2108	1.5	1.1	19.9	-43	"	"
9:00		400	5.95		6.79	2111	1.9	0.8	19.9	-45	Clear	"
9:05		400	5.95		6.79	2109	2.1	0.6	19.9	-45	"	"
				1½ Gallons								

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:	0	Well Locked at Arrival:	Yes / No
Condition of Well:		Well Locked at Departure:	Yes / No
Well Completion:	Flush Mount / Stick Up	Key Number To Well:	

ARCADIS

Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-8 Date 12/28/17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather Cloudy 40's

Measuring Pt. Description Top of PVC Screen Setting (ft-bmp) Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 6.35 Total Depth (ft-bmp): 12.91 Water Column/ Gallons in Well

MP Elevation 15.16 Pump Intake (ft-bmp): Purge Method: Low Flow Centrifugal Submersible Other Peristaltic Sample Method Reverse Flow

Pump On/Off Volumes Purged

Sample Time: Label 9:09 Start 9:10 End 9:25 Replicate/ Code No. Sampled by [illegible]

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
9:10		400	6.39		6.51	292	2.1	1.70	19.6	84	LT. Gray	Septic
9:15		400	6.41		6.52	290	2.4	1.04	~~15.6~~	90	"	"
9:20		400	6.40		6.51	293	2.3	1.03	19.9	81	"	"
9:25		400	6.41		6.53	291	2.4	1.03	19.8	81	"	"

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location:	0	Well Locked at Arrival:	Yes / No
Condition of Well:		Well Locked at Departure:	Yes / No
Well Completion:	Flush Mount / Stick Up	Key Number To Well:	

ARCADIS

Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-13 Date 12-26-17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather SUN 43°F

Measuring Pt. Description _____ Screen Setting (ft-bmp) _____ Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 5.44 Total Depth (ft-bmp): 15.76 Water Column/ Gallons in Well 10.32/1.7

MP Elevation 6.96 Pump Intake (ft-bmp): 10.76 Purge Method: Low Flow / Centrifugal / Submersible / Other Peristaltic Sample Method Reverse Flow

Pump On/Off 0905 Volumes Purged 1.5gal

Sample Time: Label 0935 Start 0935 End 0938 Replicate/ Code No. _____ Sampled by J. OBRIEN

Time	Minutes Elapsed	Rate (gpm) ~~(mL/min)~~	Depth to Water (ft)	Gallons Purged	pH	Cond. ~~(µmhos)~~ (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. ~~(°F)~~ (°C)	Redox (mV)	Appearance Color	Appearance Odor
0915	10	0.05	5.44	0.5	7.87	1.34	0.0	0.88	10.48	-153	Clear	NO
0925	10	0.05	5.45	0.5	7.86	1.35	0.0	0.86	10.42	-155	Clear	NO
0935	10	0.05	5.45	0.5	7.82	1.35	0.0	0.85	10.45	-156	Clear	NO

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	HCl

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location: 0 Well Locked at Arrival: Yes / No

Condition of Well: Good Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well: _____

ARCADIS

Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-14 Date 12-26-17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather SUN/50°F

Measuring Pt. Description | Screen Setting (ft-bmp) | Casing Diameter (in.) 2 | Well Material X PVC ___ SS

Static Water Level (ft-bmp) 6.32 | Total Depth (ft-bmp): 14 | Water Column/ Gallons in Well 7.68/1.0

MP Elevation 15.17 | Pump Intake (ft-bmp): 10 | Purge Method: Low Flow / Centrifugal / Submersible / Other Peristaltic | Sample Method Reverse Flow

Pump On/Off 1305 | Volumes Purged 1.5 gal

Sample Time: Label 1335 Start 1335 End 1340 | Replicate/ Code No. ___ | Sampled by J. O'BRIEN

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (µMhos) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) (°F)	Redox (mV)	Appearance Color	Appearance Odor
1315	10	0.05	6.34	0.5	6.57	1.99	0.10	1.18	21.68	-292	Clear	Yes
1325	10	0.05	6.36	0.5	6.57	1.98	0.0	1.17	21.71	-293	Clear	Yes
1335	10	0.05	6.37	0.5	6.58	1.98	0.0	1.16	21.71	-293	Clear	Yes

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot 1" = 0.04 | 1.25" = 0.06 | 1.5" = 0.09 | 2" = 0.16 | 2.5" = 0.26 | 3" = 0.37 | 3.5" = 0.50 | 4" = 0.65 | 6" = 1.47

Well Information

Well Location: 0 | Well Locked at Arrival: Yes / No

Condition of Well: good | Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up | Key Number To Well:

ARCADIS Groundwater Sampling Form

Project No. SC000204.0016.00001 Well ID MW-15 Date 12/28/17

Project Name/Location : Brenntag Southeast, Charleston, South Carolina Weather cloudy 40's

Measuring Pt. Description TOP of PVC ~~S.48~~ Screen Setting (ft-bmp) 5-15 Casing Diameter (in.) 2 Well Material X PVC ___ SS

Static Water Level (ft-bmp) 5.49 Total Depth (ft-bmp): 15.80 Water Column/ Gallons in Well

MP Elevation Pump Intake (ft-bmp): Purge Method: Low Flow / Centrifugal / Submersible / Other Peristaltic Sample Method Reverse Flow

Pump On/Off Volumes Purged 1 1/2 gallons

Sample Time: Label 7:54 Start 7:55 End 8:10 Replicate/ Code No. Sampled by AWS

Time	Minutes Elapsed	Rate (~~gpm~~) (mL/min)	Depth to Water (ft)	Gallons Purged	pH	Cond. (~~µMhos~~) (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp. (°C) °F	Redox (mV)	Appearance Color	Appearance Odor
7:55		400 ml	5.52		6.65	667	1.4	1.95	17.7	62	clear	none
8:00		"	5.53		6.64	666	1.5	1.74	17.4	60	"	"
8:05		"	5.53		6.65	668	1.5	1.74	17.7	61	"	"
8:10		"	5.54		6.66	668	1.4	1.73	17.7	60	"	"
				1 1/2 gallons								

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Well Casing Volumes

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

Well Information

Well Location: 0 Well Locked at Arrival: Yes / No

Condition of Well: Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up Key Number To Well:

ARCADIS

SURFACE WATER SAMPLING FORM

Project No. SC000204.0012.00001

Date 12-26-17

Site Location : Brenntag Southeast, Charleston, South Carolina

Time start sampling 1210

Sample Loc. : SW-1

Time end sampling —

FIELD SAMPLING DATA

pH	Cond. (~~µMhos~~) (mS/cm)	Turbidity (NTU)	Temp. (°C) (~~°F~~)	Dissolved Oxygen (mg/L)	Redox (mV)	Appearance	
						Color	Odor
7.55	2.82	1.1	9.35	7.56	-192	Clear	No

STREAM MEASUREMENT DATA

Time	Steam Depth	Steam Width	Velocity (ft/sec)
—	—	—	—

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Remarks

Sampling Personnel J. OBrien

ARCADIS

SURFACE WATER SAMPLING FORM

Project No. SC000204.0012.00001

Date 12-26-17

Site Location : Brenntag Southeast, Charleston, South Carolina

Time start sampling 1155

Sample Loc. : SW-2

Time end sampling —

FIELD SAMPLING DATA

pH	Cond. ~~(µMhos)~~ (mS/cm)	Turbidity (NTU)	Temp. (°C) ~~(°F)~~	Dissolved Oxygen (mg/L)	Redox (mV)	Appearance	
						Color	Odor
7.57	2.77	1.9	9.40	7.68	-193	Clear	NO

STREAM MEASUREMENT DATA

Time	Steam Depth	Steam Width	Velocity (ft/sec)
—	—		—

Constituents Sampled	Container	Number	Preservative
8260B	40 ml vial	3	Hcl

Remarks

Sampling Personnel J. OBRIEN

ARCADIS

SURFACE WATER SAMPLING FORM

Project No. SC000204.0012.00001

Date 12-26-17

Site Location : Brenntag Southeast, Charleston, South Carolina

Time start sampling 1140

Sample Loc. :SW-3

Time end sampling —

FIELD SAMPLING DATA

pH	Cond. ~~(µMhos)~~ (mS/cm)	Turbidity (NTU)	Temp. (°C) ~~(°F)~~	Dissolved Oxygen (mg/L)	Redox (mV)	Appearance	
						Color	Odor
7.62	2.74	1.8	9.44	7.69	-195	Clear	NO

STREAM MEASUREMENT DATA

Time	Steam Depth	Steam Width	Velocity (ft/sec)
—	—	—	—

Constituents Sampled	Container	Number
8260B	40 ml vial	3

Remarks

Sampling Personnel J. OBRIEN

APPENDIX C

Second Semiannual 2017 Laboratory Analytical Report

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

ARCADIS Geraghty & Miller

Brenntag; Charleston, SC

SC000204.0011.00001

SGS Job Number: FA50533

Sampling Date: 12/26/17

Report to:

ARCADIS Geraghty & Miller
1450 Greene St Suite 220
Augusta, GA 30901
charles.lawson@arcadis.com; Edward.Hirshenson@arcadis.com

ATTN: Charles Lawson

Total number of pages in report: 79

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Ken Overstreet 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

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Table of Contents

SGS North America Inc.

Sample Summary

ARCADIS Geraghty & Miller

Job No: FA50533

Brenntag; Charleston, SC
Project No: SC000204.0011.00001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA50533-1	12/26/17	09:35	JO	12/27/17	AQ	Ground Water	MW-13
FA50533-2	12/26/17	10:15	JO	12/27/17	AQ	Ground Water	MW-6
FA50533-3	12/26/17	10:55	JO	12/27/17	AQ	Ground Water	MW-5
FA50533-3F	12/26/17	10:55	JO	12/27/17	AQ	Groundwater Filtered	MW-5
FA50533-4	12/26/17	11:40	JO	12/27/17	AQ	Ground Water	SW-3
FA50533-5	12/26/17	11:55	JO	12/27/17	AQ	Ground Water	SW-2
FA50533-6	12/26/17	12:10	JO	12/27/17	AQ	Ground Water	SW-1
FA50533-7	12/26/17	12:55	JO	12/27/17	AQ	Ground Water	MW-2R
FA50533-7F	12/26/17	12:55	JO	12/27/17	AQ	Groundwater Filtered	MW-2R
FA50533-8	12/26/17	13:35	JO	12/27/17	AQ	Ground Water	MW-14
FA50533-8F	12/26/17	13:35	JO	12/27/17	AQ	Groundwater Filtered	MW-14
FA50533-9	12/26/17	00:00	JO	12/27/17	AQ	Trip Blank Water	TRIP BLANK

Summary of Hits

Job Number: FA50533
Account: ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC
Collected: 12/26/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA50533-1	**MW-13**					
Benzene		24.0	1.0	0.31	ug/l	SW846 8260B
Chlorobenzene		31.7	1.0	0.20	ug/l	SW846 8260B
1,2-Dichlorobenzene		4.1	1.0	0.32	ug/l	SW846 8260B
1,4-Dichlorobenzene		0.75 J	1.0	0.26	ug/l	SW846 8260B
1,1-Dichloroethane		145	50	17	ug/l	SW846 8260B
1,1-Dichloroethylene		140	50	16	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		26600	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		88.4	1.0	0.22	ug/l	SW846 8260B
Ethylbenzene		0.51 J	1.0	0.36	ug/l	SW846 8260B
Toluene		11.0	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene		828	50	17	ug/l	SW846 8260B
Vinyl Chloride		1670	50	20	ug/l	SW846 8260B
Xylene (total)		1.6 J	3.0	0.72	ug/l	SW846 8260B
FA50533-2	**MW-6**					
Benzene		23.4	1.0	0.31	ug/l	SW846 8260B
Chlorobenzene		31.8	1.0	0.20	ug/l	SW846 8260B
1,2-Dichlorobenzene		4.3	1.0	0.32	ug/l	SW846 8260B
1,4-Dichlorobenzene		0.81 J	1.0	0.26	ug/l	SW846 8260B
1,1-Dichloroethane		155	50	17	ug/l	SW846 8260B
1,1-Dichloroethylene		151	50	16	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		25100	500	140	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		79.3	50	11	ug/l	SW846 8260B
Ethylbenzene		0.48 J	1.0	0.36	ug/l	SW846 8260B
Toluene		11.0	1.0	0.30	ug/l	SW846 8260B
Trichloroethylene		919	50	17	ug/l	SW846 8260B
Vinyl Chloride		1870	50	20	ug/l	SW846 8260B
Xylene (total)		1.6 J	3.0	0.72	ug/l	SW846 8260B
FA50533-3	**MW-5**					
Chlorobenzene		1.0	1.0	0.20	ug/l	SW846 8260B
1,1-Dichloroethylene		0.68 J	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		47.9	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.33 J	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene		10.9	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride		2.3	1.0	0.41	ug/l	SW846 8260B
Methane		2460	5.0	1.6	ug/l	RSKSOP-147/175
Ethane		0.85 J	1.0	0.32	ug/l	RSKSOP-147/175
Iron		997	300		ug/l	SW846 6010D
Alkalinity, Total as CaCO3		603	25		mg/l	SM2320 B-11
Carbon Dioxide		635	5.0		mg/l	SM4500CO2 D-11

Summary of Hits

Job Number: FA50533
Account: ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC
Collected: 12/26/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Chloride		4200	50		mg/l	EPA 300/SW846 9056A
Iron, Ferric [a]		0.91	0.40		mg/l	SM3500FE B-11
Sulfate		363	50		mg/l	EPA 300/SW846 9056A
Sulfide		9.0	0.69		mg/l	SM4500S2- F-11
Total Organic Carbon		14.2	1.0		mg/l	SM5310 B-11/SW9060A
FA50533-3F	**MW-5**					
Total Organic Carbon		14.1	1.0		mg/l	SM5310 B-11/SW9060A
FA50533-4	**SW-3**					
Chlorobenzene		0.44 J	1.0	0.20	ug/l	SW846 8260B
1,1-Dichloroethylene		0.42 J	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		29.0	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.29 J	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene		7.2	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride		1.1	1.0	0.41	ug/l	SW846 8260B
FA50533-5	**SW-2**					
Chlorobenzene		0.42 J	1.0	0.20	ug/l	SW846 8260B
1,1-Dichloroethylene		0.47 J	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		29.9	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.35 J	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene		7.5	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride		1.2	1.0	0.41	ug/l	SW846 8260B
FA50533-6	**SW-1**					
Chlorobenzene		0.40 J	1.0	0.20	ug/l	SW846 8260B
1,1-Dichloroethylene		0.37 J	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		27.2	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.30 J	1.0	0.22	ug/l	SW846 8260B
Trichloroethylene		7.2	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride		1.3	1.0	0.41	ug/l	SW846 8260B
FA50533-7	**MW-2R**					
cis-1,2-Dichloroethylene		0.70 J	1.0	0.28	ug/l	SW846 8260B
Ethylbenzene		0.41 J	1.0	0.36	ug/l	SW846 8260B
Trichloroethylene		0.86 J	1.0	0.35	ug/l	SW846 8260B
Xylene (total)		0.93 J	3.0	0.72	ug/l	SW846 8260B
Methane		30.0	0.50	0.16	ug/l	RSKSOP-147/175
Iron		3040	300		ug/l	SW846 6010D

Summary of Hits

Job Number: FA50533
Account: ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC
Collected: 12/26/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Alkalinity, Total as CaCO3		256	5.0000		mg/l	SM2320 B-11
Carbon Dioxide		221	5.0		mg/l	SM4500CO2 D-11
Chloride		9.3	2.0		mg/l	EPA 300/SW846 9056A
Iron, Ferric [a]		2.9	0.40		mg/l	SM3500FE B-11
Iron, Ferrous [b]		0.11	0.10		mg/l	SM3500FE B-11
Sulfate		34.5	2.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.9	1.0		mg/l	SM5310 B-11/SW9060A
FA50533-7F	**MW-2R**					
Total Organic Carbon		2.6	1.0		mg/l	SM5310 B-11/SW9060A
FA50533-8	**MW-14**					
Benzene		700 J	2000	620	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		9310	2000	550	ug/l	SW846 8260B
Ethylbenzene		8640	2000	710	ug/l	SW846 8260B
Toluene		110000	2000	600	ug/l	SW846 8260B
Xylene (total)		80100	6000	1400	ug/l	SW846 8260B
Methane		9540	10	3.2	ug/l	RSKSOP-147/175
Ethane		108	1.0	0.32	ug/l	RSKSOP-147/175
Ethene		62.6	1.0	0.43	ug/l	RSKSOP-147/175
Iron		3500	300		ug/l	SW846 6010D
Alkalinity, Total as CaCO3		830	25		mg/l	SM2320 B-11
Carbon Dioxide		93.4	5.0		mg/l	SM4500CO2 D-11
Chloride		113	10		mg/l	EPA 300/SW846 9056A
Iron, Ferric [a]		3.4	0.40		mg/l	SM3500FE B-11
Sulfate		17.4	10		mg/l	EPA 300/SW846 9056A
Sulfide		3.9	0.67		mg/l	SM4500S2- F-11
Total Organic Carbon		196	7.0		mg/l	SM5310 B-11/SW9060A
FA50533-8F	**MW-14**					
Total Organic Carbon		194	7.0		mg/l	SM5310 B-11/SW9060A
FA50533-9	**TRIP BLANK**					

No hits reported in this sample.

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-13		
Lab Sample ID:	FA50533-1	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988655.D	1	01/04/18 12:48	SP	n/a	n/a	VJ5794
Run #2	J0988695.D	50	01/05/18 16:00	SP	n/a	n/a	VJ5796
Run #3	J0988733.D	500	01/08/18 19:06	SP	n/a	n/a	VJ5797

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	24.0	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	31.7	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	4.1	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.75	1.0	0.26	ug/l	J
75-34-3	1,1-Dichloroethane	145 [a]	50	17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	140 [a]	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	26600 [b]	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	88.4	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.51	1.0	0.36	ug/l	J
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-13		
Lab Sample ID:	FA50533-1	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	11.0	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	828 [a]	50	17	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1670 [a]	50	20	ug/l	
1330-20-7	Xylene (total)	1.6	3.0	0.72	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	99%	101%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	106%	106%	79-125%
2037-26-5	Toluene-D8	97%	98%	98%	85-112%
460-00-4	4-Bromofluorobenzene	95%	96%	97%	83-118%

(a) Result is from Run# 2
(b) Result is from Run# 3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	FA50533-2	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988656.D	1	01/04/18 13:12	SP	n/a	n/a	VJ5794
Run #2	J0988696.D	50	01/05/18 16:24	SP	n/a	n/a	VJ5796
Run #3	J0988734.D	500	01/08/18 19:30	SP	n/a	n/a	VJ5797

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml
Run #3	5.0 ml

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	23.4	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	31.8	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	4.3	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	0.81	1.0	0.26	ug/l	J
75-34-3	1,1-Dichloroethane	155 [a]	50	17	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	151 [a]	50	16	ug/l	
156-59-2	cis-1,2-Dichloroethylene	25100 [b]	500	140	ug/l	
156-60-5	trans-1,2-Dichloroethylene	79.3 [a]	50	11	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.48	1.0	0.36	ug/l	J
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	FA50533-2	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	11.0	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	919 [a]	50	17	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1870 [a]	50	20	ug/l	
1330-20-7	Xylene (total)	1.6	3.0	0.72	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	102%	101%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	107%	109%	79-125%
2037-26-5	Toluene-D8	97%	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	94%	97%	95%	83-118%

(a) Result is from Run# 2
(b) Result is from Run# 3

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA50533-3	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988693.D	1	01/05/18 15:12	SP	n/a	n/a	VJ5796
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	1.0	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.68	1.0	0.32	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	47.9	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.33	1.0	0.22	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA50533-3	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	10.9	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	2.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA50533-3	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF41498.D	1	12/27/17 14:30	EG	n/a	n/a	GFF1606
Run #2	FF41501.D	10	12/27/17 15:33	EG	n/a	n/a	GFF1606

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	21 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	21 Deg. C

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	2460 [a]	5.0	1.6	ug/l	
74-84-0	Ethane	0.85	1.0	0.32	ug/l	J
74-85-1	Ethene	ND	1.0	0.43	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA50533-3	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	997	300	ug/l	1	01/03/18	01/05/18	DM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA14598
(2) Prep QC Batch: MP33188

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA50533-3	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	603	25	mg/l	1	12/29/17 16:06	VK	SM2320 B-11
Carbon Dioxide	635	5.0	mg/l	1	01/08/18 11:17	VK	SM4500CO2 D-11
Chloride	4200	50	mg/l	25	12/27/17 16:53	JK	EPA 300/SW846 9056A
Iron, Ferric [a]	0.91	0.40	mg/l	1	01/11/18 11:20	VK	SM3500FE B-11
Iron, Ferrous [b]	< 0.10	0.10	mg/l	1	01/11/18 11:20	VK	SM3500FE B-11
Nitrogen, Nitrate [c]	< 2.5	2.5	mg/l	25	12/27/17 16:53	JK	EPA 300/SW846 9056A
Nitrogen, Nitrite [c]	< 2.5	2.5	mg/l	25	12/27/17 16:53	JK	EPA 300/SW846 9056A
Sulfate	363	50	mg/l	25	12/27/17 16:53	JK	EPA 300/SW846 9056A
Sulfide	9.0	0.69	mg/l	1	01/02/18 09:35	BW	SM4500S2- F-11
Total Organic Carbon	14.2	1.0	mg/l	1	12/30/17 16:05	FN	SM5310 B-11/SW9060A

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Dilution required due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	FA50533-3F	**Date Sampled:**	12/26/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Total Organic Carbon	14.1	1.0	mg/l	1	12/30/17 17:16	FN	SM5310 B-11/SW9060A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA50533-4	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988658.D	1	01/04/18 14:00	SP	n/a	n/a	VJ5794
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.44	1.0	0.20	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.42	1.0	0.32	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	29.0	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.29	1.0	0.22	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-3		
Lab Sample ID:	FA50533-4	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	7.2	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.1	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	97%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA50533-5	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988659.D	1	01/04/18 14:23	SP	n/a	n/a	VJ5794
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.42	1.0	0.20	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.47	1.0	0.32	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	29.9	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.35	1.0	0.22	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-2		
Lab Sample ID:	FA50533-5	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	7.5	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.2	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	109%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	96%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA50533-6	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I52534.D	1	01/04/18 19:22	AJ	n/a	n/a	VI1535
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	0.40	1.0	0.20	ug/l	J
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.37	1.0	0.32	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	27.2	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.30	1.0	0.22	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SW-1		
Lab Sample ID:	FA50533-6	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	7.2	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	1.3	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA50533-7	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I52535.D	1	01/04/18 19:45	AJ	n/a	n/a	VI1535
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.70	1.0	0.28	ug/l	J
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.41	1.0	0.36	ug/l	J
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA50533-7	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	0.86	1.0	0.35	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	0.93	3.0	0.72	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		83-118%
17060-07-0	1,2-Dichloroethane-D4	99%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	97%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA50533-7	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF41499.D	1	12/27/17 14:41	EG	n/a	n/a	GFF1606
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	21 Deg. C
Run #2				

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	30.0	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA50533-7	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3040	300	ug/l	1	01/03/18	01/05/18	DM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA14598
(2) Prep QC Batch: MP33188

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA50533-7	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	256	5.0000	mg/l	1	12/29/17 15:00	VK	SM2320 B-11
Carbon Dioxide	221	5.0	mg/l	1	01/08/18 11:17	VK	SM4500CO2 D-11
Chloride	9.3	2.0	mg/l	1	12/27/17 17:13	JK	EPA 300/SW846 9056A
Iron, Ferric [a]	2.9	0.40	mg/l	1	01/11/18 11:20	VK	SM3500FE B-11
Iron, Ferrous [b]	0.11	0.10	mg/l	1	01/11/18 11:20	VK	SM3500FE B-11
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	12/27/17 17:13	JK	EPA 300/SW846 9056A
Nitrogen, Nitrite	< 0.10	0.10	mg/l	1	12/27/17 17:13	JK	EPA 300/SW846 9056A
Sulfate	34.5	2.0	mg/l	1	12/27/17 17:13	JK	EPA 300/SW846 9056A
Sulfide	< 0.70	0.70	mg/l	1	01/02/18 09:35	BW	SM4500S2- F-11
Total Organic Carbon	1.9	1.0	mg/l	1	12/30/17 16:23	FN	SM5310 B-11/SW9060A

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-2R		
Lab Sample ID:	FA50533-7F	**Date Sampled:**	12/26/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Total Organic Carbon	2.6	1.0	mg/l	1	12/30/17 17:34	FN	SM5310 B-11/SW9060A

RL = Reporting Limit

Report of Analysis

Client Sample ID: MW-14
Lab Sample ID: FA50533-8
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: Brenntag; Charleston, SC

Date Sampled: 12/26/17
Date Received: 12/27/17
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I52536.D	2000	01/04/18 20:09	AJ	n/a	n/a	VI1535
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50000	20000	ug/l	
71-43-2	Benzene	700	2000	620	ug/l	J
75-27-4	Bromodichloromethane	ND	2000	480	ug/l	
75-25-2	Bromoform	ND	2000	810	ug/l	
78-93-3	2-Butanone (MEK)	ND	10000	4000	ug/l	
75-15-0	Carbon Disulfide	ND	4000	1100	ug/l	
56-23-5	Carbon Tetrachloride	ND	2000	710	ug/l	
108-90-7	Chlorobenzene	ND	2000	400	ug/l	
75-00-3	Chloroethane	ND	4000	1300	ug/l	
67-66-3	Chloroform	ND	2000	600	ug/l	
110-82-7	Cyclohexane	ND	2000	780	ug/l	
124-48-1	Dibromochloromethane	ND	2000	550	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10000	2100	ug/l	
106-93-4	1,2-Dibromoethane	ND	4000	550	ug/l	
75-71-8	Dichlorodifluoromethane	ND	4000	1000	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	2000	650	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	2000	430	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	2000	510	ug/l	
75-34-3	1,1-Dichloroethane	ND	2000	680	ug/l	
107-06-2	1,2-Dichloroethane	ND	2000	620	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2000	640	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9310	2000	550	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2000	440	ug/l	
78-87-5	1,2-Dichloropropane	ND	2000	850	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2000	580	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2000	430	ug/l	
100-41-4	Ethylbenzene	8640	2000	710	ug/l	
76-13-1	Freon 113	ND	2000	960	ug/l	
591-78-6	2-Hexanone	ND	20000	4000	ug/l	
98-82-8	Isopropylbenzene	ND	2000	440	ug/l	
79-20-9	Methyl Acetate	ND	40000	10000	ug/l	
74-83-9	Methyl Bromide	ND	4000	1200	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA50533-8	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	4000	1000	ug/l	
108-87-2	Methylcyclohexane	ND	2000	870	ug/l	
75-09-2	Methylene Chloride	ND	10000	4000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	10000	2000	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2000	460	ug/l	
100-42-5	Styrene	ND	2000	440	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2000	600	ug/l	
127-18-4	Tetrachloroethylene	ND	2000	430	ug/l	
108-88-3	Toluene	110000	2000	600	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4000	1000	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2000	500	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2000	930	ug/l	
79-01-6	Trichloroethylene	ND	2000	690	ug/l	
75-69-4	Trichlorofluoromethane	ND	4000	1000	ug/l	
75-01-4	Vinyl Chloride	ND	2000	820	ug/l	
1330-20-7	Xylene (total)	80100	6000	1400	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		83-118%
17060-07-0	1,2-Dichloroethane-D4	97%		79-125%
2037-26-5	Toluene-D8	100%		85-112%
460-00-4	4-Bromofluorobenzene	101%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA50533-8	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
Method:	RSKSOP-147/175	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF41500.D	1	12/27/17 15:00	EG	n/a	n/a	GFF1606
Run #2	FF41502.D	20	12/27/17 15:45	EG	n/a	n/a	GFF1606

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	21 Deg. C
Run #2	38.0 ml	5.0 ml	500 ul	21 Deg. C

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	9540 [a]	10	3.2	ug/l	
74-84-0	Ethane	108	1.0	0.32	ug/l	
74-85-1	Ethene	62.6	1.0	0.43	ug/l	

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA50533-8	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3500	300	ug/l	1	01/03/18	01/05/18	DM	SW846 6010D [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA14598
(2) Prep QC Batch: MP33188

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA50533-8	**Date Sampled:**	12/26/17
Matrix:	AQ - Ground Water	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	830	25	mg/l	1	12/29/17 16:06	VK	SM2320 B-11
Carbon Dioxide	93.4	5.0	mg/l	1	01/08/18 11:17	VK	SM4500CO2 D-11
Chloride	113	10	mg/l	5	12/27/17 17:33	JK	EPA 300/SW846 9056A
Iron, Ferric [a]	3.4	0.40	mg/l	1	01/11/18 11:20	VK	SM3500FE B-11
Iron, Ferrous [b]	< 0.10	0.10	mg/l	1	01/11/18 11:20	VK	SM3500FE B-11
Nitrogen, Nitrate [c]	< 0.50	0.50	mg/l	5	12/27/17 17:33	JK	EPA 300/SW846 9056A
Nitrogen, Nitrite [c]	< 0.50	0.50	mg/l	5	12/27/17 17:33	JK	EPA 300/SW846 9056A
Sulfate	17.4	10	mg/l	5	12/27/17 17:33	JK	EPA 300/SW846 9056A
Sulfide	3.9	0.67	mg/l	1	01/02/18 09:35	BW	SM4500S2- F-11
Total Organic Carbon	196	7.0	mg/l	7	12/30/17 16:42	FN	SM5310 B-11/SW9060A

(a) Calculated as: (Iron) - (Iron, Ferrous)
(b) Field analysis required. Received out of hold time and analyzed by request.
(c) Dilution required due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	FA50533-8F	**Date Sampled:**	12/26/17
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/27/17
		Percent Solids:	n/a
Project:	Brenntag; Charleston, SC		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Total Organic Carbon	194	7.0	mg/l	7	12/30/17 17:53	FN	SM5310 B-11/SW9060A

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA50533-9	**Date Sampled:**	12/26/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I52537.D	1	01/04/18 20:32	AJ	n/a	n/a	VI1535
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA50533-9	**Date Sampled:**	12/26/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/27/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	100%		79-125%
2037-26-5	Toluene-D8	101%		85-112%
460-00-4	4-Bromofluorobenzene	100%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ARCADIS | ID#: | **CHAIN OF COSTODY & LABORATORY ANALYSIS REQUEST FORM** | Page ___ of ___ | Lab Work Order #: FA50533

Send Results to:

Contact & Company Name: Charles Lawson	Telephone: 706 · 828 · 4421
Address: 1450 Greene St, Suite 220	Fax:
City / State / Zip: Augusta GA 30901	E-mail Address:
Project Name/Location (City, State): Brenntag, N Charleston, SC	Project #: SC000204.00
Sampler's Printed Name: J. OBrien	Sampler's Signature: [signature]

Preservative	B	E	D	C	D, F	B	B
Filtered (✓)	-						
# of Containers	3	1	3	1	3	2	2
Container Information	1	9	7	3	3	1	1

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key: A. H_2SO_4 B. HCL C. HNO_3 D. NaOH E. None F. Other: ZnAc G. Other: ____ H. Other: ____

Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 1 L HAS 10. Other: ____

Matrix Key: SO - Soil, W - Water, T - Tissue, SE - Sediment, SL - Sludge, A - Air, NL - NAPL/Oil, SW - Sample Wipe, Other: ____

Sample ID		Collection Date	Collection Time	Type Comp	Type Grab	Matrix	VOCs 8260B	Alk, SO4, NO3, NO2, Fe2+, Cl, Oth, CO2	DOC	Fe	S	TOC	VFAs, Kit 7, DG MEE	REMARKS
MW-13	1	12-26	0935		✓	W	3							
MW-6	2	12-26	1015		✓	W	3							
MW-5	3	12-26	1055		✓	W	3	1	3	1	3	2	2	
SW-3	4	12-26	1140		✓	W	3							
SW-2	5	12-26	1155		✓	W	3							
SW-1	6	12-26	1210		✓	W	3							
MW-2R	7	12-26	1255		✓	W	3	1	3	1	3	2	2	
MW-14	8	12-26	1335		✓	W	3	1	3	1	3	2	2	
Trip Blank	9						2							

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: Accutest	Cooler Custody Seal (✓)	Printed Name: J. OBrien	Printed Name: Fed Ex	Printed Name: Fed Ex	Printed Name: Fed Ex
☒ Cooler packed with ice (✓)	☑ Intact ☐ Not Intact	Signature: [signature]	Signature:	Signature:	Signature: [signature]
Specify Turnaround Requirements:	Sample Receipt:	Firm: Arcadis	Firm/Courier:	Firm/Courier:	Firm: SGS
Shipping Tracking #:	Condition/Cooler Temp: 3.2	Date/Time: 12·26·17 / 1430	Date/Time:	Date/Time:	Date/Time: 12/27/17 900

20730826 CofC AR Form 08.27.2015 Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

4.1

4

FA50533: Chain of Custody

Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: FA50533 **Client:** ARCADIS **Project:** BRENNTAG

Date / Time Received: 12/27/2017 9:00:00 AM **Delivery Method:** FED EX **Airbill #'s:** 812003820362

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (2.8);

Cooler Temps (Corrected) °C: Cooler 1: (3.2);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☑		☐	☐
2. Trip Blank listed on COC	☑		☐	☐

	W	or	S	N/A
3. Type Of TB Received	☑		☐	☐

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☐		☑	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☑	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments 2- VIALS FOR MEE.

SM001
Rev. Date 05/24/17

Technician: SHAYLAP Date: 12/27/2017 9:00:00 A Reviewer: SP Date: 12/27/2017

FA50533: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5794-MB	J0988653.D	1	01/04/18	SP	n/a	n/a	VJ5794

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-4, FA50533-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5794-MB	J0988653.D	1	01/04/18	SP	n/a	n/a	VJ5794

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-4, FA50533-5

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	106%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1535-MB	I52522.D	1	01/04/18	AJ	n/a	n/a	VI1535

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-6, FA50533-7, FA50533-8, FA50533-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1535-MB	I52522.D	1	01/04/18	AJ	n/a	n/a	VI1535

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-6, FA50533-7, FA50533-8, FA50533-9

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5796-MB	J0988683.D	1	01/05/18	SP	n/a	n/a	VJ5796

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5796-MB	J0988683.D	1	01/05/18	SP	n/a	n/a	VJ5796

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-3

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	83-118%

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5797-MB	J0988713.D	1	01/08/18	SP	n/a	n/a	VJ5797

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2

CAS No.	Compound	Result	RL	MDL	Units	Q
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	95%	83-118%

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5794-BS	J0988652.D	1	01/04/18	SP	n/a	n/a	VJ5794

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-4, FA50533-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	136	109	50-147
71-43-2	Benzene	25	25.5	102	81-122
75-27-4	Bromodichloromethane	25	26.2	105	79-123
75-25-2	Bromoform	25	22.3	89	66-123
78-93-3	2-Butanone (MEK)	125	133	106	56-143
75-15-0	Carbon Disulfide	25	27.7	111	66-148
56-23-5	Carbon Tetrachloride	25	26.4	106	76-136
108-90-7	Chlorobenzene	25	25.8	103	82-124
75-00-3	Chloroethane	25	24.9	100	62-144
67-66-3	Chloroform	25	25.9	104	80-124
110-82-7	Cyclohexane	25	26.3	105	73-138
124-48-1	Dibromochloromethane	25	23.6	94	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.1	96	64-123
106-93-4	1,2-Dibromoethane	25	26.2	105	75-120
75-71-8	Dichlorodifluoromethane	25	20.8	83	42-167
95-50-1	1,2-Dichlorobenzene	25	26.3	105	82-124
541-73-1	1,3-Dichlorobenzene	25	27.1	108	84-125
106-46-7	1,4-Dichlorobenzene	25	25.8	103	78-120
75-34-3	1,1-Dichloroethane	25	26.5	106	81-122
107-06-2	1,2-Dichloroethane	25	24.9	100	75-125
75-35-4	1,1-Dichloroethylene	25	26.9	108	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.4	106	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.4	110	76-127
78-87-5	1,2-Dichloropropane	25	24.8	99	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.3	97	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.5	98	80-120
100-41-4	Ethylbenzene	25	25.3	101	81-121
76-13-1	Freon 113	25	25.9	104	72-134
591-78-6	2-Hexanone	125	125	100	61-129
98-82-8	Isopropylbenzene	25	28.5	114	83-132
79-20-9	Methyl Acetate	125	124	99	65-126
74-83-9	Methyl Bromide	25	19.2	77	59-143
74-87-3	Methyl Chloride	25	22.3	89	50-159
108-87-2	Methylcyclohexane	25	27.8	111	76-129
75-09-2	Methylene Chloride	25	26.5	106	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	127	102	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5794-BS	J0988652.D	1	01/04/18	SP	n/a	n/a	VJ5794

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-4, FA50533-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.8	99	72-117
100-42-5	Styrene	25	27.2	109	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	26.0	104	72-120
127-18-4	Tetrachloroethylene	25	28.4	114	76-135
108-88-3	Toluene	25	26.1	104	80-120
120-82-1	1,2,4-Trichlorobenzene	25	26.1	104	73-129
71-55-6	1,1,1-Trichloroethane	25	26.7	107	75-130
79-00-5	1,1,2-Trichloroethane	25	25.4	102	76-119
79-01-6	Trichloroethylene	25	26.2	105	81-126
75-69-4	Trichlorofluoromethane	25	27.2	109	71-156
75-01-4	Vinyl Chloride	25	23.5	94	69-159
1330-20-7	Xylene (total)	75	79.3	106	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	98%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1535-BS	I52521.D	1	01/04/18	AJ	n/a	n/a	VI1535

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-6, FA50533-7, FA50533-8, FA50533-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	111	89	50-147
71-43-2	Benzene	25	26.0	104	81-122
75-27-4	Bromodichloromethane	25	24.4	98	79-123
75-25-2	Bromoform	25	24.3	97	66-123
78-93-3	2-Butanone (MEK)	125	118	94	56-143
75-15-0	Carbon Disulfide	25	27.0	108	66-148
56-23-5	Carbon Tetrachloride	25	25.5	102	76-136
108-90-7	Chlorobenzene	25	26.2	105	82-124
75-00-3	Chloroethane	25	28.9	116	62-144
67-66-3	Chloroform	25	24.7	99	80-124
110-82-7	Cyclohexane	25	23.9	96	73-138
124-48-1	Dibromochloromethane	25	24.8	99	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.2	93	64-123
106-93-4	1,2-Dibromoethane	25	26.4	106	75-120
75-71-8	Dichlorodifluoromethane	25	41.6	166	42-167
95-50-1	1,2-Dichlorobenzene	25	25.6	102	82-124
541-73-1	1,3-Dichlorobenzene	25	26.7	107	84-125
106-46-7	1,4-Dichlorobenzene	25	25.8	103	78-120
75-34-3	1,1-Dichloroethane	25	27.0	108	81-122
107-06-2	1,2-Dichloroethane	25	24.7	99	75-125
75-35-4	1,1-Dichloroethylene	25	26.6	106	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.7	103	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.3	105	76-127
78-87-5	1,2-Dichloropropane	25	25.2	101	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.0	92	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.0	100	80-120
100-41-4	Ethylbenzene	25	26.8	107	81-121
76-13-1	Freon 113	25	23.8	95	72-134
591-78-6	2-Hexanone	125	126	101	61-129
98-82-8	Isopropylbenzene	25	27.1	108	83-132
79-20-9	Methyl Acetate	125	114	91	65-126
74-83-9	Methyl Bromide	25	29.1	116	59-143
74-87-3	Methyl Chloride	25	26.2	105	50-159
108-87-2	Methylcyclohexane	25	25.6	102	76-129
75-09-2	Methylene Chloride	25	23.2	93	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	120	96	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VI1535-BS	I52521.D	1	01/04/18	AJ	n/a	n/a	VI1535

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-6, FA50533-7, FA50533-8, FA50533-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.5	98	72-117
100-42-5	Styrene	25	24.7	99	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	25.7	103	72-120
127-18-4	Tetrachloroethylene	25	30.3	121	76-135
108-88-3	Toluene	25	26.4	106	80-120
120-82-1	1,2,4-Trichlorobenzene	25	26.0	104	73-129
71-55-6	1,1,1-Trichloroethane	25	24.1	96	75-130
79-00-5	1,1,2-Trichloroethane	25	25.8	103	76-119
79-01-6	Trichloroethylene	25	26.2	105	81-126
75-69-4	Trichlorofluoromethane	25	31.8	127	71-156
75-01-4	Vinyl Chloride	25	32.2	129	69-159
1330-20-7	Xylene (total)	75	80.8	108	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5796-BS	J0988682.D	1	01/05/18	SP	n/a	n/a	VJ5796

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	135	108	50-147
71-43-2	Benzene	25	25.5	102	81-122
75-27-4	Bromodichloromethane	25	25.9	104	79-123
75-25-2	Bromoform	25	23.1	92	66-123
78-93-3	2-Butanone (MEK)	125	133	106	56-143
75-15-0	Carbon Disulfide	25	28.0	112	66-148
56-23-5	Carbon Tetrachloride	25	27.2	109	76-136
108-90-7	Chlorobenzene	25	26.6	106	82-124
75-00-3	Chloroethane	25	25.6	102	62-144
67-66-3	Chloroform	25	26.1	104	80-124
110-82-7	Cyclohexane	25	26.2	105	73-138
124-48-1	Dibromochloromethane	25	24.4	98	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.0	96	64-123
106-93-4	1,2-Dibromoethane	25	27.2	109	75-120
75-71-8	Dichlorodifluoromethane	25	33.9	136	42-167
95-50-1	1,2-Dichlorobenzene	25	26.4	106	82-124
541-73-1	1,3-Dichlorobenzene	25	26.9	108	84-125
106-46-7	1,4-Dichlorobenzene	25	25.9	104	78-120
75-34-3	1,1-Dichloroethane	25	27.6	110	81-122
107-06-2	1,2-Dichloroethane	25	25.3	101	75-125
75-35-4	1,1-Dichloroethylene	25	27.0	108	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.6	106	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.5	110	76-127
78-87-5	1,2-Dichloropropane	25	25.7	103	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.3	97	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.5	102	80-120
100-41-4	Ethylbenzene	25	25.8	103	81-121
76-13-1	Freon 113	25	26.8	107	72-134
591-78-6	2-Hexanone	125	128	102	61-129
98-82-8	Isopropylbenzene	25	29.1	116	83-132
79-20-9	Methyl Acetate	125	128	102	65-126
74-83-9	Methyl Bromide	25	20.5	82	59-143
74-87-3	Methyl Chloride	25	27.0	108	50-159
108-87-2	Methylcyclohexane	25	28.4	114	76-129
75-09-2	Methylene Chloride	25	26.5	106	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	129	103	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5796-BS	J0988682.D	1	01/05/18	SP	n/a	n/a	VJ5796

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	25.3	101	72-117
100-42-5	Styrene	25	27.7	111	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	26.1	104	72-120
127-18-4	Tetrachloroethylene	25	27.4	110	76-135
108-88-3	Toluene	25	26.6	106	80-120
120-82-1	1,2,4-Trichlorobenzene	25	26.5	106	73-129
71-55-6	1,1,1-Trichloroethane	25	26.5	106	75-130
79-00-5	1,1,2-Trichloroethane	25	26.9	108	76-119
79-01-6	Trichloroethylene	25	26.7	107	81-126
75-69-4	Trichlorofluoromethane	25	29.5	118	71-156
75-01-4	Vinyl Chloride	25	26.5	106	69-159
1330-20-7	Xylene (total)	75	79.9	107	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	99%	85-112%
460-00-4	4-Bromofluorobenzene	94%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5797-BS	J0988712.D	1	01/08/18	SP	n/a	n/a	VJ5797

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
156-59-2	cis-1,2-Dichloroethylene	25	26.2	105	78-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	97%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50524-1MS	I52532.D	50	01/04/18	AJ	n/a	n/a	VI1535
FA50524-1MSD	I52533.D	50	01/04/18	AJ	n/a	n/a	VI1535
FA50524-1	I52523.D	50	01/04/18	AJ	n/a	n/a	VI1535

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-6, FA50533-7, FA50533-8, FA50533-9

CAS No.	Compound	FA50524-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		6250	5060	81	6250	5400	86	7	50-147/21
71-43-2	Benzene	ND		1250	1290	103	1250	1320	106	2	81-122/14
75-27-4	Bromodichloromethane	ND		1250	1160	93	1250	1240	99	7	79-123/19
75-25-2	Bromoform	ND		1250	1030	82	1250	1120	90	8	66-123/21
78-93-3	2-Butanone (MEK)	ND		6250	5570	89	6250	5910	95	6	56-143/18
75-15-0	Carbon Disulfide	ND		1250	1110	89	1250	1260	101	13	66-148/23
56-23-5	Carbon Tetrachloride	ND		1250	1260	101	1250	1310	105	4	76-136/23
108-90-7	Chlorobenzene	ND		1250	1300	104	1250	1310	105	1	82-124/14
75-00-3	Chloroethane	ND		1250	1680	134	1250	1710	137	2	62-144/20
67-66-3	Chloroform	17.0	J	1250	1290	102	1250	1310	103	2	80-124/15
110-82-7	Cyclohexane	ND		1250	1240	99	1250	1260	101	2	73-138/18
124-48-1	Dibromochloromethane	ND		1250	1090	87	1250	1160	93	6	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		1250	1070	86	1250	1190	95	11	64-123/18
106-93-4	1,2-Dibromoethane	ND		1250	1260	101	1250	1290	103	2	75-120/13
75-71-8	Dichlorodifluoromethane	ND		1250	2160	173*	1250	2180	174*	1	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		1250	1280	102	1250	1300	104	2	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		1250	1260	101	1250	1350	108	7	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		1250	1250	100	1250	1280	102	2	78-120/15
75-34-3	1,1-Dichloroethane	ND		1250	1380	110	1250	1410	113	2	81-122/15
107-06-2	1,2-Dichloroethane	ND		1250	1230	98	1250	1270	102	3	75-125/14
75-35-4	1,1-Dichloroethylene	599		1250	1980	110	1250	1990	111	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	19.5	J	1250	1310	103	1250	1360	107	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		1250	1330	106	1250	1360	109	2	76-127/17
78-87-5	1,2-Dichloropropane	ND		1250	1270	102	1250	1310	105	3	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		1250	1090	87	1250	1140	91	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		1250	1130	90	1250	1170	94	3	80-120/22
100-41-4	Ethylbenzene	ND		1250	1310	105	1250	1340	107	2	81-121/14
76-13-1	Freon 113	304		1250	1490	95	1250	1530	98	3	72-134/20
591-78-6	2-Hexanone	ND		6250	5990	96	6250	6210	99	4	61-129/18
98-82-8	Isopropylbenzene	ND		1250	1290	103	1250	1280	102	1	83-132/15
79-20-9	Methyl Acetate	ND		6250	5620	90	6250	5860	94	4	65-126/18
74-83-9	Methyl Bromide	ND		1250	1550	124	1250	1570	126	1	59-143/19
74-87-3	Methyl Chloride	ND		1250	1380	110	1250	1390	111	1	50-159/19
108-87-2	Methylcyclohexane	ND		1250	1290	103	1250	1310	105	2	76-129/17
75-09-2	Methylene Chloride	ND		1250	1210	97	1250	1230	98	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		6250	5610	90	6250	5810	93	4	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50524-1MS	I52532.D	50	01/04/18	AJ	n/a	n/a	VI1535
FA50524-1MSD	I52533.D	50	01/04/18	AJ	n/a	n/a	VI1535
FA50524-1	I52523.D	50	01/04/18	AJ	n/a	n/a	VI1535

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-6, FA50533-7, FA50533-8, FA50533-9

CAS No.	Compound	FA50524-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		1250	1180	94	1250	1240	99	5	72-117/14
100-42-5	Styrene	ND		1250	1190	95	1250	1200	96	1	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	ND		1250	1280	102	1250	1320	106	3	72-120/14
127-18-4	Tetrachloroethylene	4290		1250	5360	86	1250	5160	70* [a]	4	76-135/16
108-88-3	Toluene	ND		1250	1290	103	1250	1290	103	0	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND		1250	1220	98	1250	1320	106	8	73-129/20
71-55-6	1,1,1-Trichloroethane	242		1250	1420	94	1250	1440	96	1	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		1250	1260	101	1250	1280	102	2	76-119/14
79-01-6	Trichloroethylene	2910		1250	4290	110	1250	4220	105	2	81-126/15
75-69-4	Trichlorofluoromethane	ND		1250	1720	138	1250	1730	138	1	71-156/21
75-01-4	Vinyl Chloride	ND		1250	1660	133	1250	1700	136	2	69-159/18
1330-20-7	Xylene (total)	ND		3750	3950	105	3750	4010	107	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA50524-1	Limits
1868-53-7	Dibromofluoromethane	99%	100%	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	99%	100%	98%	79-125%
2037-26-5	Toluene-D8	97%	96%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	101%	103%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50606-1MS	J0988673.D	20	01/04/18	SP	n/a	n/a	VJ5794
FA50606-1MSD	J0988674.D	20	01/04/18	SP	n/a	n/a	VJ5794
FA50606-1	J0988664.D	20	01/04/18	SP	n/a	n/a	VJ5794

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-4, FA50533-5

CAS No.	Compound	FA50606-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	500	U	2500	3020	121	2500	2930	117	3	50-147/21
71-43-2	Benzene	642		500	1160	104	500	1130	98	3	81-122/14
75-27-4	Bromodichloromethane	20	U	500	556	111	500	572	114	3	79-123/19
75-25-2	Bromoform	20	U	500	422	84	500	443	89	5	66-123/21
78-93-3	2-Butanone (MEK)	100	U	2500	3000	120	2500	3010	120	0	56-143/18
75-15-0	Carbon Disulfide	40	U	500	499	100	500	525	105	5	66-148/23
56-23-5	Carbon Tetrachloride	20	U	500	588	118	500	583	117	1	76-136/23
108-90-7	Chlorobenzene	20	U	500	588	118	500	573	115	3	82-124/14
75-00-3	Chloroethane	40	U	500	667	133	500	609	122	9	62-144/20
67-66-3	Chloroform	20	U	500	587	117	500	584	117	1	80-124/15
110-82-7	Cyclohexane	83.8		500	725	128	500	724	128	0	73-138/18
124-48-1	Dibromochloromethane	20	U	500	498	100	500	497	99	0	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	100	U	500	562	112	500	523	105	7	64-123/18
106-93-4	1,2-Dibromoethane	40	U	500	618	124*	500	611	122*	1	75-120/13
75-71-8	Dichlorodifluoromethane	40	U	500	745	149	500	749	150	1	42-167/19
95-50-1	1,2-Dichlorobenzene	20	U	500	591	118	500	591	118	0	82-124/14
541-73-1	1,3-Dichlorobenzene	20	U	500	606	121	500	605	121	0	84-125/14
106-46-7	1,4-Dichlorobenzene	20	U	500	588	118	500	576	115	2	78-120/15
75-34-3	1,1-Dichloroethane	20	U	500	620	124*	500	597	119	4	81-122/15
107-06-2	1,2-Dichloroethane	20	U	500	566	113	500	574	115	1	75-125/14
75-35-4	1,1-Dichloroethylene	20	U	500	603	121	500	607	121	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	20	U	500	612	122*	500	586	117	4	78-120/15
156-60-5	trans-1,2-Dichloroethylene	20	U	500	621	124	500	592	118	5	76-127/17
78-87-5	1,2-Dichloropropane	20	U	500	566	113	500	566	113	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	20	U	500	516	103	500	547	109	6	75-118/23
10061-02-6	trans-1,3-Dichloropropene	20	U	500	528	106	500	547	109	4	80-120/22
100-41-4	Ethylbenzene	1600		500	2010	82	500	1980	76* [a]	2	81-121/14
76-13-1	Freon 113	20	U	500	586	117	500	589	118	1	72-134/20
591-78-6	2-Hexanone	200	U	2500	3010	120	2500	2870	115	5	61-129/18
98-82-8	Isopropylbenzene	72.1		500	721	130	500	710	128	2	83-132/15
79-20-9	Methyl Acetate	400	U	2500	2770	111	2500	2700	108	3	65-126/18
74-83-9	Methyl Bromide	40	U	500	516	103	500	453	91	13	59-143/19
74-87-3	Methyl Chloride	40	U	500	639	128	500	631	126	1	50-159/19
108-87-2	Methylcyclohexane	73.4		500	683	122	500	677	121	1	76-129/17
75-09-2	Methylene Chloride	100	U	500	600	120	500	581	116	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	100	U	2500	3130	125*	2500	2980	119	5	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50606-1MS	J0988673.D	20	01/04/18	SP	n/a	n/a	VJ5794
FA50606-1MSD	J0988674.D	20	01/04/18	SP	n/a	n/a	VJ5794
FA50606-1	J0988664.D	20	01/04/18	SP	n/a	n/a	VJ5794

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-4, FA50533-5

CAS No.	Compound	FA50606-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	20 U		500	561	112	500	548	110	2	72-117/14
100-42-5	Styrene	20 U		500	621	124*	500	627	125*	1	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	20 U		500	595	119	500	571	114	4	72-120/14
127-18-4	Tetrachloroethylene	20 U		500	599	120	500	594	119	1	76-135/16
108-88-3	Toluene	24.3		500	621	119	500	617	119	1	80-120/14
120-82-1	1,2,4-Trichlorobenzene	40 U		500	582	116	500	593	119	2	73-129/20
71-55-6	1,1,1-Trichloroethane	20 U		500	584	117	500	587	117	1	75-130/16
79-00-5	1,1,2-Trichloroethane	20 U		500	602	120*	500	583	117	3	76-119/14
79-01-6	Trichloroethylene	20 U		500	612	122	500	615	123	0	81-126/15
75-69-4	Trichlorofluoromethane	40 U		500	696	139	500	675	135	3	71-156/21
75-01-4	Vinyl Chloride	20 U		500	625	125	500	619	124	1	69-159/18
1330-20-7	Xylene (total)	45.5	I	1500	1850	120	1500	1810	118	2	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA50606-1	Limits
1868-53-7	Dibromofluoromethane	102%	99%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	97%	103%	79-125%
2037-26-5	Toluene-D8	100%	100%	97%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	95%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50533-1MS	J0988704.D	50	01/05/18	SP	n/a	n/a	VJ5796
FA50533-1MSD	J0988705.D	50	01/05/18	SP	n/a	n/a	VJ5796
FA50533-1	J0988695.D	50	01/05/18	SP	n/a	n/a	VJ5796

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-3

CAS No.	Compound	FA50533-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		6250	6320	101	6250	7150	114	12	50-147/21
71-43-2	Benzene	22.6	J	1250	1300	102	1250	1290	101	1	81-122/14
75-27-4	Bromodichloromethane	ND		1250	1260	101	1250	1280	102	2	79-123/19
75-25-2	Bromoform	ND		1250	911	73	1250	1020	82	11	66-123/21
78-93-3	2-Butanone (MEK)	ND		6250	6430	103	6250	7110	114	10	56-143/18
75-15-0	Carbon Disulfide	ND		1250	1150	92	1250	1150	92	0	66-148/23
56-23-5	Carbon Tetrachloride	ND		1250	1260	101	1250	1270	102	1	76-136/23
108-90-7	Chlorobenzene	26.3	J	1250	1340	105	1250	1340	105	0	82-124/14
75-00-3	Chloroethane	ND		1250	1450	116	1250	1280	102	12	62-144/20
67-66-3	Chloroform	ND		1250	1250	100	1250	1260	101	1	80-124/15
110-82-7	Cyclohexane	ND		1250	1270	102	1250	1270	102	0	73-138/18
124-48-1	Dibromochloromethane	ND		1250	1100	88	1250	1110	89	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		1250	1010	81	1250	1140	91	12	64-123/18
106-93-4	1,2-Dibromoethane	ND		1250	1340	107	1250	1340	107	0	75-120/13
75-71-8	Dichlorodifluoromethane	ND		1250	1560	125	1250	1590	127	2	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		1250	1300	104	1250	1290	103	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		1250	1300	104	1250	1320	106	2	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		1250	1290	103	1250	1260	101	2	78-120/15
75-34-3	1,1-Dichloroethane	145		1250	1540	112	1250	1510	109	2	81-122/15
107-06-2	1,2-Dichloroethane	ND		1250	1260	101	1250	1280	102	2	75-125/14
75-35-4	1,1-Dichloroethylene	140		1250	1520	110	1250	1450	105	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	19300	E	1250	22500	256* [a]	1250	22300	240* [a]	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	71.7		1250	1460	111	1250	1390	105	5	76-127/17
78-87-5	1,2-Dichloropropane	ND		1250	1260	101	1250	1260	101	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		1250	1190	95	1250	1200	96	1	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		1250	1170	94	1250	1210	97	3	80-120/22
100-41-4	Ethylbenzene	ND		1250	1300	104	1250	1290	103	1	81-121/14
76-13-1	Freon 113	ND		1250	1240	99	1250	1220	98	2	72-134/20
591-78-6	2-Hexanone	ND		6250	6610	106	6250	7220	116	9	61-129/18
98-82-8	Isopropylbenzene	ND		1250	1390	111	1250	1420	114	2	83-132/15
79-20-9	Methyl Acetate	ND		6250	6190	99	6250	6250	100	1	65-126/18
74-83-9	Methyl Bromide	ND		1250	1140	91	1250	1030	82	10	59-143/19
74-87-3	Methyl Chloride	ND		1250	1390	111	1250	1370	110	1	50-159/19
108-87-2	Methylcyclohexane	ND		1250	1310	105	1250	1290	103	2	76-129/17
75-09-2	Methylene Chloride	ND		1250	1400	112	1250	1370	110	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		6250	6660	107	6250	7240	116	8	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50533-1MS	J0988704.D	50	01/05/18	SP	n/a	n/a	VJ5796
FA50533-1MSD	J0988705.D	50	01/05/18	SP	n/a	n/a	VJ5796
FA50533-1	J0988695.D	50	01/05/18	SP	n/a	n/a	VJ5796

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2, FA50533-3

CAS No.	Compound	FA50533-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		1250	1220	98	1250	1210	97	1	72-117/14
100-42-5	Styrene	ND		1250	1370	110	1250	1350	108	1	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	ND		1250	1330	106	1250	1340	107	1	72-120/14
127-18-4	Tetrachloroethylene	ND		1250	1300	104	1250	1310	105	1	76-135/16
108-88-3	Toluene	ND		1250	1320	106	1250	1330	106	1	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND		1250	1210	97	1250	1200	96	1	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		1250	1250	100	1250	1270	102	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		1250	1360	109	1250	1310	105	4	76-119/14
79-01-6	Trichloroethylene	828		1250	2270	115	1250	2290	117	1	81-126/15
75-69-4	Trichlorofluoromethane	ND		1250	1480	118	1250	1460	117	1	71-156/21
75-01-4	Vinyl Chloride	1670		1250	3250	126	1250	3170	120	2	69-159/18
1330-20-7	Xylene (total)	ND		3750	3970	106	3750	3960	106	0	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA50533-1	Limits
1868-53-7	Dibromofluoromethane	101%	101%	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	106%	79-125%
2037-26-5	Toluene-D8	100%	101%	98%	85-112%
460-00-4	4-Bromofluorobenzene	98%	98%	96%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50645-3MS	J0988735.D	20	01/08/18	SP	n/a	n/a	VJ5797
FA50645-3MSD	J0988736.D	20	01/08/18	SP	n/a	n/a	VJ5797
FA50645-3	J0988728.D	20	01/08/18	SP	n/a	n/a	VJ5797

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50533-1, FA50533-2

CAS No.	Compound	FA50645-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
156-59-2	cis-1,2-Dichloroethylene	290		500	798	102	500	825	107	3	78-120/15

CAS No.	Surrogate Recoveries	MS	MSD	FA50645-3	Limits
1868-53-7	Dibromofluoromethane	101%	101%	104%	83-118%
17060-07-0	1,2-Dichloroethane-D4	100%	101%	109%	79-125%
2037-26-5	Toluene-D8	99%	99%	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	96%	96%	83-118%

* = Outside of Control Limits.

GC Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF1606-MB	FF41483.D	1	12/27/17	EG	n/a	n/a	GFF1606

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA50533-3, FA50533-7, FA50533-8

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	
74-84-0	Ethane	ND	1.0	0.32	ug/l	
74-85-1	Ethene	ND	1.0	0.43	ug/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF1606-BS	FF41484.D	1	12/27/17	EG	n/a	n/a	GFF1606
GFF1606-BSD	FF41485.D	1	12/27/17	EG	n/a	n/a	GFF1606

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA50533-3, FA50533-7, FA50533-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	108	107	99	116	107	8	62-139/30
74-84-0	Ethane	219	222	101	235	107	6	67-141/30
74-85-1	Ethene	290	306	106	326	112	6	68-141/30

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50321-2MS	FF41497.D	1	12/27/17	EG	n/a	n/a	GFF1606
FA50321-2	FF41487.D	1	12/27/17	EG	n/a	n/a	GFF1606

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA50533-3, FA50533-7, FA50533-8

CAS No.	Compound	FA50321-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	0.54		108	112	103	62-139
74-84-0	Ethane	ND		219	229	105	67-141
74-85-1	Ethene	ND		290	318	110	68-141

* = Outside of Control Limits.

Duplicate Summary

Job Number: FA50533
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50321-1DUP	FF41496.D	1	12/27/17	EG	n/a	n/a	GFF1606
FA50321-1	FF41486.D	1	12/27/17	EG	n/a	n/a	GFF1606

The QC reported here applies to the following samples: **Method:** RSKSOP-147/175

FA50533-3, FA50533-7, FA50533-8

CAS No.	Compound	FA50321-1 ug/l	Q	DUP ug/l	Q	RPD	Limits
74-82-8	Methane	0.20	J	ND		200*	30
74-84-0	Ethane	ND		ND		nc	30
74-85-1	Ethene	ND		ND		nc	30

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

QC Batch ID: MP33188
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 01/03/18

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	14		
Antimony	6.0	1	1		
Arsenic	10	1.3	1.3		
Barium	200	1	1		
Beryllium	4.0	.2	.2		
Cadmium	5.0	.2	.2		
Calcium	1000	50	50		
Chromium	10	1	1		
Cobalt	50	.2	.2		
Copper	25	1	1		
Iron	300	17	17	-6.5	<300
Lead	5.0	1	1.1		
Magnesium	5000	35	35		
Manganese	15	.5	1		
Molybdenum	50	.3	.3		
Nickel	40	.4	.4		
Potassium	10000	200	200		
Selenium	10	2.4	2.9		
Silver	10	.7	.7		
Sodium	10000	500	500		
Strontium	10	.5	.5		
Thallium	10	1.1	1.4		
Tin	50	.9	1		
Titanium	10	.5	1		
Vanadium	50	.5	.6		
Zinc	20	3	4.4		

Associated samples MP33188: FA50533-3, FA50533-7, FA50533-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

QC Batch ID: MP33188
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 01/03/18 01/03/18

Metal	FA50533-3 Original	DUP	RPD	QC Limits	FA50533-3 Original	MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron	997	1010	1.3	0-20	997	25400	26000	93.9	80-120
Lead									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium									
Silver									
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP33188: FA50533-3, FA50533-7, FA50533-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

QC Batch ID: MP33188 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/03/18

Metal	FA50533-3 Original	MSD	Spikelot MPFLICP2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron	997	26200	26000	96.9	3.1	20
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP33188: FA50533-3, FA50533-7, FA50533-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

QC Batch ID: MP33188
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 01/03/18

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	26500	26000	101.9	80-120
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP33188: FA50533-3, FA50533-7, FA50533-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

QC Batch ID: MP33188 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/03/18

Metal	FA50533-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	997	1030	3.4	0-10
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP33188: FA50533-3, FA50533-7, FA50533-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

POST DIGESTATE SPIKE SUMMARY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

QC Batch ID: MP33188 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 01/03/18

Metal	Sample ml	Final ml	FA50533-3 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron	9.8	10	997.2	977.256	3851	0.2	150	3000	95.8	80-120
Lead										
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP33188: FA50533-3, FA50533-7, FA50533-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN77414	25	0.0	mg/l	250.0mg/l	255	102.0	90-113%
Alkalinity, Total as CaCO3	GN77415	5.0000	0.0	mg/l	250	262	104.6	90-113%
Chloride	GP30891/GN77404	2.0	0.0	mg/l	50	48.9	97.8	90-110%
Iron, Ferrous	GN77506	0.10	0.0	mg/l	0.500	0.52	104.5	82-115%
Nitrogen, Nitrate	GP30891/GN77404	0.10	0.0	mg/l	2.5	2.41	96.4	90-110%
Nitrogen, Nitrite	GP30891/GN77404	0.10	0.0	mg/l	2.5	2.56	102.4	90-110%
Sulfate	GP30891/GN77404	2.0	0.0	mg/l	50	51.4	102.8	90-110%
Sulfide	GN77424	1.0	0.0	mg/l	11.9	12.8	107.6	76-112%
Total Organic Carbon	GP30904/GN77420	1.0	0.0	mg/l	15	15.3	102.0	90-110%

Associated Samples:
Batch GN77414: FA50533-3, FA50533-8
Batch GN77415: FA50533-7
Batch GN77424: FA50533-3, FA50533-7, FA50533-8
Batch GN77506: FA50533-3, FA50533-7, FA50533-8
Batch GP30891: FA50533-3, FA50533-7, FA50533-8
Batch GP30904: FA50533-3, FA50533-7, FA50533-8, FA50533-3F, FA50533-7F, FA50533-8F
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN77414	FA50533-8	mg/l	830	830	0.0	0-20%
Alkalinity, Total as CaCO3	GN77415	FA50533-7	mg/l	256	257	0.2	0-20%
Iron, Ferrous	GN77506	FA50533-8	mg/l	0.060	0.043	33.9(a)	0-31%

Associated Samples:
Batch GN77414: FA50533-3, FA50533-8
Batch GN77415: FA50533-7
Batch GN77506: FA50533-3, FA50533-7, FA50533-8
(*) Outside of QC limits
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP30891/GN77404	FA50533-8	mg/l	113	50	169	112.0N(a)	90-110%
Nitrogen, Nitrate	GP30891/GN77404	FA50533-8	mg/l	0.0	2.5	2.6	104.0	90-110%
Nitrogen, Nitrite	GP30891/GN77404	FA50533-8	mg/l	0.0	2.5	2.8	112.0N(a)	90-110%
Sulfate	GP30891/GN77404	FA50533-8	mg/l	17.4	50	69.7	104.6	90-110%
Sulfide	GN77424	FA50533-7	mg/l	0.52	8.35	9.1	103.0	76-112%
Total Organic Carbon	GP30904/GN77420	FA50559-4	mg/l	6.5	15	21.0	96.7	90-110%

Associated Samples:
Batch GN77424: FA50533-3, FA50533-7, FA50533-8
Batch GP30891: FA50533-3, FA50533-7, FA50533-8
Batch GP30904: FA50533-3, FA50533-7, FA50533-8, FA50533-3F, FA50533-7F, FA50533-8F
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA50533
Account: ARCGMSCA - ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP30891/GN77404	FA50533-8	mg/l	113	50	169	0.0	20%
Nitrogen, Nitrate	GP30891/GN77404	FA50533-8	mg/l	0.0	2.5	2.7	3.8	20%
Nitrogen, Nitrite	GP30891/GN77404	FA50533-8	mg/l	0.0	2.5	3.0	6.9	20%
Sulfate	GP30891/GN77404	FA50533-8	mg/l	17.4	50	68.7	1.4	20%
Sulfide	GN77424	FA50533-7	mg/l	0.52	8.35	15.4	51.0*(a)	34%
Total Organic Carbon	GP30904/GN77420	FA50559-4	mg/l	6.5	15	21.0	0.0	20%

Associated Samples:
Batch GN77424: FA50533-3, FA50533-7, FA50533-8
Batch GP30891: FA50533-3, FA50533-7, FA50533-8
Batch GP30904: FA50533-3, FA50533-7, FA50533-8, FA50533-3F, FA50533-7F, FA50533-8F
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) High RPD due to possible non-homogeniety between sample bottles.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

ARCADIS Geraghty & Miller

Brenntag; Charleston, SC

SC000204.0017.00001

SGS Job Number: FA50582

Sampling Date: 12/28/17

Report to:

ARCADIS Geraghty & Miller
1450 Greene St Suite 220
Augusta, GA 30901
charles.lawson@arcadis.com; Edward.Hirshenson@arcadis.com

ATTN: Charles Lawson

Total number of pages in report: **31**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Ken Overstreet 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

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SGS North America Inc.

Sample Summary

ARCADIS Geraghty & Miller

Job No: FA50582

Brenntag; Charleston, SC
Project No: SC000204.0017.00001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA50582-1	12/28/17	08:45	CL	12/29/17	AQ	Ground Water	MW-1
FA50582-2	12/28/17	09:05	CL	12/29/17	AQ	Ground Water	MW-7
FA50582-3	12/28/17	09:25	CL	12/29/17	AQ	Ground Water	MW-8
FA50582-4	12/28/17	08:10	CL	12/29/17	AQ	Ground Water	MW-15
FA50582-5	12/28/17	00:00	CL	12/29/17	AQ	Trip Blank Water	TRIP BLANK

Summary of Hits

Job Number: FA50582
Account: ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC
Collected: 12/28/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA50582-1	**MW-1**					
No hits reported in this sample.						
FA50582-2	**MW-7**					
Chlorobenzene		120 J	500	100	ug/l	SW846 8260B
1,1-Dichloroethane		359 J	500	170	ug/l	SW846 8260B
1,1-Dichloroethylene		382 J	500	160	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		55100	1000	280	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		150 J	500	110	ug/l	SW846 8260B
Trichloroethylene		7510	500	170	ug/l	SW846 8260B
Vinyl Chloride		2680	500	200	ug/l	SW846 8260B
FA50582-3	**MW-8**					
Benzene		0.51 J	1.0	0.31	ug/l	SW846 8260B
Chlorobenzene		12.4	1.0	0.20	ug/l	SW846 8260B
1,2-Dichlorobenzene		2.4	1.0	0.32	ug/l	SW846 8260B
1,3-Dichlorobenzene		1.2	1.0	0.22	ug/l	SW846 8260B
1,4-Dichlorobenzene		4.1	1.0	0.26	ug/l	SW846 8260B
1,1-Dichloroethane		0.54 J	1.0	0.34	ug/l	SW846 8260B
1,1-Dichloroethylene		0.47 J	1.0	0.32	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		34.1	1.0	0.28	ug/l	SW846 8260B
trans-1,2-Dichloroethylene		0.27 J	1.0	0.22	ug/l	SW846 8260B
Methylcyclohexane		0.47 J	1.0	0.44	ug/l	SW846 8260B
Trichloroethylene		3.7	1.0	0.35	ug/l	SW846 8260B
Vinyl Chloride		15.4	1.0	0.41	ug/l	SW846 8260B
FA50582-4	**MW-15**					
No hits reported in this sample.						
FA50582-5	**TRIP BLANK**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	FA50582-1	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P54887.D	1	01/05/18 17:20	AJ	n/a	n/a	VP2082
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	FA50582-1	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	105%		79-125%
2037-26-5	Toluene-D8	96%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	FA50582-2	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P54888.D	500	01/05/18 17:44	AJ	n/a	n/a	VP2082
Run #2	P54903.D	1000	01/08/18 14:10	AJ	n/a	n/a	VP2083

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	13000	5000	ug/l	
71-43-2	Benzene	ND	500	160	ug/l	
75-27-4	Bromodichloromethane	ND	500	120	ug/l	
75-25-2	Bromoform	ND	500	200	ug/l	
78-93-3	2-Butanone (MEK)	ND	2500	1000	ug/l	
75-15-0	Carbon Disulfide	ND	1000	270	ug/l	
56-23-5	Carbon Tetrachloride	ND	500	180	ug/l	
108-90-7	Chlorobenzene	120	500	100	ug/l	J
75-00-3	Chloroethane	ND	1000	330	ug/l	
67-66-3	Chloroform	ND	500	150	ug/l	
110-82-7	Cyclohexane	ND	500	200	ug/l	
124-48-1	Dibromochloromethane	ND	500	140	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2500	520	ug/l	
106-93-4	1,2-Dibromoethane	ND	1000	140	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1000	250	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	500	160	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	500	110	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	500	130	ug/l	
75-34-3	1,1-Dichloroethane	359	500	170	ug/l	J
107-06-2	1,2-Dichloroethane	ND	500	160	ug/l	
75-35-4	1,1-Dichloroethylene	382	500	160	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	55100 [a]	1000	280	ug/l	
156-60-5	trans-1,2-Dichloroethylene	150	500	110	ug/l	J
78-87-5	1,2-Dichloropropane	ND	500	210	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	500	150	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	500	110	ug/l	
100-41-4	Ethylbenzene	ND	500	180	ug/l	
76-13-1	Freon 113	ND	500	240	ug/l	
591-78-6	2-Hexanone	ND	5000	1000	ug/l	
98-82-8	Isopropylbenzene	ND	500	110	ug/l	
79-20-9	Methyl Acetate	ND	10000	2500	ug/l	
74-83-9	Methyl Bromide	ND	1000	290	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	FA50582-2	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	1000	250	ug/l	
108-87-2	Methylcyclohexane	ND	500	220	ug/l	
75-09-2	Methylene Chloride	ND	2500	1000	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	2500	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	500	110	ug/l	
100-42-5	Styrene	ND	500	110	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	500	150	ug/l	
127-18-4	Tetrachloroethylene	ND	500	110	ug/l	
108-88-3	Toluene	ND	500	150	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1000	250	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	500	120	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	500	230	ug/l	
79-01-6	Trichloroethylene	7510	500	170	ug/l	
75-69-4	Trichlorofluoromethane	ND	1000	250	ug/l	
75-01-4	Vinyl Chloride	2680	500	200	ug/l	
1330-20-7	Xylene (total)	ND	1500	360	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	105%	101%	79-125%
2037-26-5	Toluene-D8	99%	102%	85-112%
460-00-4	4-Bromofluorobenzene	94%	99%	83-118%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA50582-3	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P54904.D	1	01/08/18 14:35	AJ	n/a	n/a	VP2083
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	0.51	1.0	0.31	ug/l	J
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	12.4	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	2.4	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	1.2	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	4.1	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	0.54	1.0	0.34	ug/l	J
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	0.47	1.0	0.32	ug/l	J
156-59-2	cis-1,2-Dichloroethylene	34.1	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.27	1.0	0.22	ug/l	J
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	FA50582-3	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	0.47	1.0	0.44	ug/l	J
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	3.7	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	15.4	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA50582-4	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P54905.D	1	01/08/18 14:59	AJ	n/a	n/a	VP2083
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	FA50582-4	**Date Sampled:**	12/28/17
Matrix:	AQ - Ground Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	102%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA50582-5	**Date Sampled:**	12/28/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P54906.D	1	01/08/18 15:24	AJ	n/a	n/a	VP2083
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA50582-5	**Date Sampled:**	12/28/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/29/17
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Brenntag; Charleston, SC		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	95%		83-118%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ARCADIS

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page ___ of ___

Lab Work Order #: FA50582

Send Results to:

Contact & Company Name: CHARLES LAWSON ARCADIS
Telephone: 706-929-4421
Address: 1450 Greene St Ste 200
Fax:
City: AUGUSTA State: GA Zip: 30909
E-mail Address: Charles.Lawson@arcadis.com
Project Name/Location (City, State): BRUNTAG - CHARLESTON, SC
Project #: SC000204.0017
Sampler's Printed Name: Charles Lawson
Sampler's Signature: CB Lawson

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	Preservative	Filtered (✓)	# of Containers	Container Information	PARAMETER ANALYSIS & METHOD: 8260 VOC 40 mL VIAL HCl
MW-1 (1)	12/28/17	8:45		✓	GW	B		3	1	3
MW-7 (2)	11	9:05		✓	GW			3		3
MW-8 (3)	11	9:25		✓	GW			3		3
MW-15 (4)	12/28/17	8:10		✓	GW			3		3
TRIP BLANK (5)										

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

REMARKS

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: ACCUTEST	Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact	Printed Name: Charles Lawson	Printed Name: Fed Ex	Printed Name: Fed Ex	Printed Name: Shayla Prince
☒ Cooler packed with ice (✓)		Signature: CB Lawson	Signature:	Signature:	Signature:
Specify Turnaround Requirements: STANDARD	Sample Receipt:	Firm: ARCADIS	Firm/Courier:	Firm/Courier:	Firm: SGS
Shipping Tracking #:	Condition/Cooler Temp: ____	Date/Time: 12/29/17 12:00	Date/Time:	Date/Time:	Date/Time: 12/29/17 930

20730826 CofC AR Form 08.27.2015

Distribution: WHITE – Laboratory returns with results YELLOW – Lab copy PINK – Retained by Arcadis

3.8

FA50582: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: FA50582 **Client:** ARCADIS **Project:** BRENNTAG

Date / Time Received: 12/29/2017 9:30:00 AM **Delivery Method:** FED EX **Airbill #'s:** 812216989890

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Information	Y	N
1. Custody Seals Present	☑	☐
2. Custody Seals Intact	☑	☐
3. Temp criteria achieved	☑	☐
4. Cooler temp verification	IR Gun	
5. Cooler media	Ice (Bag)	

Trip Blank Information	Y	N	N/A
1. Trip Blank present / cooler	☑	☐	☐
2. Trip Blank listed on COC	☑	☐	☐
	W	**S**	**N/A**
3. Type Of TB Received	☑	☐	☐

Sample Information	Y	N	N/A
1. Sample labels present on bottles	☑	☐	
2. Samples preserved properly	☑	☐	
3. Sufficient volume/containers recvd for analysis:	☑	☐	
4. Condition of sample	Intact		
5. Sample recvd within HT	☑	☐	
6. Dates/Times/IDs on COC match Sample Label	☑	☐	
7. VOCs have headspace	☐	☑	☐
8. Bottles received for unspecified tests	☐	☑	
9. Compositing instructions clear	☐	☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐	☐	☑
11. % Solids Jar received?	☐	☐	☑
12. Residual Chlorine Present?	☐	☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: SHAYLAP Date: 12/29/2017 9:30:00 A Reviewer: P.H Date: 12/29/2017

FA50582: Chain of Custody
Page 2 of 2

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2082-MB	P54872.D	1	01/05/18	AJ	n/a	n/a	VP2082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-1, FA50582-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2082-MB	P54872.D	1	01/05/18	AJ	n/a	n/a	VP2082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-1, FA50582-2

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	97%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

Method Blank Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2083-MB	P54901.D	1	01/08/18	AJ	n/a	n/a	VP2083

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-2, FA50582-3, FA50582-4, FA50582-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.39	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
76-13-1	Freon 113	ND	1.0	0.48	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.44	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	

Method Blank Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2083-MB	P54901.D	1	01/08/18	AJ	n/a	n/a	VP2083

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-2, FA50582-3, FA50582-4, FA50582-5

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	79-125%
2037-26-5	Toluene-D8	101%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

Blank Spike Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2082-BS	P54871.D	1	01/05/18	AJ	n/a	n/a	VP2082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-1, FA50582-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	107	86	50-147
71-43-2	Benzene	25	26.2	105	81-122
75-27-4	Bromodichloromethane	25	25.7	103	79-123
75-25-2	Bromoform	25	26.0	104	66-123
78-93-3	2-Butanone (MEK)	125	120	96	56-143
75-15-0	Carbon Disulfide	25	28.8	115	66-148
56-23-5	Carbon Tetrachloride	25	25.7	103	76-136
108-90-7	Chlorobenzene	25	25.2	101	82-124
75-00-3	Chloroethane	25	26.3	105	62-144
67-66-3	Chloroform	25	25.2	101	80-124
110-82-7	Cyclohexane	25	25.2	101	73-138
124-48-1	Dibromochloromethane	25	25.7	103	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.1	88	64-123
106-93-4	1,2-Dibromoethane	25	25.0	100	75-120
75-71-8	Dichlorodifluoromethane	25	30.2	121	42-167
95-50-1	1,2-Dichlorobenzene	25	24.6	98	82-124
541-73-1	1,3-Dichlorobenzene	25	25.4	102	84-125
106-46-7	1,4-Dichlorobenzene	25	24.3	97	78-120
75-34-3	1,1-Dichloroethane	25	26.9	108	81-122
107-06-2	1,2-Dichloroethane	25	23.7	95	75-125
75-35-4	1,1-Dichloroethylene	25	25.9	104	78-137
156-59-2	cis-1,2-Dichloroethylene	25	26.9	108	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.6	110	76-127
78-87-5	1,2-Dichloropropane	25	24.8	99	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.4	98	75-118
10061-02-6	trans-1,3-Dichloropropene	25	24.2	97	80-120
100-41-4	Ethylbenzene	25	25.1	100	81-121
76-13-1	Freon 113	25	26.7	107	72-134
591-78-6	2-Hexanone	125	114	91	61-129
98-82-8	Isopropylbenzene	25	25.5	102	83-132
79-20-9	Methyl Acetate	125	117	94	65-126
74-83-9	Methyl Bromide	25	24.7	99	59-143
74-87-3	Methyl Chloride	25	20.7	83	50-159
108-87-2	Methylcyclohexane	25	26.6	106	76-129
75-09-2	Methylene Chloride	25	23.6	94	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	114	91	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2082-BS	P54871.D	1	01/05/18	AJ	n/a	n/a	VP2082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-1, FA50582-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	24.8	99	72-117
100-42-5	Styrene	25	24.1	96	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	23.3	93	72-120
127-18-4	Tetrachloroethylene	25	29.1	116	76-135
108-88-3	Toluene	25	25.0	100	80-120
120-82-1	1,2,4-Trichlorobenzene	25	26.3	105	73-129
71-55-6	1,1,1-Trichloroethane	25	25.7	103	75-130
79-00-5	1,1,2-Trichloroethane	25	24.2	97	76-119
79-01-6	Trichloroethylene	25	26.4	106	81-126
75-69-4	Trichlorofluoromethane	25	28.1	112	71-156
75-01-4	Vinyl Chloride	25	26.1	104	69-159
1330-20-7	Xylene (total)	75	75.6	101	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	98%	79-125%
2037-26-5	Toluene-D8	96%	85-112%
460-00-4	4-Bromofluorobenzene	102%	83-118%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2083-BS	P54902.D	1	01/08/18	AJ	n/a	n/a	VP2083

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-2, FA50582-3, FA50582-4, FA50582-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	97.9	78	50-147
71-43-2	Benzene	25	25.1	100	81-122
75-27-4	Bromodichloromethane	25	24.9	100	79-123
75-25-2	Bromoform	25	23.3	93	66-123
78-93-3	2-Butanone (MEK)	125	109	87	56-143
75-15-0	Carbon Disulfide	25	28.3	113	66-148
56-23-5	Carbon Tetrachloride	25	24.9	100	76-136
108-90-7	Chlorobenzene	25	25.5	102	82-124
75-00-3	Chloroethane	25	26.4	106	62-144
67-66-3	Chloroform	25	24.8	99	80-124
110-82-7	Cyclohexane	25	24.2	97	73-138
124-48-1	Dibromochloromethane	25	25.6	102	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.6	94	64-123
106-93-4	1,2-Dibromoethane	25	25.1	100	75-120
75-71-8	Dichlorodifluoromethane	25	29.4	118	42-167
95-50-1	1,2-Dichlorobenzene	25	26.1	104	82-124
541-73-1	1,3-Dichlorobenzene	25	26.5	106	84-125
106-46-7	1,4-Dichlorobenzene	25	25.3	101	78-120
75-34-3	1,1-Dichloroethane	25	26.5	106	81-122
107-06-2	1,2-Dichloroethane	25	24.0	96	75-125
75-35-4	1,1-Dichloroethylene	25	27.9	112	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.4	102	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.0	108	76-127
78-87-5	1,2-Dichloropropane	25	23.8	95	76-124
10061-01-5	cis-1,3-Dichloropropene	25	23.7	95	75-118
10061-02-6	trans-1,3-Dichloropropene	25	26.1	104	80-120
100-41-4	Ethylbenzene	25	26.9	108	81-121
76-13-1	Freon 113	25	25.6	102	72-134
591-78-6	2-Hexanone	125	115	92	61-129
98-82-8	Isopropylbenzene	25	26.9	108	83-132
79-20-9	Methyl Acetate	125	109	87	65-126
74-83-9	Methyl Bromide	25	23.2	93	59-143
74-87-3	Methyl Chloride	25	21.7	87	50-159
108-87-2	Methylcyclohexane	25	25.1	100	76-129
75-09-2	Methylene Chloride	25	23.7	95	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	117	94	66-122

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VP2083-BS	P54902.D	1	01/08/18	AJ	n/a	n/a	VP2083

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-2, FA50582-3, FA50582-4, FA50582-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	25	23.1	92	72-117
100-42-5	Styrene	25	24.5	98	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	25.3	101	72-120
127-18-4	Tetrachloroethylene	25	26.3	105	76-135
108-88-3	Toluene	25	26.6	106	80-120
120-82-1	1,2,4-Trichlorobenzene	25	25.9	104	73-129
71-55-6	1,1,1-Trichloroethane	25	25.3	101	75-130
79-00-5	1,1,2-Trichloroethane	25	24.6	98	76-119
79-01-6	Trichloroethylene	25	24.8	99	81-126
75-69-4	Trichlorofluoromethane	25	28.7	115	71-156
75-01-4	Vinyl Chloride	25	24.3	97	69-159
1330-20-7	Xylene (total)	75	80.8	108	80-126

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	103%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	99%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50629-1MS	P54885.D	1	01/05/18	AJ	n/a	n/a	VP2082
FA50629-1MSD	P54886.D	1	01/05/18	AJ	n/a	n/a	VP2082
FA50629-1	P54881.D	1	01/05/18	AJ	n/a	n/a	VP2082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-1, FA50582-2

CAS No.	Compound	FA50629-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25	U	125	113	90	125	120	96	6	50-147/21
71-43-2	Benzene	1.0	U	25	25.6	102	25	25.8	103	1	81-122/14
75-27-4	Bromodichloromethane	1.0	U	25	24.2	97	25	24.5	98	1	79-123/19
75-25-2	Bromoform	1.0	U	25	17.9	72	25	18.1	72	1	66-123/21
78-93-3	2-Butanone (MEK)	5.0	U	125	125	100	125	136	109	8	56-143/18
75-15-0	Carbon Disulfide	2.0	U	25	22.5	90	25	23.5	94	4	66-148/23
56-23-5	Carbon Tetrachloride	1.0	U	25	24.0	96	25	24.5	98	2	76-136/23
108-90-7	Chlorobenzene	1.0	U	25	24.0	96	25	24.4	98	2	82-124/14
75-00-3	Chloroethane	2.0	U	25	27.7	111	25	29.4	118	6	62-144/20
67-66-3	Chloroform	1.0	U	25	24.7	99	25	25.4	102	3	80-124/15
110-82-7	Cyclohexane	1.0	U	25	23.6	94	25	24.7	99	5	73-138/18
124-48-1	Dibromochloromethane	1.0	U	25	20.9	84	25	21.8	87	4	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U	25	25.4	102	25	24.8	99	2	64-123/18
106-93-4	1,2-Dibromoethane	2.0	U	25	24.0	96	25	24.9	100	4	75-120/13
75-71-8	Dichlorodifluoromethane	2.0	U	25	30.4	122	25	31.8	127	5	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0	U	25	24.2	97	25	24.9	100	3	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0	U	25	24.6	98	25	25.2	101	2	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0	U	25	23.9	96	25	24.4	98	2	78-120/15
75-34-3	1,1-Dichloroethane	1.0	U	25	26.6	106	25	27.3	109	3	81-122/15
107-06-2	1,2-Dichloroethane	1.0	U	25	25.8	103	25	25.9	104	0	75-125/14
75-35-4	1,1-Dichloroethylene	1.0	U	25	27.0	108	25	28.7	115	6	78-137/18
156-59-2	cis-1,2-Dichloroethylene	34.9		25	57.8	92	25	59.6	99	3	78-120/15
156-60-5	trans-1,2-Dichloroethylene	11.3		25	36.7	102	25	37.6	105	2	76-127/17
78-87-5	1,2-Dichloropropane	1.0	U	25	24.0	96	25	24.8	99	3	76-124/14
10061-01-5	cis-1,3-Dichloropropene	1.0	U	25	21.1	84	25	21.7	87	3	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0	U	25	23.3	93	25	23.1	92	1	80-120/22
100-41-4	Ethylbenzene	1.0	U	25	25.1	100	25	25.6	102	2	81-121/14
76-13-1	Freon 113	1.0	U	25	26.1	104	25	27.5	110	5	72-134/20
591-78-6	2-Hexanone	10	U	125	127	102	125	133	106	5	61-129/18
98-82-8	Isopropylbenzene	1.0	U	25	25.3	101	25	25.6	102	1	83-132/15
79-20-9	Methyl Acetate	20	U	125	123	98	125	123	98	0	65-126/18
74-83-9	Methyl Bromide	2.0	U	25	26.0	104	25	27.5	110	6	59-143/19
74-87-3	Methyl Chloride	2.0	U	25	22.8	91	25	24.0	96	5	50-159/19
108-87-2	Methylcyclohexane	1.0	U	25	25.6	102	25	26.0	104	2	76-129/17
75-09-2	Methylene Chloride	5.0	U	25	24.7	99	25	25.4	102	3	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	125	126	101	125	135	108	7	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50629-1MS	P54885.D	1	01/05/18	AJ	n/a	n/a	VP2082
FA50629-1MSD	P54886.D	1	01/05/18	AJ	n/a	n/a	VP2082
FA50629-1	P54881.D	1	01/05/18	AJ	n/a	n/a	VP2082

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-1, FA50582-2

CAS No.	Compound	FA50629-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	0.41	J	25	24.5	96	25	24.9	98	2	72-117/14
100-42-5	Styrene	1.0 U		25	20.8	83	25	21.6	86	4	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	25.8	103	25	26.3	105	2	72-120/14
127-18-4	Tetrachloroethylene	0.47	J	25	22.9	90	25	24.2	95	6	76-135/16
108-88-3	Toluene	1.0 U		25	24.2	97	25	24.9	100	3	80-120/14
120-82-1	1,2,4-Trichlorobenzene	2.0 U		25	23.6	94	25	24.6	98	4	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U		25	25.1	100	25	25.6	102	2	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U		25	24.2	97	25	24.0	96	1	76-119/14
79-01-6	Trichloroethylene	1.9		25	27.0	100	25	28.7	107	6	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U		25	30.4	122	25	32.0	128	5	71-156/21
75-01-4	Vinyl Chloride	6.0		25	30.7	99	25	32.7	107	6	69-159/18
1330-20-7	Xylene (total)	3.0 U		75	74.3	99	75	76.8	102	3	80-126/15

CAS No.	Surrogate Recoveries	MS	MSD	FA50629-1	Limits
1868-53-7	Dibromofluoromethane	101%	102%	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	108%	104%	79-125%
2037-26-5	Toluene-D8	95%	97%	96%	85-112%
460-00-4	4-Bromofluorobenzene	93%	95%	96%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50582-2MS	P54914.D	1000	01/08/18	AJ	n/a	n/a	VP2083
FA50582-2MSD	P54915.D	1000	01/08/18	AJ	n/a	n/a	VP2083
FA50582-2	P54903.D	1000	01/08/18	AJ	n/a	n/a	VP2083

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-2, FA50582-3, FA50582-4, FA50582-5

CAS No.	Compound	FA50582-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125000	107000	86	125000	115000	92	7	50-147/21
71-43-2	Benzene	ND		25000	24100	96	25000	24400	98	1	81-122/14
75-27-4	Bromodichloromethane	ND		25000	24200	97	25000	25000	100	3	79-123/19
75-25-2	Bromoform	ND		25000	22300	89	25000	23600	94	6	66-123/21
78-93-3	2-Butanone (MEK)	ND		125000	122000	98	125000	125000	100	2	56-143/18
75-15-0	Carbon Disulfide	ND		25000	26900	108	25000	28100	112	4	66-148/23
56-23-5	Carbon Tetrachloride	ND		25000	23700	95	25000	24500	98	3	76-136/23
108-90-7	Chlorobenzene	ND		25000	24800	99	25000	25600	102	3	82-124/14
75-00-3	Chloroethane	ND		25000	28100	112	25000	29400	118	5	62-144/20
67-66-3	Chloroform	ND		25000	23200	93	25000	24000	96	3	80-124/15
110-82-7	Cyclohexane	ND		25000	21900	88	25000	22800	91	4	73-138/18
124-48-1	Dibromochloromethane	ND		25000	24200	97	25000	26000	104	7	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25000	24300	97	25000	26100	104	7	64-123/18
106-93-4	1,2-Dibromoethane	ND		25000	23800	95	25000	25000	100	5	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25000	28000	112	25000	29800	119	6	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25000	25300	101	25000	25700	103	2	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		25000	25800	103	25000	26200	105	2	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		25000	24600	98	25000	25300	101	3	78-120/15
75-34-3	1,1-Dichloroethane	377	J	25000	25100	99	25000	25800	102	3	81-122/15
107-06-2	1,2-Dichloroethane	ND		25000	24000	96	25000	24900	100	4	75-125/14
75-35-4	1,1-Dichloroethylene	457	J	25000	26900	106	25000	28400	112	5	78-137/18
156-59-2	cis-1,2-Dichloroethylene	55100		25000	74500	78	25000	75000	80	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25000	24500	98	25000	25100	100	2	76-127/17
78-87-5	1,2-Dichloropropane	ND		25000	22200	89	25000	22600	90	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		25000	22200	89	25000	23100	92	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25000	24500	98	25000	25600	102	4	80-120/22
100-41-4	Ethylbenzene	ND		25000	25900	104	25000	26900	108	4	81-121/14
76-13-1	Freon 113	ND		25000	25100	100	25000	26200	105	4	72-134/20
591-78-6	2-Hexanone	ND		125000	126000	101	125000	132000	106	5	61-129/18
98-82-8	Isopropylbenzene	ND		25000	26000	104	25000	26700	107	3	83-132/15
79-20-9	Methyl Acetate	ND		125000	112000	90	125000	115000	92	3	65-126/18
74-83-9	Methyl Bromide	ND		25000	24000	96	25000	25600	102	6	59-143/19
74-87-3	Methyl Chloride	ND		25000	22200	89	25000	23100	92	4	50-159/19
108-87-2	Methylcyclohexane	ND		25000	23900	96	25000	24700	99	3	76-129/17
75-09-2	Methylene Chloride	ND		25000	23100	92	25000	24300	97	5	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		125000	128000	102	125000	137000	110	7	66-122/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA50582
Account: ARCGMSCA ARCADIS Geraghty & Miller
Project: Brenntag; Charleston, SC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50582-2MS	P54914.D	1000	01/08/18	AJ	n/a	n/a	VP2083
FA50582-2MSD	P54915.D	1000	01/08/18	AJ	n/a	n/a	VP2083
FA50582-2	P54903.D	1000	01/08/18	AJ	n/a	n/a	VP2083

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA50582-2, FA50582-3, FA50582-4, FA50582-5

CAS No.	Compound	FA50582-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		25000	21600	86	25000	22900	92	6	72-117/14
100-42-5	Styrene	ND		25000	23600	94	25000	24400	98	3	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	ND		25000	25700	103	25000	25700	103	0	72-120/14
127-18-4	Tetrachloroethylene	ND		25000	23400	94	25000	23900	96	2	76-135/16
108-88-3	Toluene	ND		25000	25100	100	25000	25700	103	2	80-120/14
120-82-1	1,2,4-Trichlorobenzene	ND		25000	24300	97	25000	25600	102	5	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25000	23700	95	25000	24900	100	5	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25000	23800	95	25000	24600	98	3	76-119/14
79-01-6	Trichloroethylene	7620		25000	31100	94	25000	32000	98	3	81-126/15
75-69-4	Trichlorofluoromethane	ND		25000	30900	124	25000	33400	134	8	71-156/21
75-01-4	Vinyl Chloride	2530		25000	26600	96	25000	29200	107	9	69-159/18
1330-20-7	Xylene (total)	ND		75000	77600	103	75000	80400	107	4	80-126/15

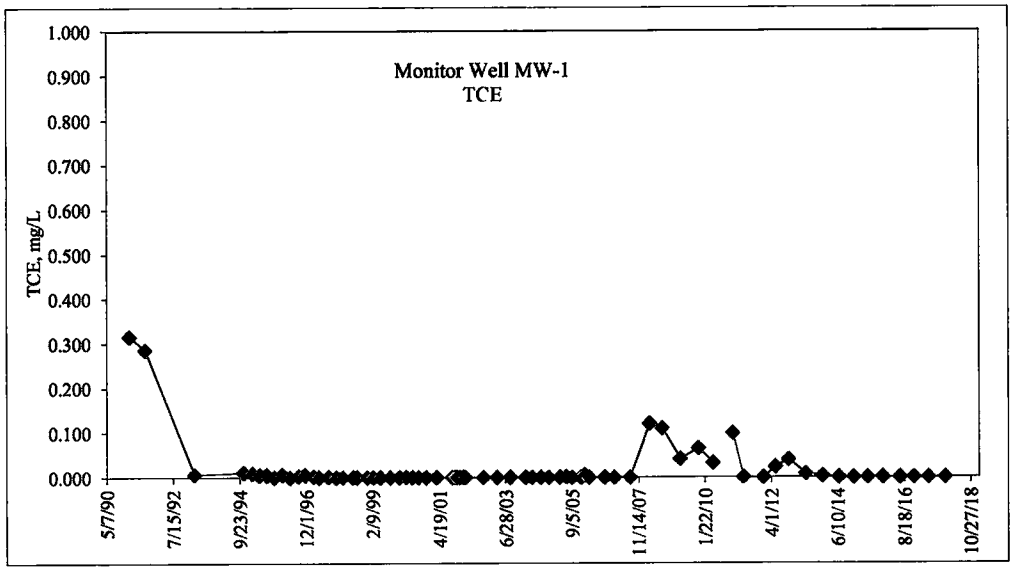
CAS No.	Surrogate Recoveries	MS	MSD	FA50582-2	Limits
1868-53-7	Dibromofluoromethane	99%	100%	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	108%	101%	79-125%
2037-26-5	Toluene-D8	100%	101%	102%	85-112%
460-00-4	4-Bromofluorobenzene	92%	93%	99%	83-118%

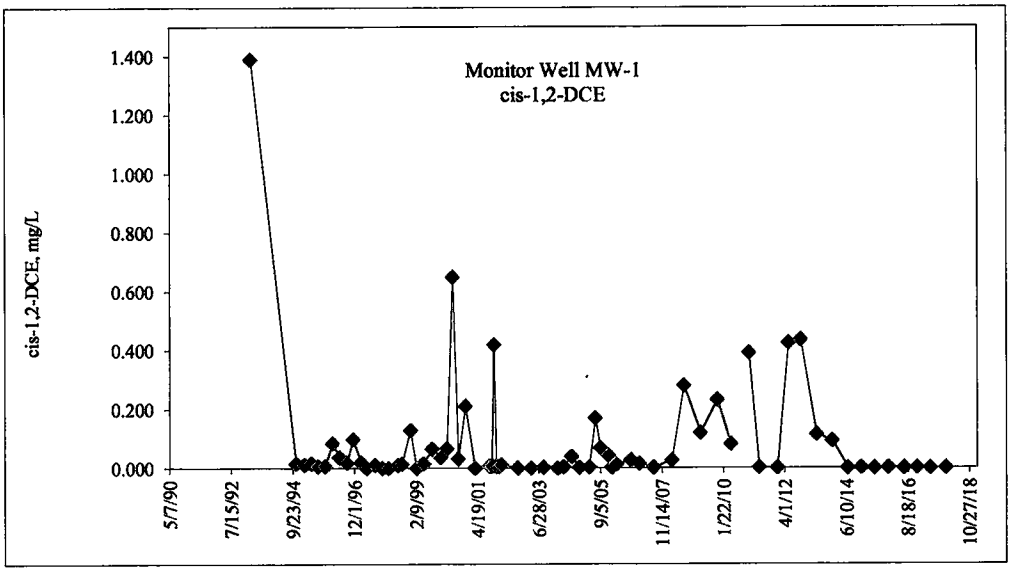
* = Outside of Control Limits.

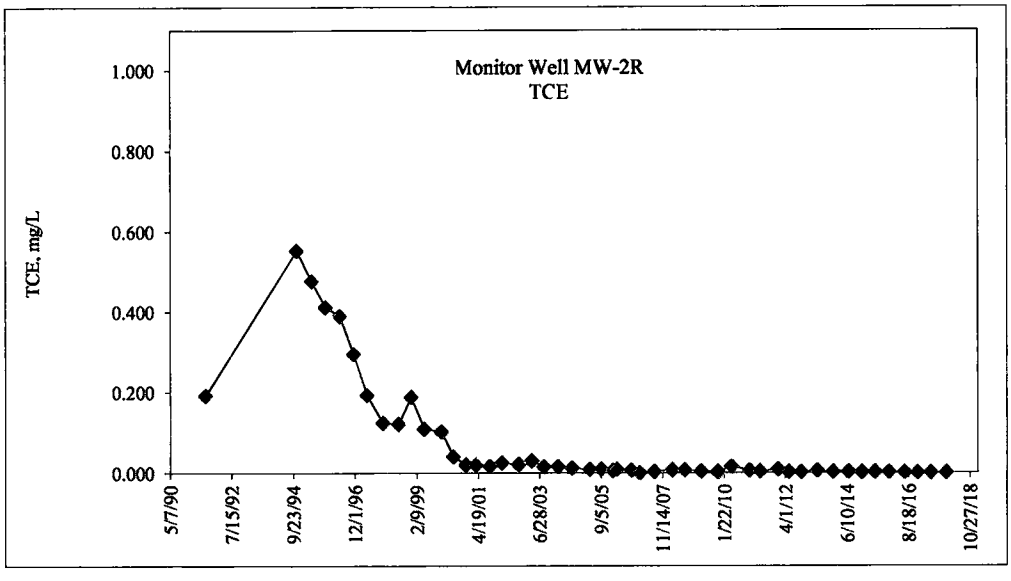
APPENDIX D

Time vs Concentration Graphs

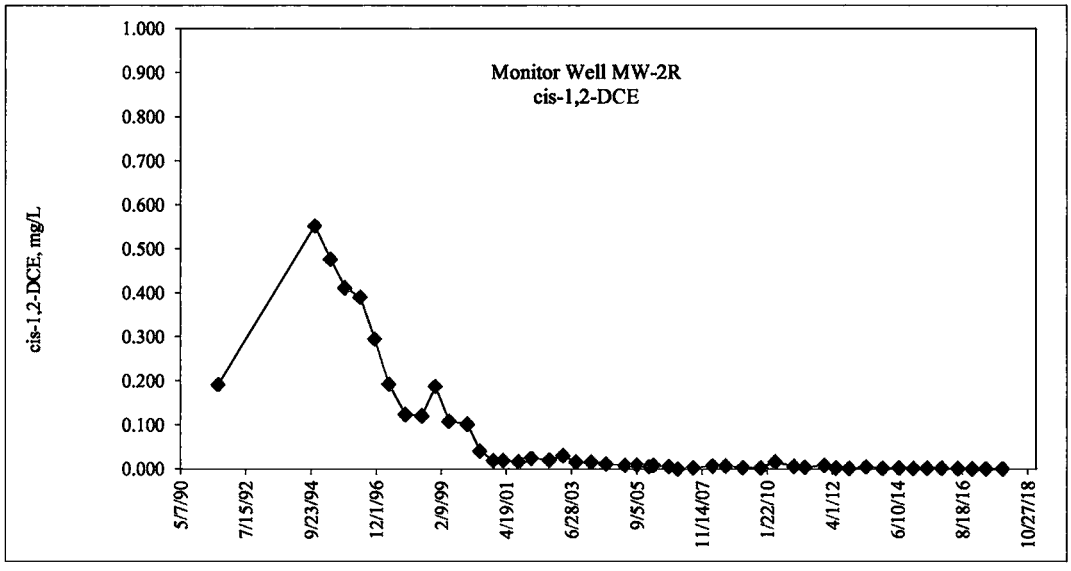
Appendix D. Time vs Concentration Graphs
Brenntag Southeast, Charleston, South Carolina
(revised 1/12/2018)

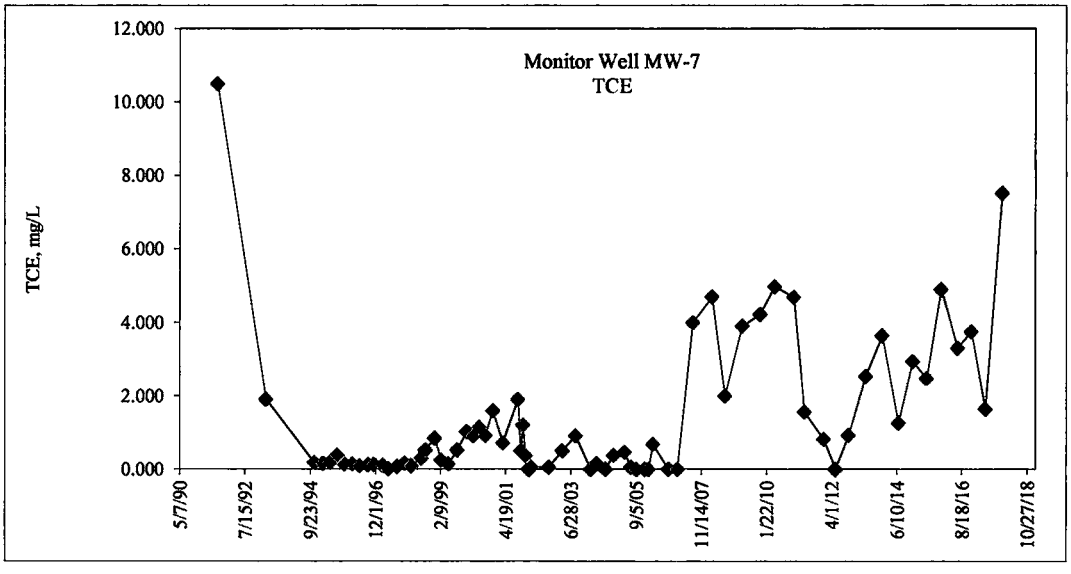


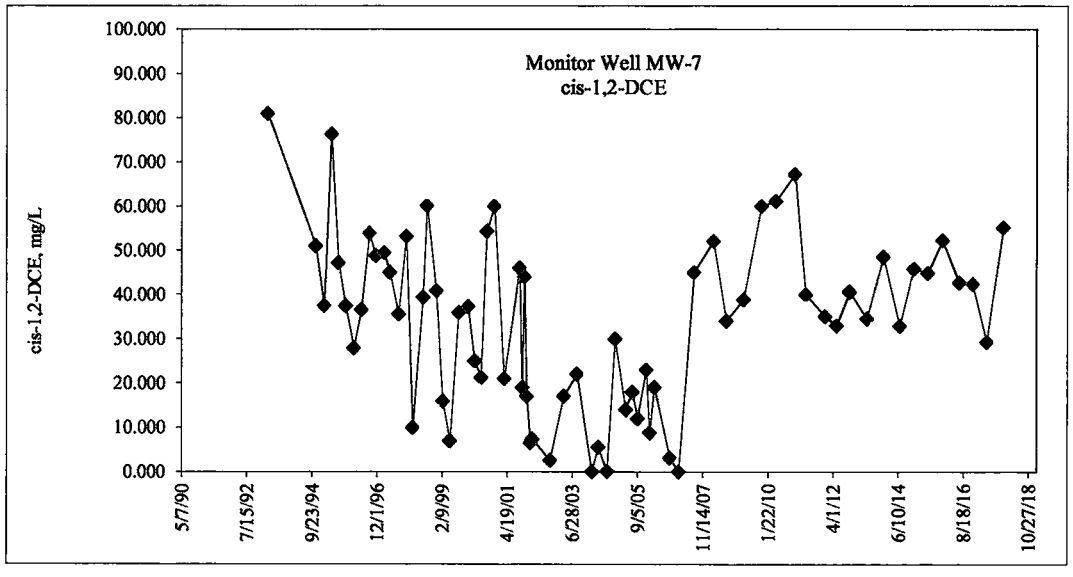




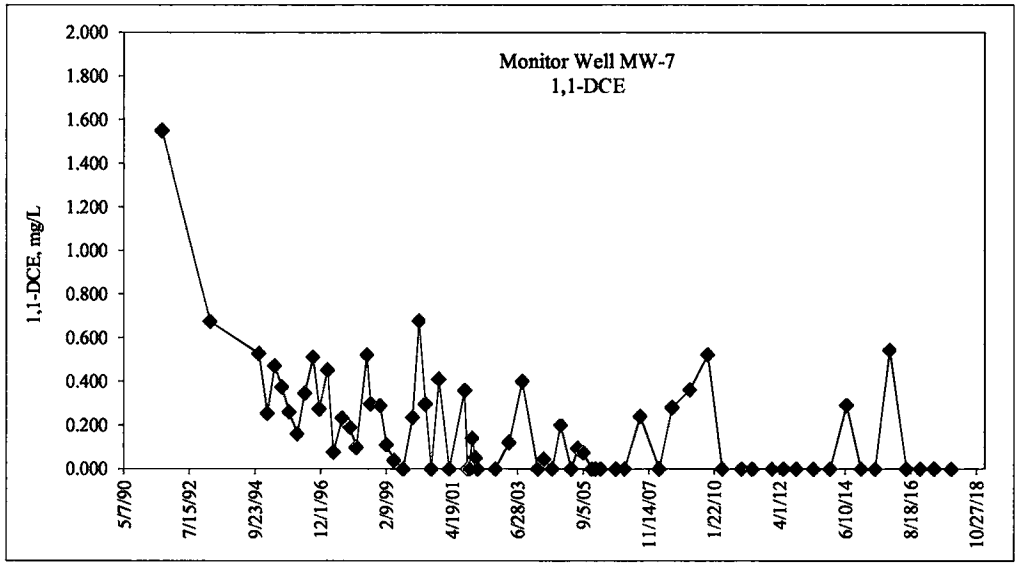
Appendix D. Time vs Concentration Graphs
Brenntag Southeast, Charleston, South Carolina
(revised 1/12/2018)

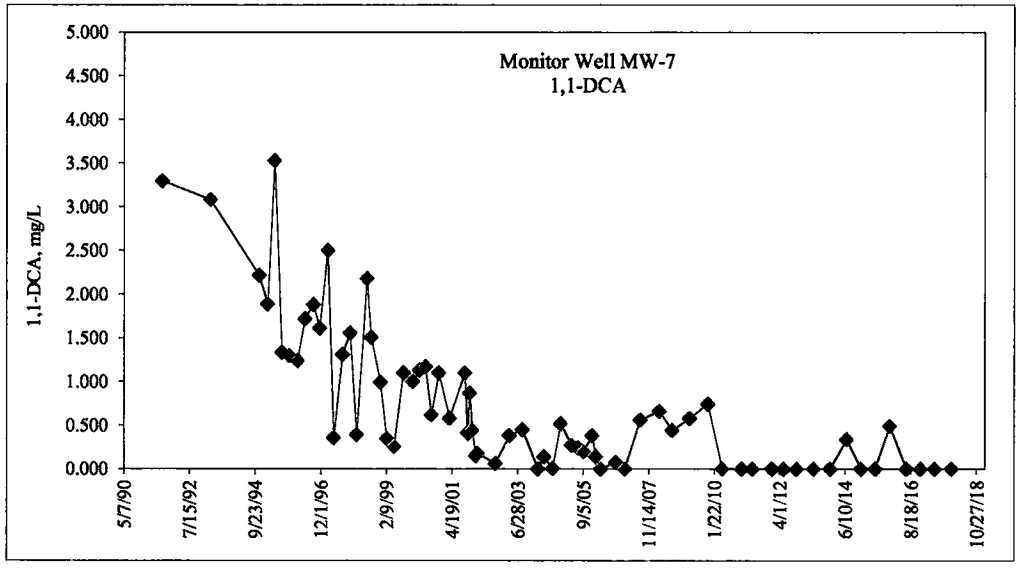


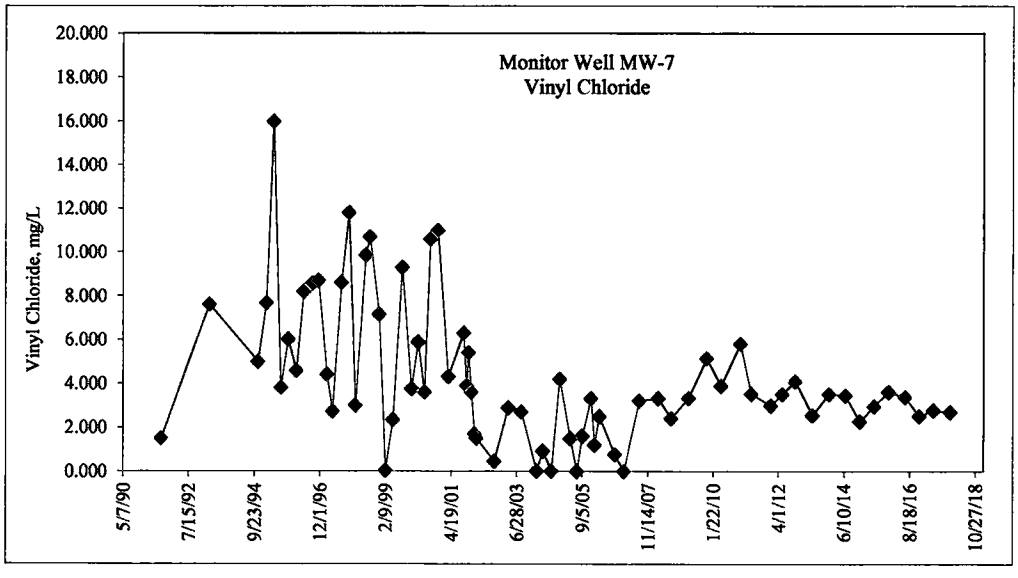




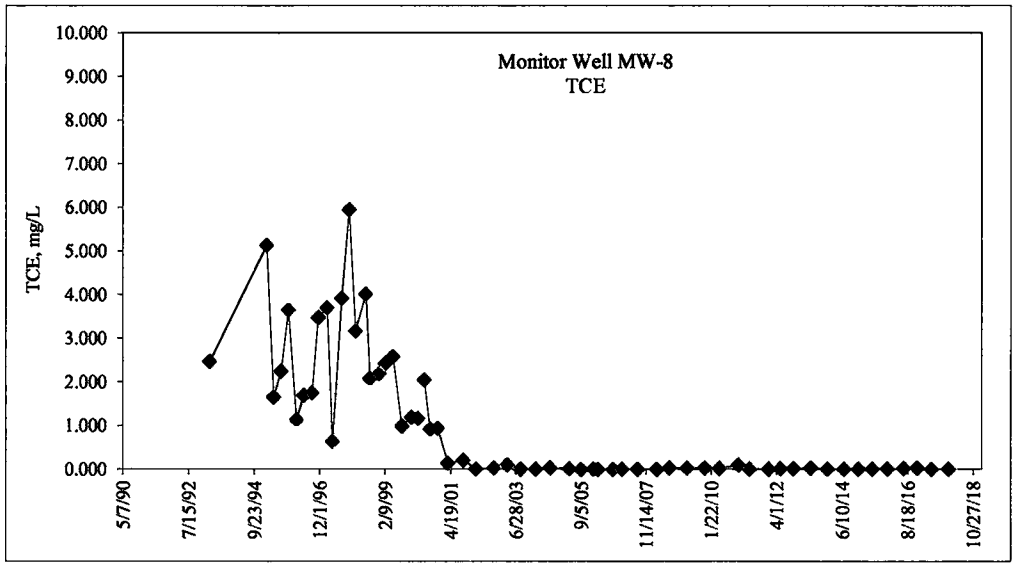
Appendix D. Time vs Concentration Graphs
Brenntag Southeast, Charleston, South Carolina
(revised 1/12/2018)

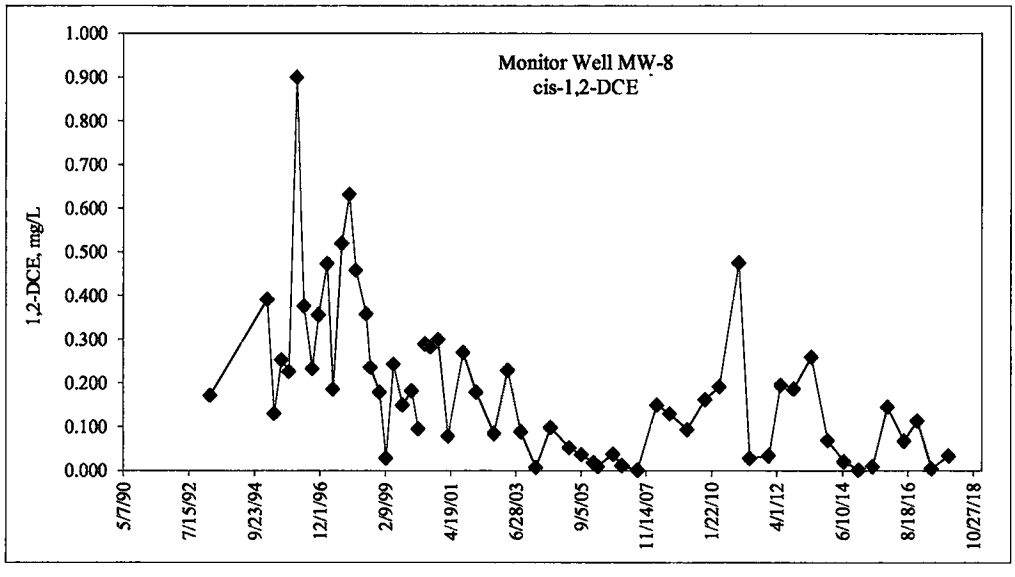


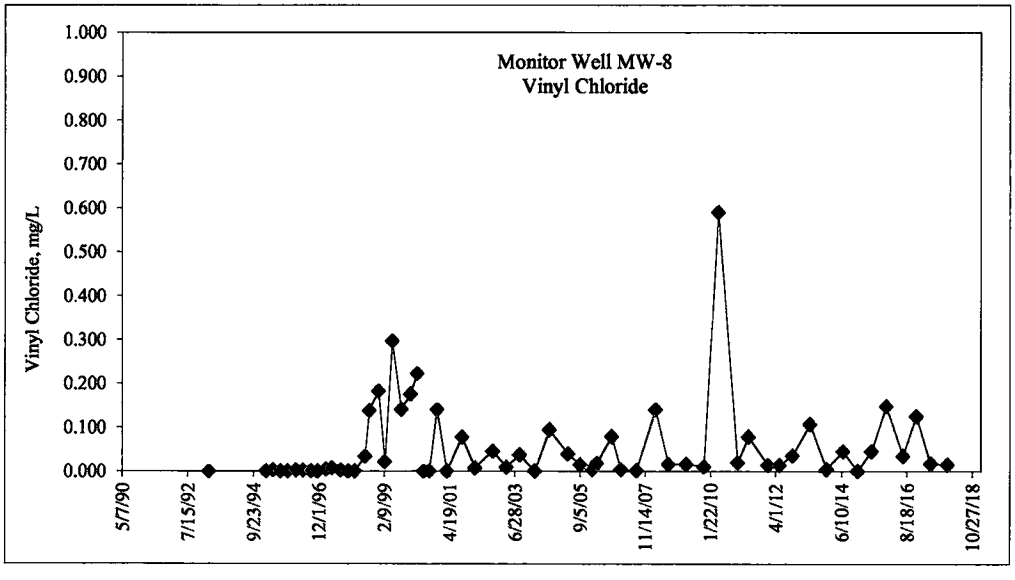




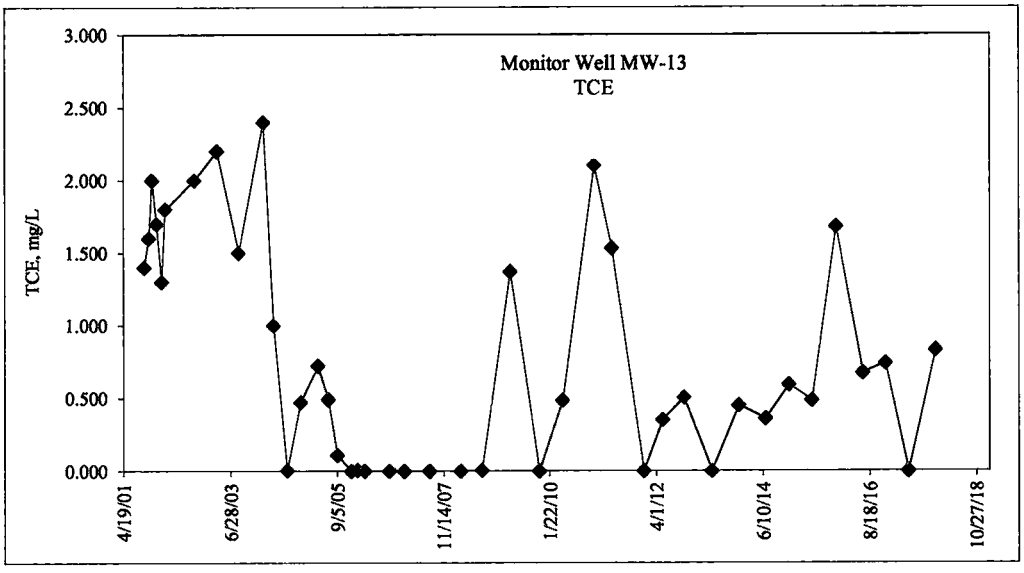
Appendix D. Time vs Concentration Graphs
Brenntag Southeast, Charleston, South Carolina
(revised 1/12/2018)

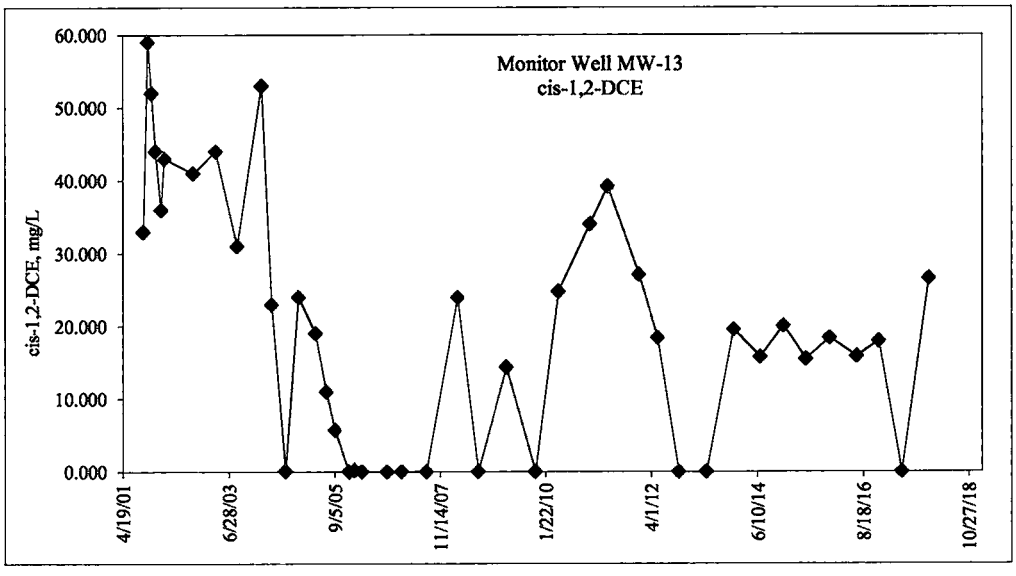


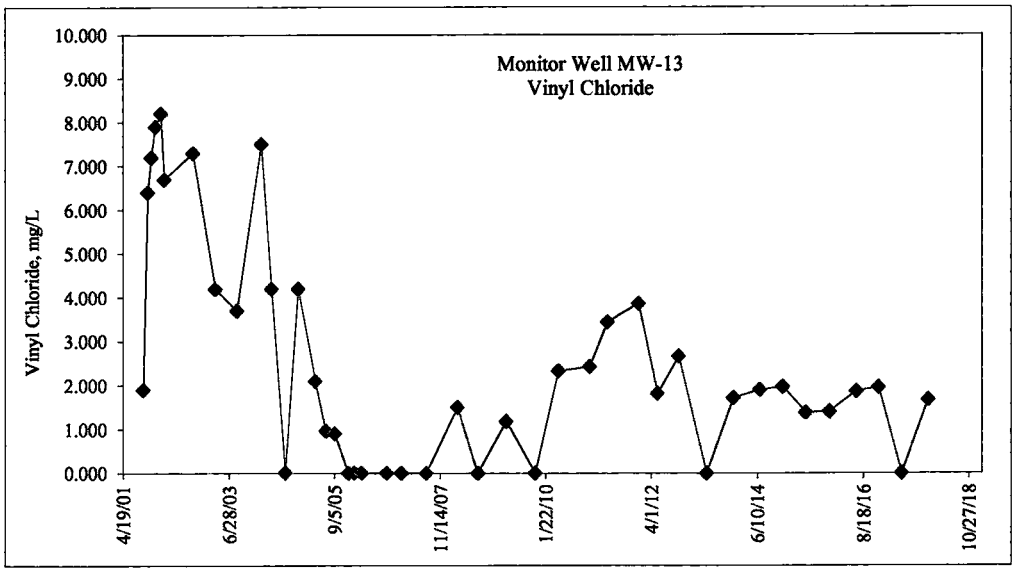




Appendix D. Time vs Concentration Graphs
Brenntag Southeast, Charleston, South Carolina
(revised 1/12/2018)







APPENDIX E

Table 1. Summary of Groundwater Biogeochemical Analysis

Table 2. Summary of Statistical Analysis of Groundwater Analytical Data

ARCADIS

Appendix E. Table 1. Summary of Area #1 Groundwater Biogeochemical Analyses
Brenntag Southeast Charleston Facility
revised (04/2/18)

	September 2001 Analyses	February 202 Analyses	December 2003 Analyses			March 2009 Analyses				May 2011 Analyses			Deceember 2017 Analyses		
	MW-7	MW-7	MW-2R	MW-14	MW-5	MW-14	MW-11	MW-9	MW-4	MW-1	MW-7	MW-13	MW-5	MW-2R	MW-14
Carbon Dioxide, mg/L	160	140	1.6	200	87	2	1.2	0.19	1.6	190	140	65	635	221	93.4
Methane, mg/L	3.5	3.6	0.071	10	0.73	6.1	0.19	0.0012	10	1.53	2.19	1.02	2.46	0.03	9.54
Dissolved Oxygen, mg/L	0.61	0.44	1	0.3	0.52	1.48	1.4	3.33	1.85	0.17	0.18	4.51	0	0	1.2
pH	7.5	7	9.8	6.7	6.6	7.2	6.78	7.45	7.21	6.89	6.81	6.84	6.7	6.8	6.6
ORP, millivolts	-195	-188	-258	-216	-131	-131	-18	151	-119	-167	-124	-78	-301	-202	-293
Temperature, ^{0}C	22.3	19.5	21.9	23.7	20.1	23.81	20.85	19.21	18.56	22.19	19.69	20.61	12.6	20	21.7
Alkalinity, mg/L	937	1440	230	900	380	700	85	96	340	1260	1370	880	603	256	830
Chloride, mg/L	211	177	13	99	6800	88	21	<5.0	53	105	144	278	4200	9.3	113
Sulfate, mg/L	131	177	21	20	840	15	65	10	<5.0	174	28	162	363	34.5	17.4
Sulfide, mg/L	5	2	>2.0	<2.0	2.9	1.5	<1.0	<1.0	<1.0	2.1	3.4	<1.0	9	<0.7	3.9
Nitrate Nitrogen, mg/L	BDL	BDL	<0.5	<0.5	<5.0	0.083	0.078	1.1	0.062	<0.50	<1.0	<0.50	<2.5	<0.10	<0.50
Nitrite Nitrogen, mg/L			<0.5	<0.5	<5.0	<0.050	<0.050	<0.050	<0.050				<2.5	<0.10	<0.50
nitrogen, mg/L			20	6.3	16					13	9.8	15			
Ferrous Iron, mg/L	3	1	<1.0	2.2	4.3	0.16	12	<0.10	1.7	1.1	2.7	1.4			
total Iron, mg/L			1.8	9.4	2.0	5.9	20	<0.050	32	9.87	4.22	4.31	0.997	3.04	3.5
total Manganese, mg/L			0.02	0.17	0.036					0.143	0.0769	0.074			
Ethane, mg/L	0.33	0.054	0.0008	0.047	0.0006	0.088	0.015	<0.00035	0.24	0.00363	0.0846	0.0597	0.00085	<0.001	0.108
Ethene, mg/L	1.6	0.3	0.0014	0.036	0.00002	0.08	0.0049	<0.00033	<0.00033	0.00061	0.2	0.178	<0.00043	<0.001	0.063
TCE, mg/L	1.9		<0.005	1.8	<0.005	1.56	<0.1	<0.001	<0.010	<0.001	1.56	1.53	0.0109	<0.001	<0.69
DCA, mg/L	1.1		<0.005	0.35	<0.005	0.188	<0.1	<0.001	<0.010	0.00041	0.412	0.431	<0.001	<0.001	<0.620
chloroethane, mg/L	<0.5		<0.005	0.015	<0.005	0.0096	<0.2	<0.002	0.0065	<0.002	<2.0	<1.0	<0.002	<0.002	<1.3
DCE, mg/L	46	7.4	<0.005	0.097	<0.005	8.86	<0.1	<0.001	<0.010	0.0016	40.196	39.49	0.0486	0.0007	9.3
VC, mg/L	6.3	1.5	<0.005	0.1	<0.005	0.878	<0.1	<0.001	<0.010	0.0058	3.51	3.44	0.0023	<0.001	<0.820
DOC, mg/L			7.7	240	14	150	2.4	5.1	9.6	24.3	27.3	7.5			
TOC, mg/L	70	NS	<5.0	200	12	130	2.6	5.2	11	24.2	25.2	7.7	14.2	1.9	196
BTEX, mg/L	<0.2		<0.005	120.4	<0.005	169.1	<100	<1	0.42	0.0018	<1.0	<0.50	<0.001	0.00134	199.4

[1] organic must be a daughter product of the solvent released

mg/L=milligrams per liter
ORP=Oxidation Reduction Potential
TCE=Trichloroethene
DCA=Dicholorethane
DCE=Dichloroethene
VC=Vinyl Chloride
DOC=Dissolved Organic Carbon
TOC=Total Organic Carbon
BTEX=Benzene/Toluene, Ethylebenzene, Xylenes
BDL=Below Detection Limits

G:\AProject\Brenntag Southeast\SC000204.0017 services for 2017\Reports\Semiannual\Second semiannual\tables\[Appendix E table 1.xls]BioGeoChem Table

Appendix E - Table 2
Summary of Statistical Analysis of Groundwater Analytical Data
Second Semiannual 2017 Groundwater Monitoring Report
Brenntag Southeast
Charleston, South Carolina

Constituent	Well	Cleanup Goal/Screening Level/Remediation Goal (µg/L)[1]	Data Range						Linear Regression Analysis						Notes
			Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Concentration Measured Most Recently (µg/L)	% of Data Above Laboratory Reporting Limit	Start Date	End Date	Coefficient of Determination, R^2	p-value of Correlation (Significance of Slope)	Attenuation Half-life (days)	Trend Direction	Significance of Trend[3]	Projected Year to Screening Level	
TCE	MW-5	5	0.26	20.4	10.9	58	8/27/2008	12/26/2017	0.030	0.48	NA	No Trend	NS	NA	Of the 12 data points collected since May 2012, one exceedance has been measured
c-1,2-DCE	MW-6	70	679.00	0	42,891	82	3/30/1993	1/0/1900	0.09	0.05	NA	No Trend	NS	NA	Below screening level 2012-2017; exceedance in Dec. 2017 and resample in Jan 2018 omitted
TCE		5	0.31	156	1	56	8/27/2008	6/5/2017	0.17	0.09	NA	Decreasing	NS	NA	Below screening level 2006-2017; exceedance in Dec. 2017 and resample in Jan 2018 omitted
VC		2	0.45	47	1	57	8/15/1991	6/5/2017	0.39	<0.01	2,132	Decreasing	Significant	2009	Below screening level 20013-2017; exceedance in Dec. 2017 and resample in Jan 2018 omitted
c-1,2-DCE	MW-7	70	*1*	81,000	55,100	99	3/30/1993	12/28/2017	<0.01	0.92	NA	No Trend	NS	NA	
TCE		5	*1*	10,500	7,510	89	8/15/1991	12/28/2017	0.16	<0.01	NA	Increasing	Significant	NA	
TCE		5	*459*	7,510	7,510	100	8/1/2007	12/28/2017	<0.01	1.00	NA	No Trend	NS	NA	
VC		2	*1*	16,000	2,680	97	8/15/1991	12/28/2017	0.026	0.19	NA	No Trend	NS	NA	
c-1,2-DCE	MW-8	70	*1.3*	900	34.1	100	3/30/1993	12/28/2017	0.28	<0.01	2,397	Decreasing	Significant	2008	Below screening level eight of nine monitoring events since 2013
VC		2	0.4	590	15.4	82	3/30/1993	12/28/2017	0.021	0.27	NA	No Trend	NS	NA	
c-1,2-DCE	MW-13	70	0.53	59,000	26,600	90	9/20/2001	12/26/2017	<0.01	0.59	NA	No Trend	NS	NA	
TCE		5	0.20	2,400	828	79	9/20/2001	12/26/2017	<0.01	0.61	NA	No Trend	NS	NA	
TCE		5	1.00	2,100	828	83	3/30/2009	12/26/2017	<0.01	0.96	NA	No Trend	NS	NA	
VC		2	0.20	8,200	1,670	81	9/20/2001	12/26/2017	0.012	0.50	NA	No Trend	NS	NA	
c-1,2-DCE	MW-14	70	5	330,000	9,310	100	10/13/2003	12/26/2017	0.17	0.028	NA	Increasing	Significant	NA	
c-1,2-DCE		70	7,540	14,700	9,310	100	3/30/2009	12/26/2017	<0.01	0.938	NA	No Trend	NS	NA	
TCE		5	2	350,000	2,000	86	10/13/2003	12/26/2017	<0.01	0.68	NA	No Trend	NS	NA	
Benzene		5	630	943	700	100	11/5/2009	12/26/2017	<0.01	0.93	NA	No Trend	NS	NA	
Toluene		1,000	53,500	135,000	110,000	100	11/5/2009	12/26/2017	0.063	0.33	NA	No Trend	NS	NA	
Ethylbenzene		700	4,570	87,700	8,640	100	11/5/2009	12/26/2017	<0.01	0.78	NA	No Trend	NS	NA	
Xylenes		10,000	39,900	86,900	80,100	100	11/5/2009	12/26/2017	0.37	0.010	NA	Increasing	Significant	NA	
Xylenes		10,000	76,700	86,900	80,100	100	5/24/2013	12/26/2017	<0.01	0.834	NA	No Trend	NS	NA	

Notes, Abbreviations and Assumptions:
µg/L = micrograms per liter
NS = not significant
NA = not applicable due to increasing trend or non-significant trend
[1] Screening levels based on EPA National Primary Drinking Water Regulations maximum contaminant levels (MCLs).
[2] Linear regression analysis with R^2 values <0.1 and no statistically significant trend were defined as having no apparent trend (No Trend).
[3] Statistically significant trend defined as having p-value ≤ 0.05.
Data in italics ND taken at reporting limit/reported value

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