

**From:** M Muthig IPGX <[mgm.ipgx@gmail.com](mailto:mgm.ipgx@gmail.com)>  
**Sent:** Monday, July 9, 2018 7:57 AM  
**To:** Hornosky, Tim  
**Subject:** 4210 Azalea Dr, Groundwater Monitoring Report

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Tim,

Attached is a copy of the subject report summarizing water-level data and analytical results for the groundwater sampling at the subject site. A printed copy of the report will be transmitted to your attention and should arrive within 8 business days.

Groundwater samples are collected semiannually. Samples are analyzed for volatile organic compounds, and results are submitted to the Department. The attached report is intended to meet the reporting requirements of the agreement.

In June 2018, at the request of DHEC, routine monitoring was coordinated with the adjacent property (4200 Azalea Dr) currently operated by Brenntag Southeast. As a result, sampling changed from March/April to June to coincide with sampling on the adjacent site. This report was updated to include monitoring results from the adjacent property (MW-5, 6, 8, 10, and 14).

We are also continuing to coordinate efforts with Brenntag and are discussing plans for additional assessment and potential soil/groundwater remediation.

We are in the process of finalizing the plan for additional assessment and will submit the plan in the next two weeks.

Please feel free to call me if you have any questions or comments regarding analytical results. I can be reached by phone at 803-414-2905 or email at [mgm.ipgx@gmail.com](mailto:mgm.ipgx@gmail.com).

Regards,

Michael

Michael Muthig, President  
IPGX, Inc.  
803-414-2905  
[Mgm.ipgx@gmail.com](mailto:Mgm.ipgx@gmail.com)

50975

**IPGX**

**Innovative Products and Services**

**GROUNDWATER MONITORING REPORT**

**JUNE 2018 SAMPLING  
4210 AZALEA DRIVE  
CHARLESTON, SC**

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PM Copy*

Submitted to:

**Division of Site Assessment, Remediation & Revitalization  
Bureau of Land and Waste Management**

**S.C. Department of Health and Environmental Control  
2600 Bull Street  
Columbia, SC 29201**

**RECEIVED**

Prepared for:

**Burris Environmental Services  
4310 Amsterdam Street  
N. Charleston, SC 29418**

**SITE ASSESSMENT,  
REMEDIATION &  
REVITALIZATION**

Prepared By:

**Michael G. Muthig, Ph.D., P.G.  
SC Professional Geologist No. 803  
IPGX, Inc.**

June 2018

*[Signature]*  
Signature

7/8/2018

Date

(32)

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A	Report of Analysis (Groundwater Samples)

## **1.0 Introduction**

This report provides a summary of semiannual groundwater sampling for the former Burris Headquarters property located at 4210 Azalea Drive, N. Charleston, SC. Groundwater monitoring is performed semiannually from monitoring wells MW-4, 9, 10, 11, and 12. Because MW-12 contains a layer of light, non-aqueous phase liquid (lnapl), fluid levels are measured in MW-12, but samples for chemical analysis are not typically collected. Groundwater samples are analyzed for volatile organic compounds, and results are submitted to the SC Department of Health & Environmental Control (DHEC).

In June 2018, at the request of DHEC, routine monitoring was coordinated with the adjacent property (4200 Azalea Dr) currently operated by Brenntag Southeast. As a result, sampling changed from March/April to June to coincide with sampling on the adjacent site. This report was updated to include monitoring results for selected wells on the adjacent property (MW-5, 6, 8, 10, and 14).

Groundwater elevations are summarized in Table 1 and illustrated in Figures 2 and 3. Water-quality results are summarized in Tables 2, 3, and 4 and are illustrated in Figures 4, 5, 6 and 7. Lnapl thickness is illustrated in Figure 8. Certificates of Analysis for the reporting period are provided in Appendices A and B.

This report is intended to meet the reporting requirements of the Administrative Content Agreement between DHEC and Burris Environmental Services.

## **2.0 Groundwater Elevation**

Groundwater elevations for the recent event are provided in Table 1. A groundwater elevation map is provided in Figure 2, and hydrographs for MW-4 and MW-9 are provided in Figure 3.

Brickyard Creek is located just west of the property and is a discharge point for shallow groundwater. Overall topography and surface water drainage is towards the west and is captured in a retention pond located between the office building and the creek. In general, groundwater flow is from east to west-southwest towards Brickyard Creek. The office building sits on a local ridge or topographic high, and groundwater elevations (and flow) appear to have a similar trend to surface topography (Figure 2).

Depth to groundwater below the site typically ranges from approximately 3 to 8 feet below ground surface. Groundwater elevations measured in the recent event generally increased from the prior event and are comparable to high levels reached 2014-2017. Prior extreme low groundwater levels were recorded between Fall 2002 to Spring 2003, from Fall 2011 through Fall 2012, and in spring 2017 (see hydrograph – Figure 3).

## **3.0 Groundwater Quality**

Groundwater analytical results are summarized in Tables 2, 3, and 4 and Certificates of Analysis are provided in Appendix A. Water-quality maps are provided in Figures 4 and 6, and time-concentrations plots are provided in Figures 5 and 7. For illustration purposes, water quality data

are summarized for selected total chlorinated and total non-chlorinated volatile organic compounds.

Distribution of nonchlorinated volatile organics is shown in Figure 4. The highest concentrations are found in MW-14. Overall, the concentration of non-chlorinated volatiles has been decreasing and non-chlorinated volatile organic compounds are near or below detection limits in all wells except MW-12 (Tables 2 & 4 and Figures 4 & 5). There was a slight rebound in concentration in MW-4 (primarily benzene). An increase in non-chlorinated volatiles commonly follows notable decreases in water level elevation.

Distribution of chlorinated volatile organics (CVOCs) is shown in Figure 6. The highest concentrations of CVOCs for the recent event were found in MW-14 and MW-11. The first sampling from MW-11 took place in September 1997. The concentration of CVOCs were relatively low (200 ug/l) in the first sampling. MW-11 was not sampled again until the fall 2000, when the concentration was 4008 ug/l. The total concentration of total CVOCs was relatively stable for the next 6 events, then increased in the March 2005. Since mid-2007, the concentration of CVOC shows a decreasing trend. A period of low concentration is observed in late 2012 through mid-2013 which corresponds to an extreme low in groundwater levels.

In MW-4, the total concentration of CVOCs has shown an overall decrease since monitoring was initiated in 1991. The concentration of CVOCs was relatively low and stable between September 1997 and March 2001. There was an increased concentration in MW-4 in 2002. Since February 2002, the total concentration of chlorinated volatile compounds in MW-4 has fluctuated and tends to increase when water level decreases. From early 2005 through October 2016, there was a general decrease in the total concentration of CVOCs in MW-11 (Figure 7). Since late 2017, the concentration of CVOCs in MW-4 rebounded, but there remains an overall downward trend in concentration. The concentration of CVOCs in all other wells continues to show a decreasing trend (Table 3).

## 4.0 Lnapl Removal

In 2004, an investigation was performed to characterize the extent of LNAPL floating on the water table near MW-12. The scope of work included installing eight temporary monitoring wells to allow the direct measurement of LNAPL and a product baildown test. Data from assessment activity did not show evidence that the free-phase layer did not extend beyond the immediate vicinity of MW-12. Results of a product baildown test indicated the actual thickness of free-phase material floating on the water table at the time of the test was no more than two inches thick.

A free product removal program was initiated that included periodic removal of free-phase material from MW-12. Initial removal activity was performed on a weekly or more frequent basis. The frequency was decreased to every two weeks, and then to every three weeks to allow a sufficient volume of free-phase material to collect in the well. The thickness of LNAPL measured in MW-12 decreased from an apparent thickness of 3.5 feet prior to initiating recovery to non-detectable levels in November and December 2006. Lnapl was not detected in MW-12 between September 2007 and October 2010.

In Spring 2011, measurable lnapl was found again in MW-12. As a result, the lnapl program was resumed. The program includes measuring lanpl levels quarterly followed by manual removal of lnapl. Records of lnapl monitoring and removal data are illustrated in Figure 8. Lnapl thickness during the recent recovery event was 0.12ft. Lnapl thickness has been less than 0.2 feet since September 2016 (Figure 8). The volume of lnapl recovered during a single event has been decreasing and has been 2 pints or less since 2016 (Figure 8). To enhance recovery, the lnapl removal program will be modified to include periodic removal using vacuum recovery.

Recovery will typically include one hour of vacuum enhanced recovery of lanpl. This will be accomplished by lowering a small diameter pipe (e.g., 1 to 1.5-inch diameter) into the well and applying a vacuum for up to one hour. Fluid levels will be measured prior to each event. After three recovery events, water samples will be collected from MW-12 for water quality testing. Data will be reviewed to evaluate effectiveness of the vacuum recovery program.

## 5.0 Summary & Planned Action

Groundwater monitoring is being performed on a semiannual basis. Overall, the concentrations of non-chlorinated volatiles have been decreasing and most non-chlorinated volatile organic compounds are at or below detection limits. MW- 11 and 14 showed the highest concentration of chlorinated volatile organic compounds. After showing a temporary rebound in concentration in 2002, chlorinated volatile organic compounds in MW-11 have shown a decreasing trend. In June 2018, sampling and analysis efforts were coordinated with the adjacent site in an effort to develop a better understanding of soil and groundwater conditions in the area.

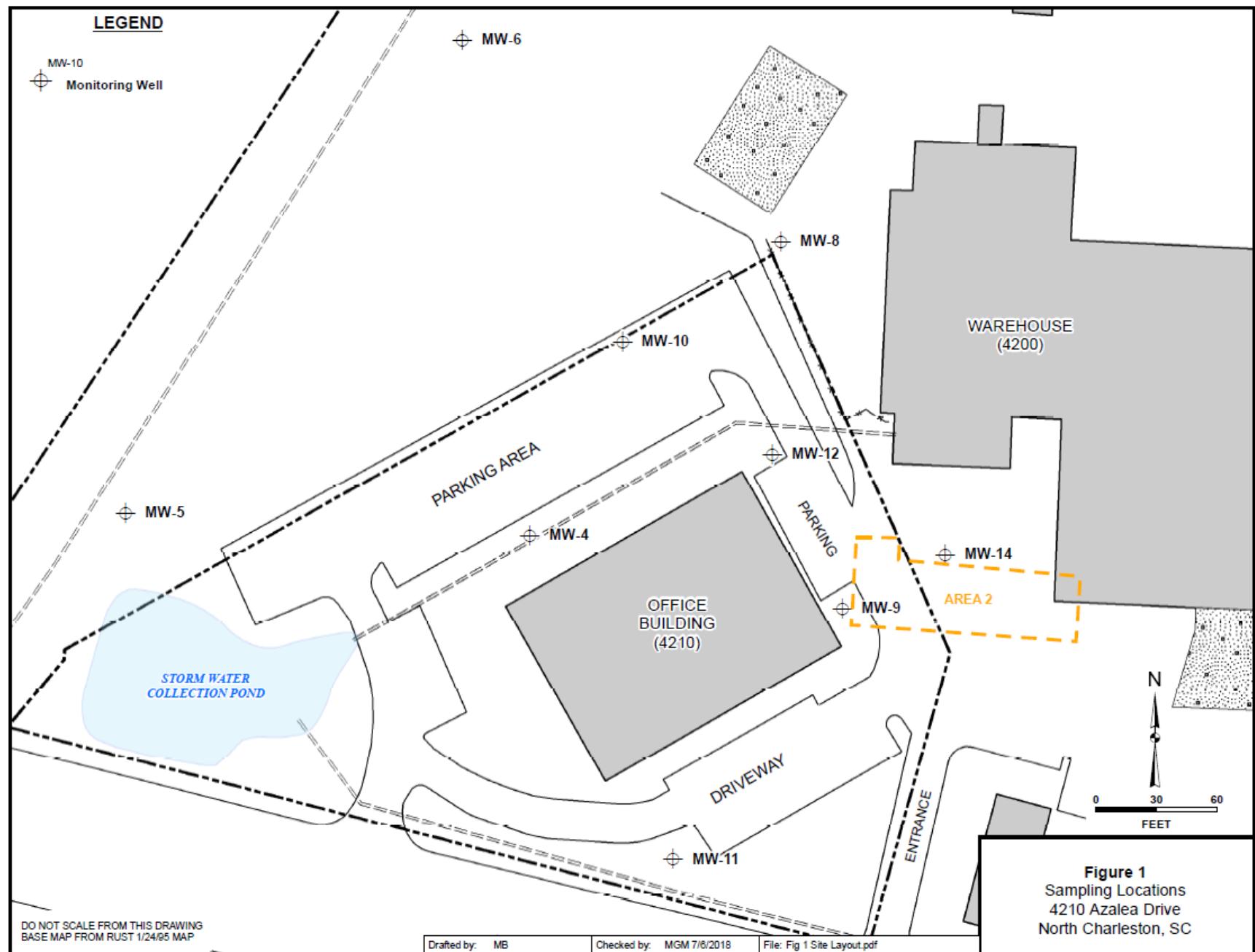
Light, non-aqueous phase liquid was found in MW-12 during the April 2011 groundwater sampling event. In an effort to address the material in MW-12, a free-phase removal program was implemented. The program included quarterly removal of free-phase material from MW-12. Given the limited thickness of lnapl and the relatively small quantity that can be recovered in an event, the lnapl recovery program will be modified to include periodic vacuum-enhanced recovery. Data will be reviewed to evaluate effectiveness of the vacuum recovery program.

As part of ongoing efforts to develop a better characterization of soil and groundwater quality, a plan for additional soil/groundwater assessment will be implemented. The plan will be submitted for DHEC review and approval in July 2018. Efforts will continue to be made to work with the adjacent site to address soil and groundwater assessment and remediation efforts.

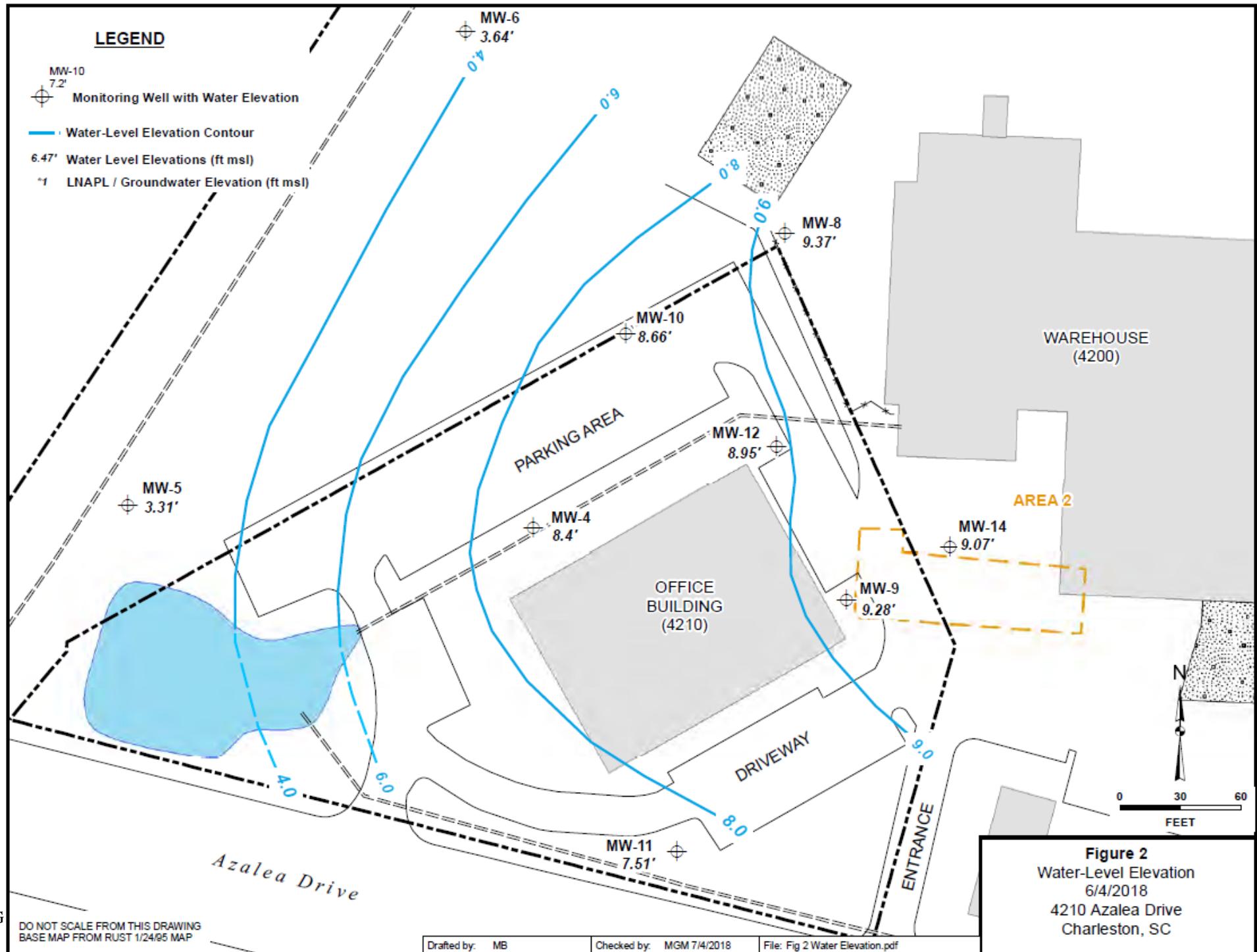
## **FIGURES**

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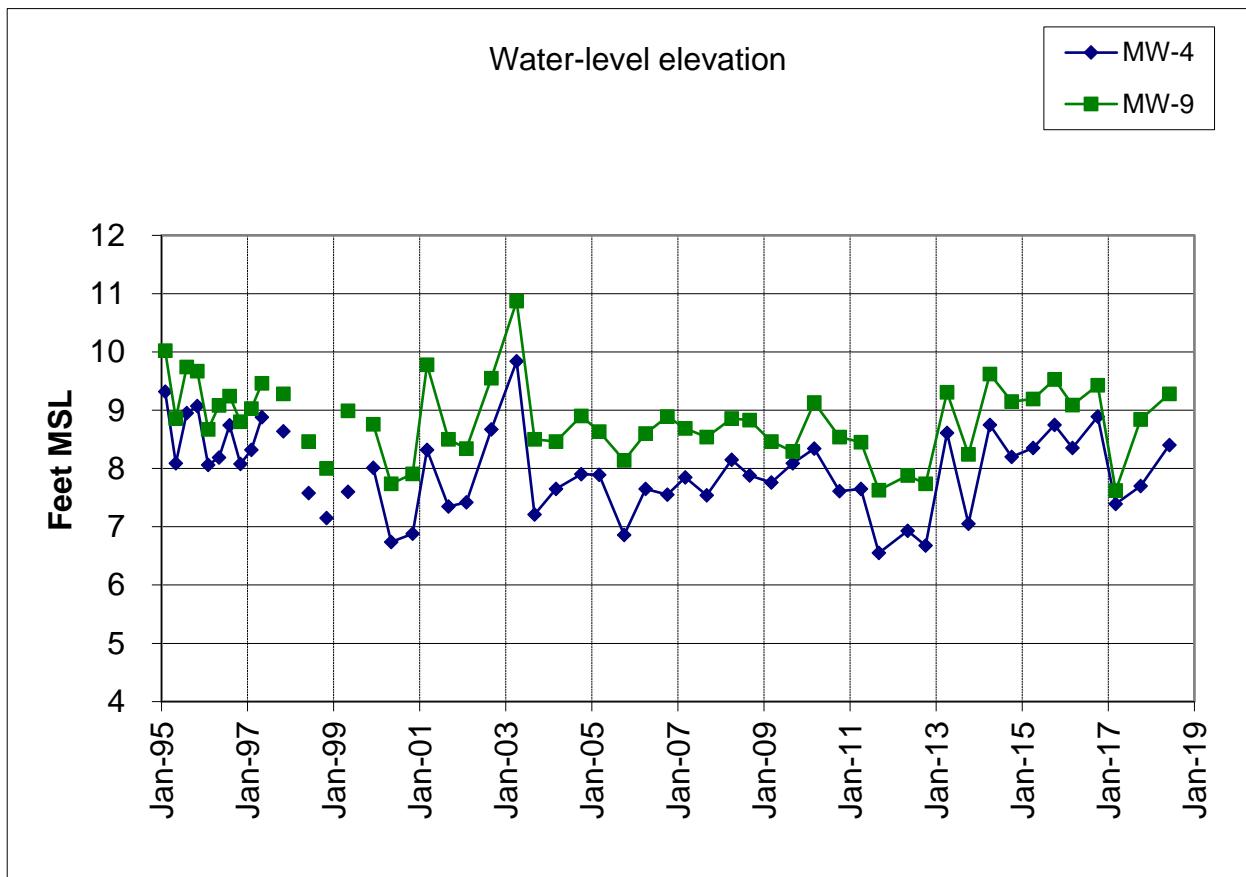
<b>Figure</b>	<b>Title</b>
1	Site Layout
2	Water-Level Elevation Map
3	Water-Level Hydrograph
4	Total Nonchlorinated Volatile Organics Map
5	Time-Concentration Graphs - Total Nonchlorinated Volatiles
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7	Time-Concentration Graphs - Total Chlorinated Volatiles
8	Lnapl Thickness & Volume Recovered

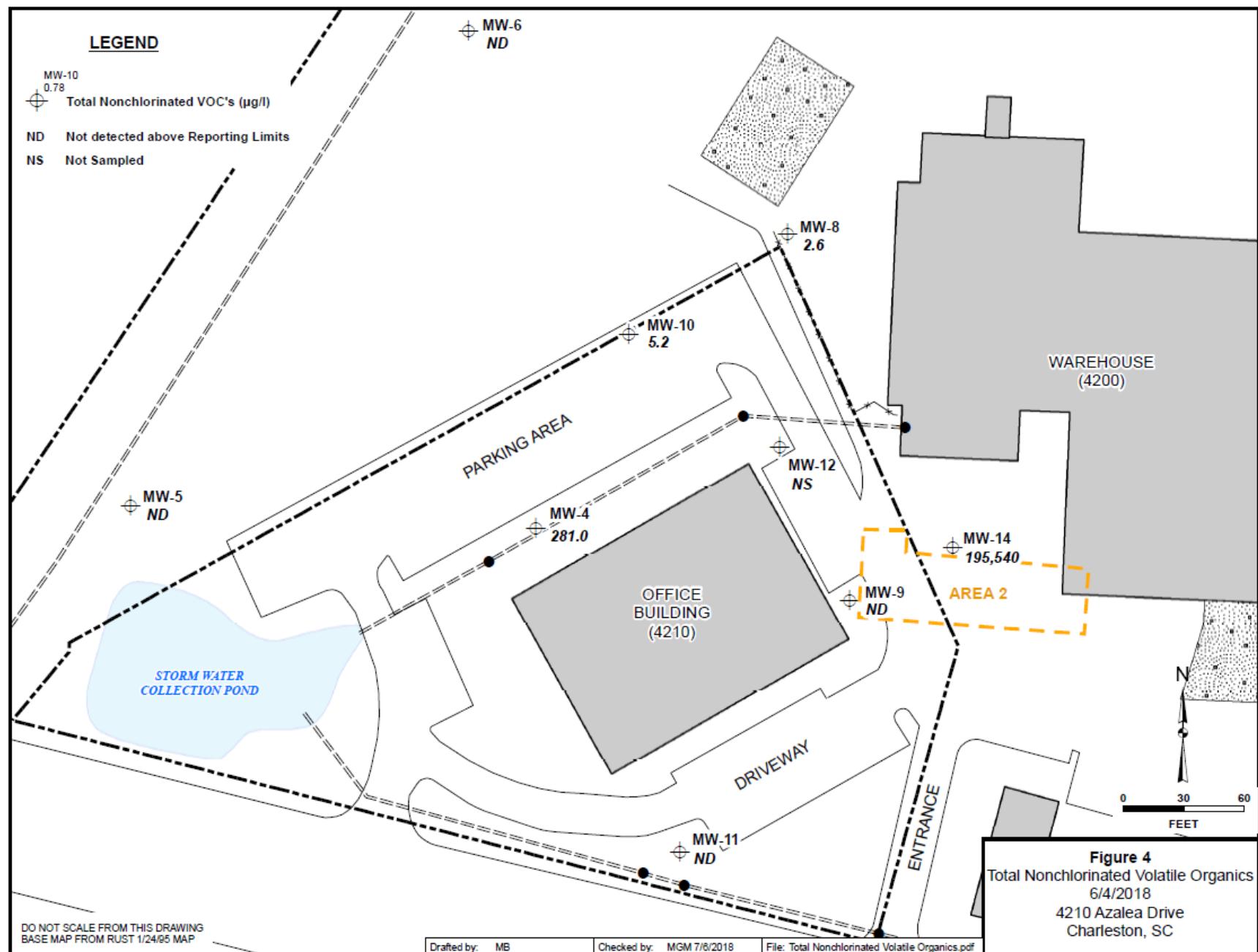


**Figure 1**  
Sampling Locations  
4210 Azalea Drive  
North Charleston, SC

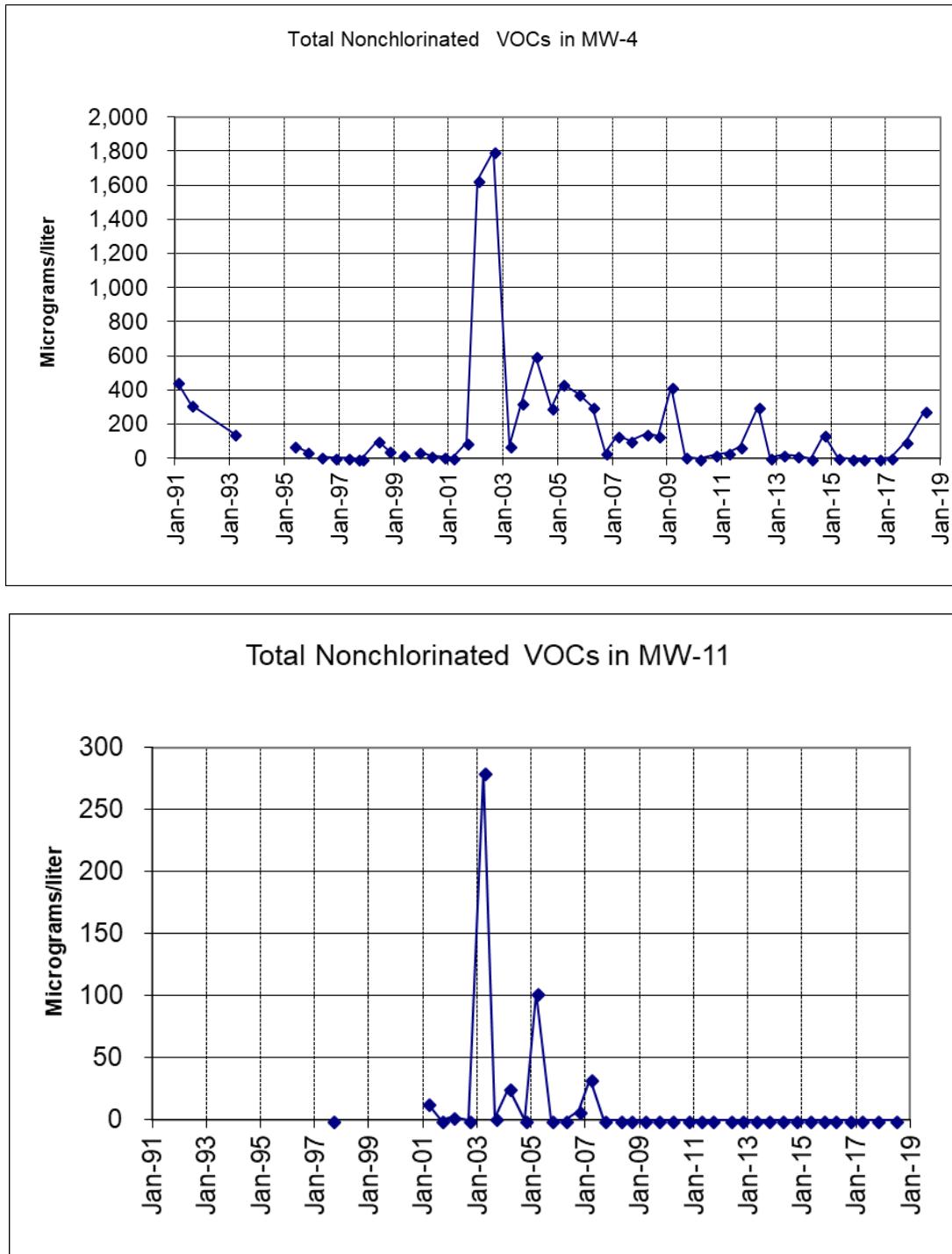


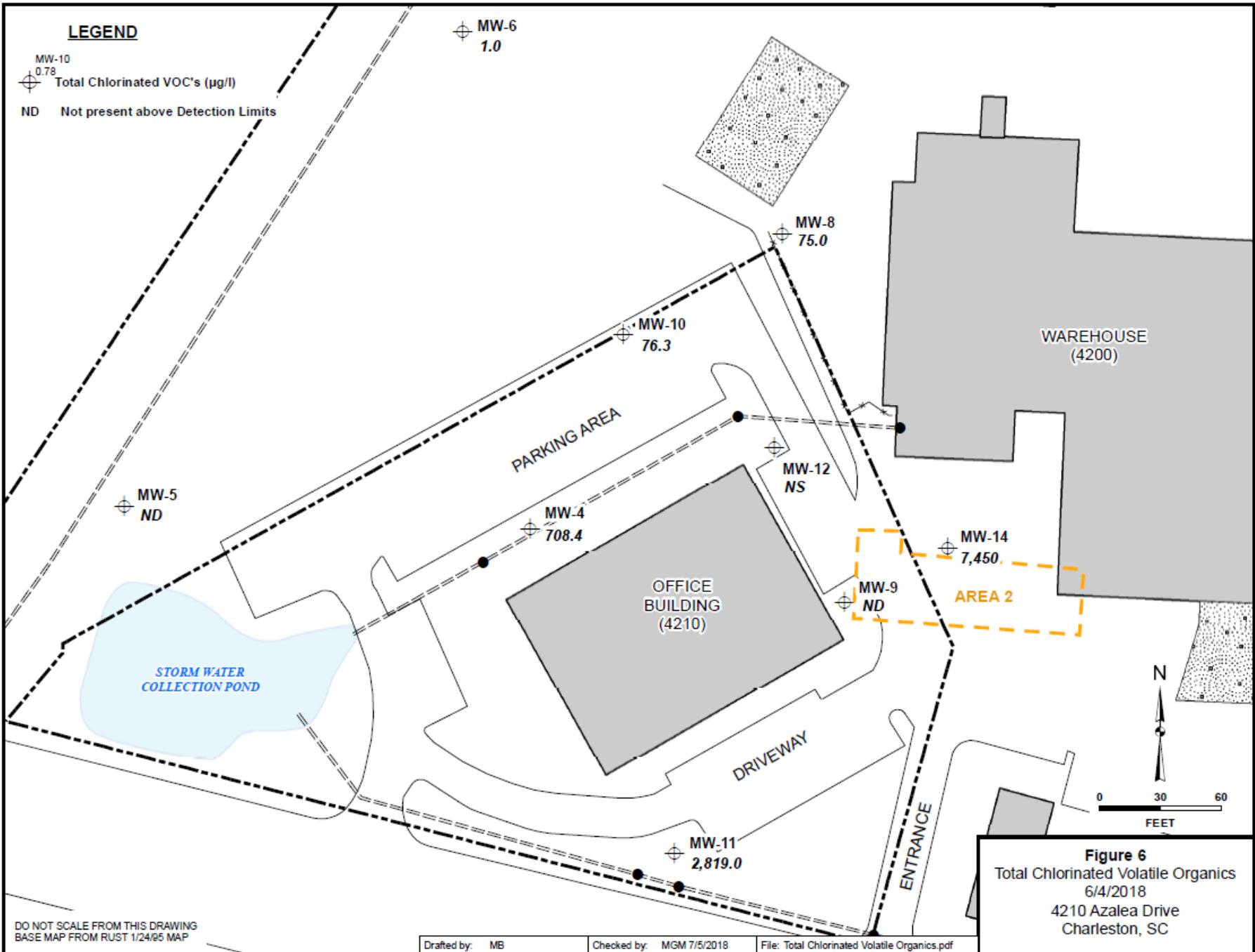
**Figure 3. Water-Level Hydrograph**



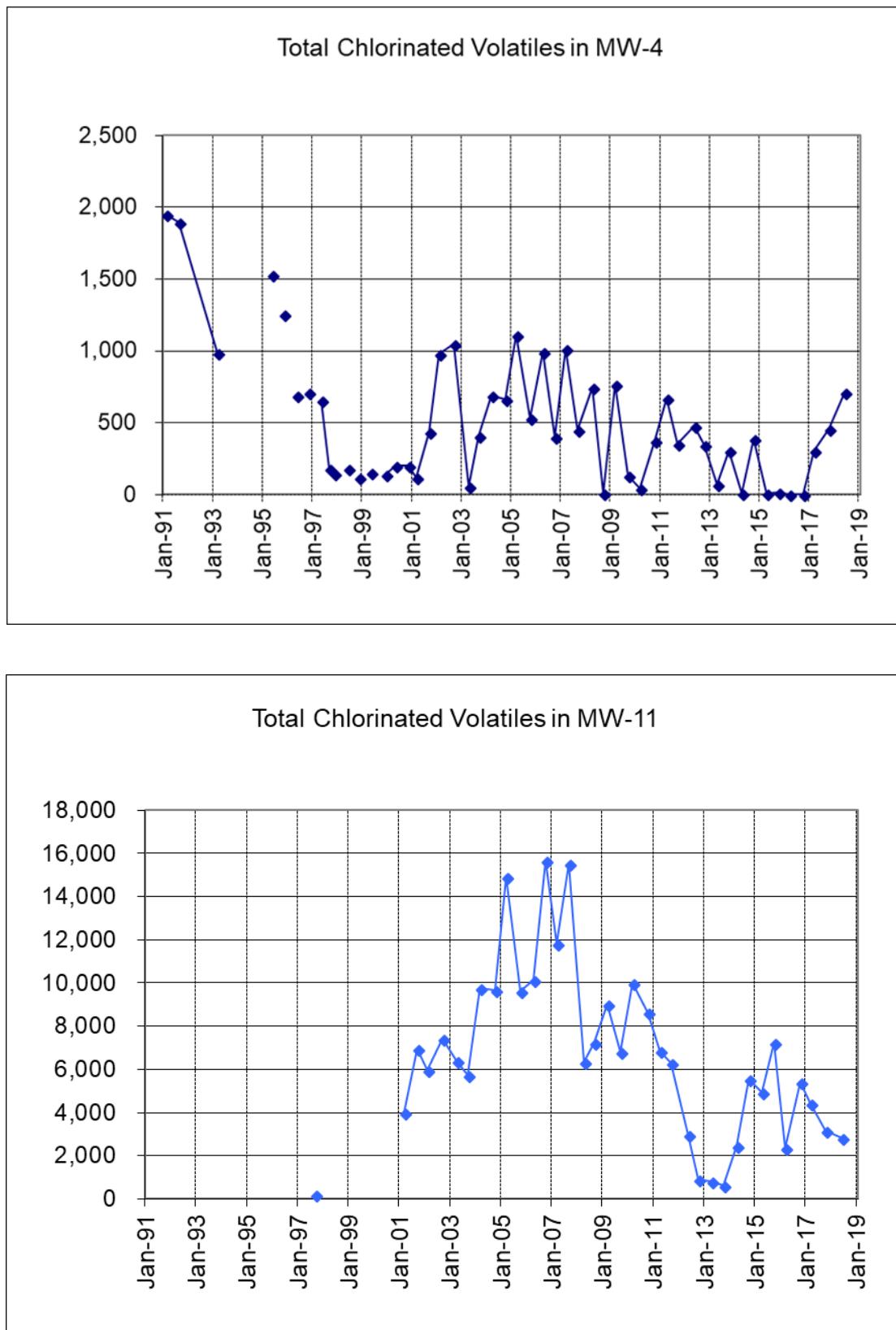


**Figure 5. Time-Concentration Graphs - Total Non-Chlorinated Volatiles**

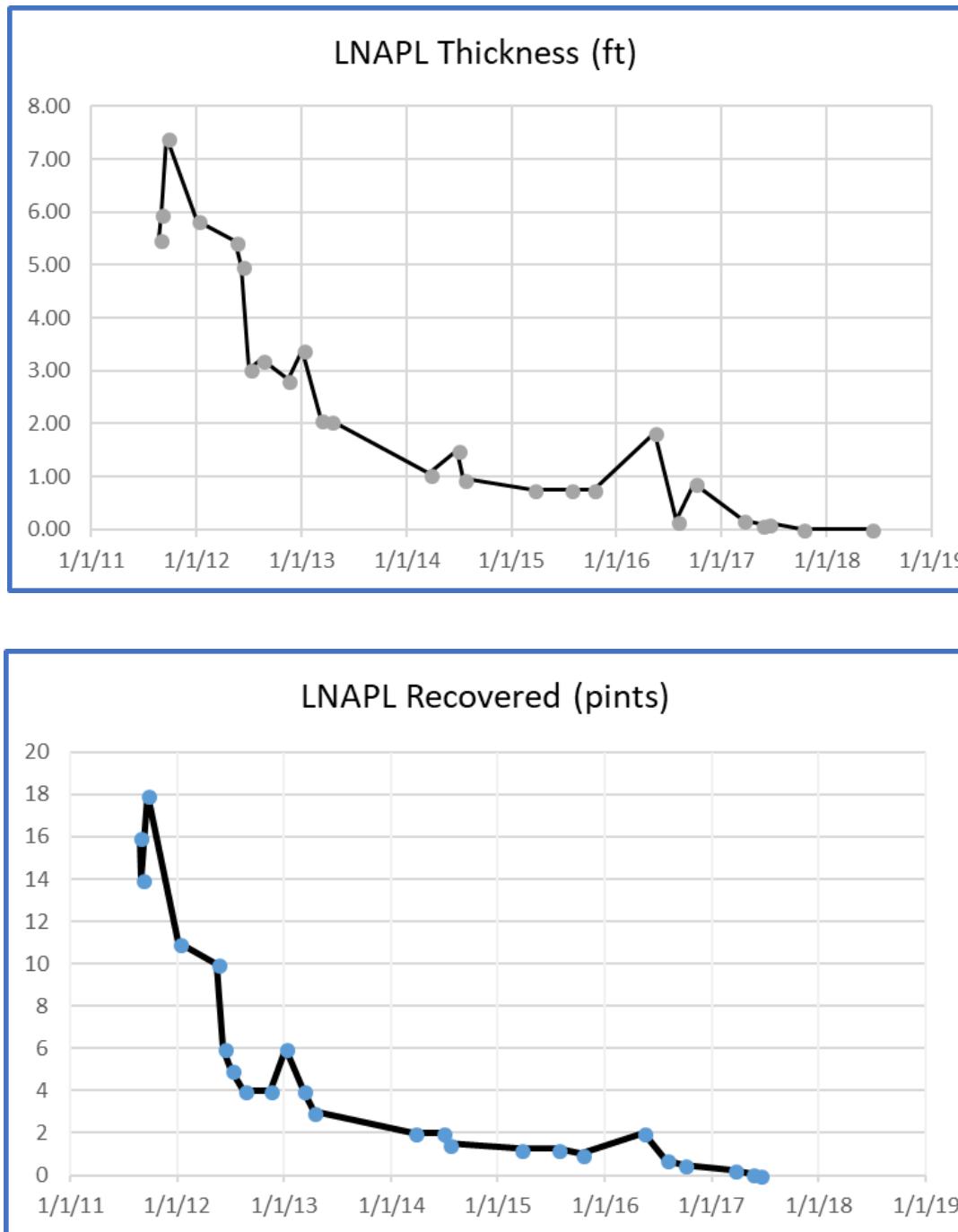




**Figure 7. Time-Concentration Graphs - Total Chlorinated Volatiles**



**Figure 8. Lnapl Thickness & Volume Recovered**



## **TABLES**

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<b>Table</b>	<b>Title</b>
1	Water-Level Elevations
2	Groundwater Quality Summary - Nonchlorinated Volatile Organic Parameters
3	Groundwater Quality Summary - Chlorinated Volatile Organic Parameters
4	Groundwater Quality Summary – Current Sampling Event



**Table 1. Water-Level Elevations**  
**4210 Azalea Drive, Charleston, SC**

DATE	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point to Level Elev. Inapl Water	Meas. Depth Water Point To Level Elev. Water	Meas. Depth Water Point To Level Elev. Water
	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
10/04/13	6.45 7.05				7.04 8.24	7.27 7.18	3.56 6.87	7.15 8.80	7.76 6.11
04/25/14	4.75 8.75				5.66 9.62	5.60 8.85	2.79 7.64	5.70 6.80	9.21 8.11
04/25/14	5.3 8.2				6.13 9.15	6.16 8.29	2.83 7.60	6.30 7.02	8.61 7.89
04/03/15	5.15 8.35				6.09 9.19	5.95 8.50	3.05 7.38	6.15 7.40	8.76 7.51
10/17/15	4.75 8.75				5.75 9.53	5.57 8.88	2.71 7.72	5.82 5.90	9.09 9.01
03/17/16	5.15 8.35				6.19 9.09	6.07 8.38	3.09 7.34	6.07 6.35	8.84 8.56
10/16/16	4.61 8.89				5.85 9.43	5.51 8.94	2.99 7.44	5.85 6.90	9.06 8.01
03/18/17	6.11 7.39				7.66 7.62	6.95 7.50	3.55 6.88	7.11 8.51	7.80 6.40
10/08/17	5.8 7.7				6.44 8.84	6.64 7.81	3.56 6.87	6.46 6.47	8.45 8.44
06/04/18	5.1 8.4	8.7 3.31	6.98 3.64	5.79 9.37	6.00 9.28	5.79 8.66	2.92 7.51	5.95 5.96	8.96 8.95
									6.10 9.07

Depth to groundwater in feet below measuring point.

Measuring point elevations for 8/15/91 are reportedly relative to mean sea level. This data is from the 10/31/91 Assessment Report by GEL.

Measuring point elevations were resurveyed on 3/30/93 and again on 1/24/95. Elevations were then calculated from those surveys assuming the elevation for MW-5 was correctly given as 12.01 feet above mean sea level. MW-10 & 12 from 4/98 Trico map.

Free phase material was discovered in MW-12 on 3/16/01.

2/25/02 - Depth to water in MW-12 may be inaccurate due to equipment problem.

10/9/10 - Interface probe was not operational, depth taken with water level meter.













**Table 2. Groundwater Quality Summary - Nonchlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

	DATE	MW-2r *	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Total	02/06/91		67	448								
Nonchlorinated	08/15/91		166	312	4	29						
Volatiles	03/30/93		67	146	2	38	0	6,429				
	11/07/94	500										
	05/18/95	130	40	75	0		25	0				
	11/13/95	161	29	38	0		0	0				
	02/20/96						9					
	05/20/96	253	25	12	5		16	48				
	11/14/96	55	25	4	35		15	10				
	05/08/97	25	18	2	0		19	2				
	09/08/97		23	0				467	273	0	29,280	
	11/26/97	133	28	0	0		0	221				
	06/19/98	168		103	0		20	1,689				
	11/30/98	45		42	0		77	2,587			33,340	
	02/15/99						0					
	05/15/99	92		24	0		98	0				
	09/03/99						146					
	12/27/99		37		47	41						
	05/31/00	18		15		34	176	229				
	11/10/00			8		35	19	16				
	03/16/01	7		3		7		0	8	13	513,000,000	
	09/20/01	0 a		90	0 a	7 a	5 a	0	5	0	133,900	
	02/25/02	13 a		1,630	0 a	14 a	0 a	0	4	2	280,200	
	09/30/02	0 a		1,798	0 a	23 a	0 a	0	0	0	90,000	
	04/11/03	23 a		77	0 a	21 a	4 a	0	1	280	153,000	
	09/30/03	0 a		326	0 a	28 a	25 a	1	53	2	57,470	
	03/26/04	6 a		600	0 a	0 a	0 a	0	34	25	82,700	159,860 a
	10/02/04			298				0	14	0		
	03/12/05			434				0	6	102		
	10/01/05			380				0	12	0		
	04/02/06			300				1	1	0		
	10/01/06			36				65	19	7		
	03/25/07			134				1,880	38	33		
	09/22/07			104				40	48	0		
	04/06/08			142				0	102	0		
	09/27/08			130				0	41	0		
	03/30/09			420				0	40	0	69,224	
	09/19/09			8				1	42	0		
	03/27/10			0.87				0	0.79	0		
	10/09/10			20				0	60	0		
	04/09/11			31				0	11	0		
	09/25/11			67				0.3	69.8	0		
	05/18/12	16.80		300	0.23		1.63	0	66.4	0	172,647	
	10/17/12			2				0	56.1	0		
	04/13/13			21				0	0.9	0		
	10/04/13			14				0	56.8	0		
	04/25/14			0.7				0	3.1	0		
	10/04/14			137.7				0	38.5	0		
	04/03/15			5.18				0	0.96	0		
	10/17/15			0				0	0.72	0		
	03/17/16			0				0	1.40	0		
	10/16/16			0				0	0.74	0		
	03/18/17			4.4				0	13.4	0		
	10/08/17			96.9				0	17.6	0		
	06/04/18			281.0	0	0	2.6	0	5.2	0	195,540	

**Table 2. Groundwater Quality Summary - Nonchlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-2r *	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
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All values are micrograms per liter ug/l.

<10 - Compound not detected above method detection or method reporting level.

8/91 Sampling took place on 8/15-16/91.

\* MW-2 abandoned on 12/16/92 for warehouse construction, and replaced with MW-2r on 10/26/94.

9/8/97 results for MW 3,4,9,10,11, and 12 collected by GEL.

9/8/97 results for MW-8 are from 8/26/97 routine sampling.

3/6/01 results for MW-12 were from a free phase material floating in the well.

a-Data from Breinntag sampling for similar period

Samples after April 2006 collected with passive diffusion bag samplers

D - Compound exceeded upper calibration level.

E - Compound exceeded upper calibration level. Sample was diluted and reanalyzed.

J - Concentration estimated below detection limit.

NA - Parameter not included in analysis





**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichloro-benzene 1,2 (o)	2/6/91	13	1,175							
	8/15/91	80	1,140	18.6	<2.00					
	3/30/93	34	649	4 J	2 J	8 J	35 J			
	11/7/94				<1					
	2/22/95					<25				
	5/18/95	31	1070	3 J		26	<5			
	8/15/95					<50	<1			
	11/13/95	29	979	<5		12	<5			
	2/20/96					13.1				
	5/20/96	20	475	10.2		17.7	<1			
	8/30/96					33				
	11/14/96	19.7	401	271		17	<1			
	2/28/97					9.3				
	5/8/97	15.2	389	<1		12.5	<1			
	9/8/97	13.4	86.4			6	<10	66	<10	775
	11/26/97	13.9	67.4	<5		<5	<5			
	2/14/98					<5				
	6/19/98		13.8	<5		8.4	6.9			
	8/8/98					25.1				
	11/30/98		5.4	<5		102	19.4			1840
	2/15/99					9.9				
	5/15/99		<5	<5		138	<5			
	9/3/99					140				
	12/27/99		5	<2	<2	31	<2			
	5/31/00		<1	<1	<1	<1	<1			
	11/10/00		<10	<10	<10	62	<10			
	3/16/01		<10	<10	<10	<10	<10	55	38	16000000
	9/20/01		<10	<10	<10	<10	<10	47	<500	1600
	2/25/02	a	<50	<10 a	<10 a	<10 a	<10	33	35	7000
	9/30/02	a	5.4	<10 a	<10 a	<10 a	<5	15	30	1000
	4/11/03	a	<1	<10 a	<10 a	<10 a	<0.5	0.8	<210	<2500
	9/30/03	a	4.8	<10 a	<10 a	<10 a	<0.5	88 D	39 E	1100
	3/26/04	a	<18	<10 a	<10 a	<10 a	<0.5	70	54 E	1400
	10/2/04		<5			<5	36	<100		
	3/12/05		<25			<5	19	<250		
	10/1/05		<10			<5	66	<250		
	4/2/06		<50			<5	15	<250		
	10/1/06		1.4 J			0.6 J	120	26		
	3/25/07		4.1 J			2.2 J	27 J	25 J		
	9/22/07		1.4 J			<5	120	<250		
	4/6/08		2.7 J			<1	20	<20		
	9/27/08		<5			<1	87	<2		
	3/30/09		<10			<1	14	<100	1100	
	9/19/09		2			<1	97	<25		
	3/27/10		<1			<1	2 J	<250		
	10/9/10		1.7			<1	91	<20		
	4/9/11		2.1			<1	25	<50		
	9/25/11		1.3			<1	95	<20		
	5/18/12	J	0.64 J	<1		1.5	<1	70	<1	<2000
	10/17/12		<1			<1	78	<1		
	4/13/13		<1			<1	3.7	<5		
	10/4/13		2.2			<1	92	<1		
	4/25/14		<1			<1	11	<20		
	10/4/14		1.6			<1	77	<50		
	4/3/15		<1			<1	4.9	<50		
	10/17/15		<1			<1	8.3	<50		
	3/17/16		<1			<1	3.4	<20		
	10/16/16		<1			<1	36	<50	1,300	
	3/18/17		1.3			<1	33	<1		
	10/8/17		<4			<1	43.1	<25		<2000
	6/4/18		<5	<1	<1	5.4	<1	36.4	<25	



**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichloro-benzene 1,4 (p)	2/6/91	48	322							
	8/15/91	20.0	255.0	3.72	<2.00					
	3/30/93	13	148	<5	<5	6 J	<100			
	11/7/94				<1					
	2/22/95				<25					
	5/18/95	17	256	<5		29	<5			
	8/15/95					<50	<1			
	11/13/95	14	130	<5		13	<5			
	2/20/96					15.4				
	5/20/96	10	90.6	2.2		27.2	<1			
	8/30/96					<1				
	11/14/96	1.9	104	61.6		32.1	<1			
	2/28/97					<1				
	5/8/97	7.7	102.5	<1		18	<1			
	9/8/97	<10	30			2.8	<10	16.6	<10	171
	11/26/97	10.7	24.3	<5		<5	<5			
	2/14/98					<5				
	6/19/98		24.5	<5		10.6	6.4			
	8/8/98					22.8				
	11/30/98		12.4	<5		35.8	9.9			103
	2/15/99					<5				
	5/15/99		6.1	<5		10.3	<5			
	9/3/99					41				
	12/27/99		8	<2	<2	19	<2			
	5/31/00		<1	<1	<1	<1	<1			
	11/10/00		30	<10	<10	<50	<10			
	3/16/01		19	<10	<10	<10	<10	21	<10	<10000000
	9/20/01		23	<10	<10	<10	<10	20	<500	<500
	2/25/02 a		<50	<10 a	<10 a	<10 a	<10	16	<10	1400
	9/30/02 a		19	<10 a	<10 a	<10 a	<5	7.8	<25	<500
	4/11/03 a		<1	<10 a	<10 a	<10 a	<0.5	<0.5	<210	<2500
	9/30/03 a		16	<10 a	<10 a	<10 a	<0.5	18	1.5	<630
	3/26/04 a		<18	<10 a	<10 a	<10 a	<0.5	16	2.3	<1300 <100 a
	10/2/04					<5		8.7	<100	
	3/12/05		8.4 J			<5		8.2	<250	
	10/1/05		6.3 J			<5		12	<250	
	4/2/06		<50			0.27 J	7.3	<250		
	10/1/06		6.5			1.4 J	23	1.3 J		
	3/25/07		11 J			5.4 J	10	<10		
	9/22/07		8.2			2.1 J	21 J	<250		
	4/6/08		9.1			<1	6.5	<20		
	9/27/08		7.8			<1	15	<2		
	3/30/09		6.6 J			<1	3.7 J	<100		250
	9/19/09		7.6			<1	16	<25		
	3/27/10		1.5			<1	<5	<250		
	10/9/10		8.2			<1	16	<20		
	4/9/11		6.4			<1	7.6	<50		
	9/25/11		8.4			<1	17	<20		
	5/18/12		2.5	<1	0.83 J	<1	13	<1		<2000
	10/17/12		5.13			<1	14	<1		
	4/13/13		0.99 J			<1	2.6	<5		
	10/4/13		9.4			<1	16	<1		
	4/25/14		1.6			<1	4.9	<20		
	10/4/14		7.3			<1	14	<50		
	4/3/15		0.55 J			<1	3.4	<50		
	10/17/15		2.3			<1	4.2	<50		
	3/17/16		0.29 J			<1	1.8	<20		
	10/16/16		0.6 J			<1	7.3	<50	230 J	
	3/18/17		3.5			<1	7.4	<1		
	10/8/17		5.3			<1	7.9	<25		<2000
	6/4/18		5.4	<1	<1	2.5	<1	7.6	<25	

**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichloro-ethane 1,1	2/6/91	17	63							
	8/15/91	25.0	52.5	<2.00	<2.00					
	3/30/93	12	13	<5	<5	10 J	<100			
	11/7/94				<1					
	2/22/95					<25				
	5/18/95	8	11	<5		7	<5			
	8/15/95					<50	<1			
	11/13/95	4 J	6	<5		6	<5			
	2/20/96					4.7				
	5/20/96	3.8	4.7	<1		5.4	<1			
	8/30/96					6.7				
	11/14/96	5.4	4.9	<1		6.9	<1			
	2/28/97					<1				
	5/8/97	<1	3.6	<1		<1	<1			
	9/8/97	3.6	<2			5.6	<2	26.1	<2	<200
	11/26/97	<5	<5	<5		<5	<5			
	2/14/98					<5				
	6/19/98	<5	<5			<5	<5			
	8/8/98					8.3				
	11/30/98	<5	<5			9.3	6.1		26.7	
	2/15/99					<5				
	5/15/99	<5	<5			13	<5			
	9/3/99					8.2				
	12/27/99	3	<2	<2		15	<2			
	5/31/00	1	<1	<1		23	<1			
	11/10/00	<2	<2	<2		18	<2			
	3/16/01	<2	<2	<2		<2	<2	10	3	<2000000
	9/20/01	<2	<2	<2		2	<2	9	<100	<100
	2/25/02	a	<10	<2 a	<2 a	<2 a	<2	8	27	120
	9/30/02	a	<5	<2 a	<2 a	<2 a	<5	<5	<25	<500
	4/11/03	a	2	<2 a	<2 a	<2 a	<0.5	0.6	<210	<2500
	9/30/03	a	<0.5	<2 a	<2 a	5 a	<0.5	11	2.1	<630
	3/26/04	a	<18	<2 a	<2 a	<2 a	<0.5	10	3.7	<1300 150 a
	10/2/04		<5			<5	5.2	<100		
	3/12/05		<25			<5	6.7	<250		
	10/1/05		<10			<5	5.2	<250		
	4/2/06		<50			<5	4.2 J	<250		
	10/1/06		<5			0.39 J	5.4	0.91 J		
	3/25/07		<1.5			<1.5	16	<15		
	9/22/07		<5			<5	9.5 J	<250		
	4/6/08		<5			<1	19	<20		
	9/27/08		<5			<1	7.4	<2		
	3/30/09		<10			<1	17	<100	<100	
	9/19/09	0.38 J				<1	4.5	<25		
	3/27/10	0.38 J				<1	2.4 J	<250		
	10/9/10	0.28 J				<1	5.4	<20		
	4/9/11	0.27 J				<1	4.8	<50		
	9/25/11	0.15 J				<1	5.2	<20		
	5/18/12	0.38 J	<1		1.8	<1	4.5	<1		<2000
	10/17/12		<1			<1	4.23	<1		
	4/13/13	0.16 J				<1	1.8	<5		
	10/4/13		<1			<1	3.9	<1		
	4/25/14		<1			<1	2.9	<20		
	10/4/14		<1			<1	2.8	<50		
	4/3/15		<1			<1	1.6	<50		
	10/17/15		<1			<1	<1	<50		
	3/17/16		<1			<1	1	<20		
	10/16/16		<1			<1	<1	<50	<500	
	3/18/17		<1			<1	1.4	<1		
	10/8/17		<4			<1	1.5	<25		
	6/4/18		<5	<1	<1	0.56 J	<1	1.1	<25	<2000
Dichloro-ethane 1,1										

**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichlor-ethane 1,2	2/6/91	<10	<50							
	8/15/91	25.0	<50.0	<2.00	<2.00					
	3/30/93	10	<10	<5	<5	<50	<100			
	11/7/94				<1					
	2/22/95				<25					
	5/18/95	4 J	<5	<5		<5	<5			
	8/15/95					<50	<1			
	11/13/95	<5	<5	<5		<5	<5			
	2/20/96					<1				
	5/20/96	<1	<1	<1		<1	<1			
	8/30/96					<1				
	11/14/96	<1	<1	<1		<1	<1			
	2/28/97					<1				
	5/8/97	<1	<1	<1		<1	<1			
	9/8/97	<2	<2			<1	<2	<2	<2	<200
	11/26/97	<5	<5	<5		<5	<5			
	2/14/98					<5				
	6/19/98	<5	<5			<5	22.8			
	8/8/98					<5				
	11/30/98	<5	<5			<5	<5			<5
	2/15/99					<5				
	5/15/99	<5	<5			<5	<5			
	9/3/99					<5				
	12/27/99	<2	<2	<2		<2	<2			
	5/31/00	<1	<1	<1		<1	<1			
	11/10/00	<2	<2	<2		<10	<2			
	3/16/01	<2	<2	<2		<2	<2	<2	<2	<2000000
	9/20/01	<2	<2	<2		<2	<2	<2	<100	<100
	2/25/02	a	<10	<2 a	<2 a	<2 a	<2	<2	<2	<100
	9/30/02	a	<5	<2 a	<2 a	<2 a	<5	<5	<25	<500
	4/11/03	a	<1	<2 a	<2 a	<2 a	<0.5	<0.5	<210	<2500
	9/30/03	a	27 E	<2 a	<2 a	<2 a	<0.5	3.3	<0.5	<630
	3/26/04	a	<18	<2 a	<2 a	<2 a	<0.5	<3.1	<.5	<1300 160 a
	10/2/04		<5			<5	<5	<100		
	3/12/05		<25			<5	<5	<250		
	10/1/05		<10			<5	<5	<250		
	4/2/06		<50			<5	<5	<250		
	10/1/06		<5			0.37 J	1 J	<5		
	3/25/07		<1.5			<1.5	<0.3	<15		
	9/22/07		<5			<5	<25	<250		
	4/6/08		<5			<1	<5	<20		
	9/27/08		<5			<1	<5	<2		
	3/30/09		<10			<1	<10	<100	<100	
	9/19/09		<1			<1	<1	<25		
	3/27/10		<1			<1	<5	<250		
	10/9/10		<1			<1	<1	<20		
	4/9/11		<1			<1	<1	<50		
	9/25/11		<1			<1	<1	<20		
	5/18/12		<1	<1		<1	<1	<1	<1	<2000
	10/17/12		<1			<1	0.477 J	<1		
	4/13/13		<1			<1	<1	<5		
	10/4/13		<1			<1	<1	<1		
	4/25/14		<1			<1	<1	<20		
	10/4/14		<1			<1	<1	<50		
	4/3/15		<1			<1	<1	<50		
	10/17/15		<1			<1	<1	<50		
	3/17/16		<1			<1	<1	<20		
	10/16/16		<1			<1	<1	<50	<500	
	3/18/17		<1			<1	<1	<1		
	10/8/17		<4			<1	<1	<25		
	6/4/18		<5	<1	<1	<1	<1	<25		<2000
Dichlor-ethane 1,2										

**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichloro-ethene 1,1	2/6/91	22	<50							
	8/15/91	70.0	<50.0	<2.00	<2.00					
	3/30/93	14	4 J	<5	<5	<50	<100			
	11/7/94				<1					
	2/22/95				<25					
	5/18/95	7	<5	<5		3 J	<5			
	8/15/95					<50	<1			
	11/13/95	<5	<5	<5		4 J	<5			
	2/20/96					3.8				
	5/20/96	3.2	<1	<1		2.4	<1			
	8/30/96					<1				
	11/14/96	2.7	<1	<1		<1	<1			
	2/28/97					5.8				
	5/8/97	4	<1	<1		2.2	<1			
	9/8/97	<2	<2			<1	<2	<2	<2	<200
	11/26/97	<5	<5	<5		5.7	<5			
	2/14/98					<5				
	6/19/98		<5	<5		7.9	<5			
	8/8/98					<5				
	11/30/98		<5	<5		<5	<5		38.8	
	2/15/99					<5				
	5/15/99		<5	<5		<5	<5			
	9/3/99					<5				
	12/27/99		<2	<2	<2	8	<2			
	5/31/00		<1	<1	<1	5	<1			
	11/10/00		<2	<2	<2	<10	<2			
	3/16/01		<2	<2	<2	<2	<2	<2	9	<2000000
	9/20/01		<2	<2	<2	4	<2	<2	<100	<100
	2/25/02 a	<10	<2 a	<2 a	<2 a	<2 a	<2	<2	11	<100
	9/30/02 a	<5	<2 a	<2 a	2 a	<5	<5	<5	<25	<500
	4/11/03 a	<1	<2 a	<2 a	3 a	<0.5	<0.5	<0.5	<210	<2500
	9/30/03 a	<0.5	<2 a	<2 a	<2 a	<0.5	<0.5	21	<630	
	3/26/04 a	<18	<2 a	<2 a	<2 a	<0.5	<3.1	29 E	<1300	<20 a
	10/2/04		<5			<5	<5	<100		
	3/12/05		<25			<5	<5	<250		
	10/1/05		<10			<5	<5	<250		
	4/2/06		<50			<5	<5	<250		
	10/1/06		<5			<5	<5	24		
	3/25/07		<2.5			<2.5	<0.5	<25		
	9/22/07		<5			<5	<25	<250		
	4/6/08		<5			<1	5.1	12 J		
	9/27/08		<5			<1	<5	11		
	3/30/09		<10			<1	5.6 J	<100	<100	
	9/19/09		<1			<1	0.37 J	<25		
	3/27/10		<1			<1	<5	<250		
	10/9/10		<1			<1	0.37 J	12 J		
	4/9/11		<1			<1	<1	<50		
	9/25/11		<1			<1	0.69 J	12 J		
	5/18/12		<1	<1	3.6	<1	0.26 J	5.3 J	<2000	
	10/17/12		<1			<1	<1	2.31		
	4/13/13		<1			<1	1.8	<5		
	10/4/13		<1			<1	<1	1.5		
	4/25/14		<1			<1	<1	<20		
	10/4/14		<1			<1	<1	<50		
	4/3/15		<1			<1	<1	8.4 J		
	10/17/15		<1			<1	<1	17 J		
	3/17/16		<1			<1	<1	<20		
	10/16/16		<1			<1	<1	<50	<500	
	3/18/17		<1			<1	<1	9.7		
	10/8/17		<4			<1	<1	<25		
	6/4/18		<5	<1	<1	0.86 J	<1	<1	<25	<2000
Dichloro-ethene 1,1										

**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichloro- ethene cis- 1,2	2/6/91									
	8/15/91									
	3/30/93	81	11	96	44	172	290			
	11/7/94				151					
	2/22/95					392				
	5/18/95	63	4 J	3 J		131	<5			
	8/15/95					253	<1			
	11/13/95	20	<5	<5		227	<5			
	2/20/96					900				
	5/20/96	22.6	<1	<1		376	<1			
	8/30/96					233				
	11/14/96	37.9	3.2	<1		356	<1			
	2/28/97					474				
	5/8/97	50.5	2.8	<1		186	<1			
	9/8/97	16.2	<2			520	<2	34.3	166	8550
	11/26/97	22.7	7.2	<5		632	<5			
	2/14/98					458				
	6/19/98		12.6	<5		358	86.9			
	8/8/98					236				
	11/30/98		12.1	<5		179	<5		2280	
	2/15/99					28.2				
	5/15/99		61.3	<5		243	<5			
	9/3/99					150				
	12/27/99		65	11	25	182	<2			
	5/31/00		113	<1	42	290	<1			
	11/10/00		3	<2	18	300	<2			
	3/16/01		2	<2	3	79	<2	30	3,600	<2000000
	9/20/01		2	<2	4	270	<2	38	6,800	7400
	2/25/02	a	<10	<2 a	5 a	180 a	<2	18	5,500	13000
	9/30/02	a	<5	<2 a	8 a	85 a	21	14	7,200	3600
	4/11/03	a	5	<2 a	8 a	230 a	<0.5	23	6,400	8000
	9/30/03	a	3.6	<2 a	9 a	89 a	<0.5	25 D	5,400 D	1400
	3/26/04	a	<18	<2 a	<2 a	7 a	<0.5	19	8,800 D	2600
	10/2/04		<5				<5	6.4	9,400	
	3/12/05		<25				0.32 J	3.3 J	14,000	
	10/1/05		<10				3.9 J	2.2 J	8,900	
	4/2/06		<50				5.3	0.44 J	8,700	
	10/1/06		0.26 J				2 J	5.2	15,000	
	3/25/07		2 J				<1.0	43	11,000	
	9/22/07		<5				<5	320	15,000	
	4/6/08		<5				0.3 J	1400	6,200	
	9/27/08		<5				0.32 J	220	7,100	
	3/30/09		<10				<1	1100	9,000	1400
	9/19/09		0.48 J				11	82	6,600	
	3/27/10		1.9				1.5	70	9,800	
	10/9/10		0.25 J				6.8	84	8,400	
	4/9/11		<1				3.3	24	6,700	
	9/25/11		0.23 J				11	110	6,100	
	5/18/12		0.27 J	2.3		196 b	25	46	2,900	10,300
	10/17/12		0.259 J				21.3	20.6	885	
	4/13/13		2.4				3	0.73 J	780 S	
	10/4/13		0.2 J				4.2	15	560	
	4/25/14		<1				1.3	0.94 J	2,400	
	10/4/14		<1				1.8	1.6	5,400	
	4/3/15		0.38 J				2.6	0.39 J	4,800	
	10/17/15		<1				2.2	<1	7,000	
	3/17/16		<1				1.8	0.65 J	2,300	
	10/16/16		0.52 J				1.1	<1	5,200	1,400
	3/18/17		<1				5.0	1.0	4,300	
	10/8/17		<4				1.7	<1	3,080	
	6/4/18		<5	<1	<1	33.7	<1	<1	2,690	7,450

**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Dichloro-ethene trans, 1-2	2/6/91	<10	<50							
	8/15/91	10.0	<50.0	2.26	<2.00					
	3/30/93	5	<10	2 J	<5	<50	<100			
	11/7/94				<1					
	2/22/95				<25					
	5/18/95	4 J	<5	<5		3 J	<5			
	8/15/95					<50	<1			
	11/13/95	<5	<5	<5		<5	<5			
	2/20/96				1.8					
	5/20/96	2.5	<1	<1		<1	<1			
	8/30/96					<1				
	11/14/96	2.1	<1	<1		1.8	<1			
	2/28/97					<1				
	5/8/97	<1	<1	<1		3.1	<1			
	9/8/97	<2	<2			1	<2	<2	2.7	<200
	11/26/97	<5	<5	<5		<5	<5			
	2/14/98					<5				
	6/19/98		<5	<5		<5	<5			
	8/8/98					<5				
	11/30/98		<5	<5		<5	<5			7.8
	2/15/99					<5				
	5/15/99		<5	<5		<5	<5			
	9/3/99					<5				
	12/27/99		<2	<2	<2	<2	<2			
	5/31/00		<1	<1	<1	3	<1			
	11/10/00		<2	<2	<2	<10	<2			
	3/16/01		<2	<2	<2	<2	<2	<2	62	<2000000
	9/20/01		<2	<2	<2	<2	<2	<2	<100	<100
	2/25/02	a	<10	<2 a	<2 a	<2 a	<2	<2	97	<100
	9/30/02	a	<5	<2 a	<2 a	<2 a	<5	<5	65	<500
	4/11/03	a	<1	<2 a	<2 a	<2 a	<0.5	<0.5	<210	<2500
	9/30/03	a	<0.5	<2 a	<2 a	<2 a	<0.5	2.4 D	93 E	<630
	3/26/04	a	<18	<2 a	<2 a	<2 a	<0.5	<3.1	73 E	<1300
	10/2/04		<5			<5	<5	<100		
	3/12/05		<25			<5	0.69 J	48 J		
	10/1/05		<10			<5	1.3 J	34 J		
	4/2/06		<50			<5	<5	20 J		
	10/1/06		<5			0.62 J	2 J	46		
	3/25/07		<2			<2.0	3 J	42 J		
	9/22/07		<5			<5	5 J	44 J		
	4/6/08		<5			<1	14	26		
	9/27/08		<5			<1	3.9 J	32		
	3/30/09		<10			<1	10	37 J	<100	
	9/19/09		<1			0.26 J	2.4	36		
	3/27/10		0.27 J			<1	1.3 J	36 J		
	10/9/10		<1			<1	2.4	28		
	4/9/11		<1			<1	1.1	25 J		
	9/25/11		<1			<1	2.9	29		
	5/18/12		0.23 J	<1		1.4	<1	2.3	13	<2000
	10/17/12		<1			0.703 J	2.61	16.5		
	4/13/13		<1			<1	<1	3 J		
	10/4/13		<1			<1	2.2	3.7		
	4/25/14		<1			<1	0.51 J	12 J		
	10/4/14		<1			<1	1.3	<50		
	4/3/15		<1			<1	<1	29 J		
	10/17/15		<1			<1	<1	33 J		
	3/17/16		<1			<1	<1	12 J		
	10/16/16		<1			<1	<1	30 J	<500	
	3/18/17		<1			<1	0.61 J	21		
	10/8/17		<4			<1	<1	<25		
	6/4/18		<5	<1	<1	0.26 J	<1	<1	<25	<2000



**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
Trichloro- ethene 5 ug/l	2/6/91	29	76							
	8/15/91	45.0	67.5	<2.00	<2.00					
	3/30/93	25	16	<5	<5	2,470	124			
	11/7/94				<1					
	2/22/95					5,130				
	5/18/95	19	10	<5		1,650	<5			
	8/15/95					2,240	<1			
	11/13/95	5	<5	<5		3,650	<5			
	2/20/96					1,140				
	5/20/96	9.3	7.3	<1		1,694	<1			
	8/30/96					1,750				
	11/14/96	7.1	2.1	<1		3,475	1			
	2/28/97					3,695				
	5/8/97	7.5	2.5	<1		631	<1			
	9/8/97	<2	<2			3,920	<2	<2	5.3	829
	11/26/97	<5	<5	<5		5,950	<5			
	2/14/98					3,170				
	6/19/98		<5	<5		4,010	14.5			
	8/8/98					2,080				
	11/30/98		<5	<5		2,180	<5			1850
	2/15/99					2,420				
	5/15/99		<5	<5		2,580	<5			
	9/3/99					990				
	12/27/99		<2	<2	<2	1,190	6			
	5/31/00		<1	<1	<1	2,050	<1			
	11/10/00		<2	<2	<2	940	<2			
	3/16/01		<2	<2	<2	140	<2	<2	96	16000000
	9/20/01		<2	<2	<2	210	<2	<2	<100	6800
	2/25/02	a	<10	<2	a	9	a	<2	60	13000
	9/30/02	a	<5	<2	a	27	a	<5	26	5700
	4/11/03	a	<1	<2	a	95	a	<0.5	<0.5	<210
	9/30/03	a	<0.5	<2	a	4	a	<0.5	0.7	<0.5
	3/26/04	a	<18	<2	a	4	a	<0.5	<3.1	3.4
	10/2/04		<5					<5	<100	
	3/12/05		<25					<5	<5	270
	10/1/05		<10					<5	<5	<250
	4/2/06		<50					<5	<5	<250
	10/1/06		<5					<5	<5	5.8
	3/25/07		<1.5					<1.5	<0.3	<15
	9/22/07		<5					<5	<25	<250
	4/6/08		<5					<1	16	<20
	9/27/08		<5					<1	1.4 J	11
	3/30/09		<10					<1	<10	<100
	9/19/09		1.4					<1	0.69 J	<25
	3/27/10		1.5					<1	0.36 J	<250
	10/9/10		0.27 J					<1	<1	93
	4/9/11		<1					<1	<1	40 J
	9/25/11		<1					<1	0.22 J	65
	5/18/12		1.4	0.26 J		12.8	<1	<1	31	1,870 J
	10/17/12		0.327 J					<1	<1	6.71
	4/13/13		0.590 J					<1	<1	6.7
	10/4/13		<1					<1	<1	16
	4/25/14		<1					<1	<1	17 J
	10/4/14		<1					<1	<1	63
	4/3/15		0.56 J					<1	<1	14 J
	10/17/15		0.35 J					<1	<1	52
	3/17/16		<1					<1	0.17 J	5.2 J
	10/16/16		<1					<1	<1	71
	3/18/17		<1					<1	<1	54
	10/8/17		<4					<1	<1	<25
	6/4/18		<5	<1	<1	6.8	<1	<1	100	<2000





**Table 3. Groundwater Quality Summary - Chlorinated Volatile Organic Parameters**  
**4210 Azalea Drive, Charleston, SC**

DATE	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-14
------	------	------	------	------	------	------	-------	-------	-------	-------

All values are micrograms per liter (ug/l).

<10 - Compound not detected above method detection or method reporting level.

8/91 Sampling took place on 8/15-16/91.

\* MW-2 abandoned on 12/16/92 for warehouse construction, and replaced with MW-2r on 10/26/94.

D - Compound exceeded upper calibration level. This value reported when value is below detection limit of dilution.

E - Compound exceeded upper calibration level. Sample was diluted and reanalyzed.

J - Concentration estimated below detection limit.

S - MS/MSD failure

\*T - Prior to 3/30/93, 1,2-cis dichloroethene was not included in lab analyses.

9/8/97 results for MW-3,4,9,10,11, &12 were collected by GEL.

8/26/97 data for MW-8 is from routine sampling performed on 8/26/97.

3/16/01 results for MW-12 were for sample of free phase material.

a - Data from Brenntag report dated 4/28/04

Samples after 4/2006 collected with passive diffusion bag samplers

**Table 4. Groundwater Quality Summary – Current Sampling Event**

<b>Table 4a. Groundwater Quality Summary - Current Sampling Event</b>								
<b>Parameter</b>	<b>MW-4</b>	<b>MW-5</b>	<b>MW-6</b>	<b>MW-8</b>	<b>MW-9</b>	<b>MW-10</b>	<b>MW-11</b>	<b>MW-14</b>
Benzene	281	<1	<1	<1	<1	5.2	<25	<2000
Ethylbenzene	<5	<1	<1	<1	<1	<1	<25	8840
Toluene	<5	<1	<1	1.5	<1	<1	<25	102000
Xylenes	<5	<3	<3	1.1	<1	<1	<25	84700
<b>Total Nonchlorinated</b>	<b>281</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>5.2</b>	<b>0</b>	<b>195,540</b>
<b>Parameter</b>	<b>MW-4</b>	<b>MW-5</b>	<b>MW-6</b>	<b>MW-8</b>	<b>MW-9</b>	<b>MW-10</b>	<b>MW-11</b>	<b>MW-14</b>
Chlorobenzene	703	<1	1.1	2.5	<1	23.1	<25	<2000
Chloroethane	<5	<2	<2	<2	<1	<1	<25	<4000
1,2 Dichlorobenzene	<5	<1	<1	5.4	<1	36.4	<25	0
1,3 Dichlorobenzene	<5	<1	<1	0.71	<1	2.3	<25	<2000
1,4 Dichlorobenzene	5.4	<1	<1	2.5	<1	7.6	<25	0
1,1 Dichloroethane	<5	<1	<1	0.56	<1	1.1	<25	<2000
1,2 Dichloroethane	<5	<1	<1	<1	<1	<1	<25	<2000
1,1 Dichloroethene	<5	<1	<1	0.86	<1	<1	<25	<2000
cis-1,2 Dichloroethene	<5	<1	<1	33.7	<1	<1	2690	7450
trans- 1,2 Dichloroethene	<5	<1	<1	0.26	<1	<1	<25	<2000
Tetrachloroethene	<5	<1	<1	0.48	<1	<1	<25	<2000
Trichloroethene	<5	<1	<1	6.8	<1	<1	100	<2000
Vinylchloride	<5	<1	<1	21.1	<1	5.8	28.6	<2000
<b>Total Chlorinated</b>	<b>708.4</b>	<b>0</b>	<b>1.1</b>	<b>74.9</b>	<b>0</b>	<b>76.3</b>	<b>2,818.6</b>	<b>7,450</b>

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**APPENDIX A**

**Report of Analysis**

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June 13, 2018

Jonathon Gerst  
Peak Hydrogeologic  
470 Hogback Mt Rd  
Tryon, NC 28782

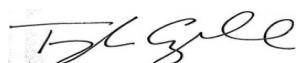
RE: Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Dear Jonathon Gerst:

Enclosed are the analytical results for sample(s) received by the laboratory on June 05, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Taylor Ezell  
taylor.ezell@pacelabs.com  
(704)875-9092  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

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### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
Louisiana/NELAP Certification # LA170028  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001  
Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
Virginia/VELAP Certification #: 460221

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92387151001	MW9	EPA 8260	GAW	65	PASI-C
92387151002	MW10	EPA 8260	GAW	65	PASI-C
92387151003	MW4	EPA 8260	GAW	65	PASI-C
92387151004	MW11	EPA 8260	GAW	65	PASI-C

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Sample: MW9	Lab ID: 92387151001	Collected: 06/04/18 08:00	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		06/11/18 17:45	67-64-1	
Benzene	ND	ug/L	1.0	1		06/11/18 17:45	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		06/11/18 17:45	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		06/11/18 17:45	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		06/11/18 17:45	75-27-4	
Bromoform	ND	ug/L	1.0	1		06/11/18 17:45	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/11/18 17:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		06/11/18 17:45	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		06/11/18 17:45	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		06/11/18 17:45	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/11/18 17:45	75-00-3	
Chloroform	ND	ug/L	1.0	1		06/11/18 17:45	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/11/18 17:45	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		06/11/18 17:45	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		06/11/18 17:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		06/11/18 17:45	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		06/11/18 17:45	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		06/11/18 17:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:45	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		06/11/18 17:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		06/11/18 17:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/11/18 17:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		06/11/18 17:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		06/11/18 17:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		06/11/18 17:45	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		06/11/18 17:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		06/11/18 17:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		06/11/18 17:45	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		06/11/18 17:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		06/11/18 17:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		06/11/18 17:45	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		06/11/18 17:45	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		06/11/18 17:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		06/11/18 17:45	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		06/11/18 17:45	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		06/11/18 17:45	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		06/11/18 17:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		06/11/18 17:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/11/18 17:45	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		06/11/18 17:45	91-20-3	
Styrene	ND	ug/L	1.0	1		06/11/18 17:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		06/11/18 17:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/11/18 17:45	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		06/11/18 17:45	127-18-4	
Toluene	ND	ug/L	1.0	1		06/11/18 17:45	108-88-3	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL

Pace Project No.: 92387151

Sample: MW9	Lab ID: 92387151001	Collected: 06/04/18 08:00	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		06/11/18 17:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		06/11/18 17:45	79-00-5	
Trichloroethylene	ND	ug/L	1.0	1		06/11/18 17:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/11/18 17:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		06/11/18 17:45	96-18-4	
1,2,3-Trimethylbenzene	ND	ug/L	1.0	1		06/11/18 17:45	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		06/11/18 17:45	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		06/11/18 17:45	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		06/11/18 17:45	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		06/11/18 17:45	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		06/11/18 17:45	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		06/11/18 17:45	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		06/11/18 17:45	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	1		06/11/18 17:45	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		06/11/18 17:45	17060-07-0	
Toluene-d8 (S)	106	%	70-130	1		06/11/18 17:45	2037-26-5	

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Sample: MW10	Lab ID: 92387151002	Collected: 06/04/18 08:45	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		06/11/18 17:28	67-64-1	
Benzene	<b>5.2</b>	ug/L	1.0	1		06/11/18 17:28	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		06/11/18 17:28	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		06/11/18 17:28	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		06/11/18 17:28	75-27-4	
Bromoform	ND	ug/L	1.0	1		06/11/18 17:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/11/18 17:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		06/11/18 17:28	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		06/11/18 17:28	56-23-5	
Chlorobenzene	<b>23.1</b>	ug/L	1.0	1		06/11/18 17:28	108-90-7	
Chloroethane	ND	ug/L	1.0	1		06/11/18 17:28	75-00-3	
Chloroform	ND	ug/L	1.0	1		06/11/18 17:28	67-66-3	
Chloromethane	ND	ug/L	1.0	1		06/11/18 17:28	74-87-3	
2-Chlorotoluene	<b>3.2</b>	ug/L	1.0	1		06/11/18 17:28	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		06/11/18 17:28	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	1		06/11/18 17:28	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		06/11/18 17:28	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		06/11/18 17:28	74-95-3	
1,2-Dichlorobenzene	<b>36.4</b>	ug/L	1.0	1		06/11/18 17:28	95-50-1	
1,3-Dichlorobenzene	<b>2.3</b>	ug/L	1.0	1		06/11/18 17:28	541-73-1	
1,4-Dichlorobenzene	<b>7.6</b>	ug/L	1.0	1		06/11/18 17:28	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		06/11/18 17:28	75-71-8	
1,1-Dichloroethane	<b>1.1</b>	ug/L	1.0	1		06/11/18 17:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/11/18 17:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		06/11/18 17:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		06/11/18 17:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		06/11/18 17:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		06/11/18 17:28	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		06/11/18 17:28	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		06/11/18 17:28	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		06/11/18 17:28	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		06/11/18 17:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		06/11/18 17:28	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		06/11/18 17:28	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		06/11/18 17:28	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		06/11/18 17:28	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		06/11/18 17:28	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		06/11/18 17:28	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		06/11/18 17:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		06/11/18 17:28	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/11/18 17:28	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		06/11/18 17:28	91-20-3	
Styrene	ND	ug/L	1.0	1		06/11/18 17:28	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		06/11/18 17:28	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/11/18 17:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		06/11/18 17:28	127-18-4	
Toluene	ND	ug/L	1.0	1		06/11/18 17:28	108-88-3	

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Sample: MW10	Lab ID: 92387151002	Collected: 06/04/18 08:45	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:28	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		06/11/18 17:28	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		06/11/18 17:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		06/11/18 17:28	79-00-5	
Trichloroethylene	ND	ug/L	1.0	1		06/11/18 17:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		06/11/18 17:28	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		06/11/18 17:28	96-18-4	
1,2,3-Trimethylbenzene	ND	ug/L	1.0	1		06/11/18 17:28	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		06/11/18 17:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		06/11/18 17:28	108-67-8	
Vinyl acetate	ND	ug/L	2.0	1		06/11/18 17:28	108-05-4	
Vinyl chloride	5.8	ug/L	1.0	1		06/11/18 17:28	75-01-4	
Xylene (Total)	ND	ug/L	1.0	1		06/11/18 17:28	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		06/11/18 17:28	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		06/11/18 17:28	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	70-130	1		06/11/18 17:28	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	1		06/11/18 17:28	17060-07-0	
Toluene-d8 (S)	107	%	70-130	1		06/11/18 17:28	2037-26-5	

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Sample: MW4	Lab ID: 92387151003	Collected: 06/04/18 09:15	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
Acetone	ND	ug/L	125	5		06/11/18 18:02	67-64-1	
Benzene	<b>281</b>	ug/L	5.0	5		06/11/18 18:02	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		06/11/18 18:02	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		06/11/18 18:02	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		06/11/18 18:02	75-27-4	
Bromoform	ND	ug/L	5.0	5		06/11/18 18:02	75-25-2	
Bromomethane	ND	ug/L	25.0	5		06/11/18 18:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	25.0	5		06/11/18 18:02	78-93-3	
Carbon tetrachloride	ND	ug/L	5.0	5		06/11/18 18:02	56-23-5	
Chlorobenzene	<b>703</b>	ug/L	5.0	5		06/11/18 18:02	108-90-7	
Chloroethane	ND	ug/L	5.0	5		06/11/18 18:02	75-00-3	
Chloroform	<b>8.7</b>	ug/L	5.0	5		06/11/18 18:02	67-66-3	
Chloromethane	ND	ug/L	5.0	5		06/11/18 18:02	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		06/11/18 18:02	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		06/11/18 18:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	10.0	5		06/11/18 18:02	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		06/11/18 18:02	124-48-1	
Dibromomethane	ND	ug/L	5.0	5		06/11/18 18:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		06/11/18 18:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		06/11/18 18:02	541-73-1	
1,4-Dichlorobenzene	<b>5.4</b>	ug/L	5.0	5		06/11/18 18:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		06/11/18 18:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		06/11/18 18:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		06/11/18 18:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	5		06/11/18 18:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		06/11/18 18:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		06/11/18 18:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		06/11/18 18:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		06/11/18 18:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		06/11/18 18:02	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		06/11/18 18:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		06/11/18 18:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		06/11/18 18:02	10061-02-6	
Diisopropyl ether	ND	ug/L	5.0	5		06/11/18 18:02	108-20-3	
Ethylbenzene	ND	ug/L	5.0	5		06/11/18 18:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		06/11/18 18:02	87-68-3	
2-Hexanone	ND	ug/L	25.0	5		06/11/18 18:02	591-78-6	
p-Isopropyltoluene	ND	ug/L	5.0	5		06/11/18 18:02	99-87-6	
Methylene Chloride	ND	ug/L	10.0	5		06/11/18 18:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	5		06/11/18 18:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		06/11/18 18:02	1634-04-4	
Naphthalene	ND	ug/L	5.0	5		06/11/18 18:02	91-20-3	
Styrene	ND	ug/L	5.0	5		06/11/18 18:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		06/11/18 18:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		06/11/18 18:02	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	5		06/11/18 18:02	127-18-4	
Toluene	ND	ug/L	5.0	5		06/11/18 18:02	108-88-3	

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Sample: MW4	Lab ID: 92387151003	Collected: 06/04/18 09:15	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		06/11/18 18:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		06/11/18 18:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		06/11/18 18:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		06/11/18 18:02	79-00-5	
Trichloroethylene	ND	ug/L	5.0	5		06/11/18 18:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		06/11/18 18:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	5.0	5		06/11/18 18:02	96-18-4	
1,2,3-Trimethylbenzene	ND	ug/L	5.0	5		06/11/18 18:02	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		06/11/18 18:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		06/11/18 18:02	108-67-8	
Vinyl acetate	ND	ug/L	10.0	5		06/11/18 18:02	108-05-4	
Vinyl chloride	ND	ug/L	5.0	5		06/11/18 18:02	75-01-4	
Xylene (Total)	ND	ug/L	5.0	5		06/11/18 18:02	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	5		06/11/18 18:02	179601-23-1	
o-Xylene	ND	ug/L	5.0	5		06/11/18 18:02	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	5		06/11/18 18:02	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	70-130	5		06/11/18 18:02	17060-07-0	
Toluene-d8 (S)	105	%	70-130	5		06/11/18 18:02	2037-26-5	

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL

Pace Project No.: 92387151

Sample: MW11	Lab ID: 92387151004	Collected: 06/04/18 09:45	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
Acetone	ND	ug/L	625	25		06/11/18 18:19	67-64-1	
Benzene	ND	ug/L	25.0	25		06/11/18 18:19	71-43-2	
Bromobenzene	ND	ug/L	25.0	25		06/11/18 18:19	108-86-1	
Bromochloromethane	ND	ug/L	25.0	25		06/11/18 18:19	74-97-5	
Bromodichloromethane	ND	ug/L	25.0	25		06/11/18 18:19	75-27-4	
Bromoform	ND	ug/L	25.0	25		06/11/18 18:19	75-25-2	
Bromomethane	ND	ug/L	125	25		06/11/18 18:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	125	25		06/11/18 18:19	78-93-3	
Carbon tetrachloride	ND	ug/L	25.0	25		06/11/18 18:19	56-23-5	
Chlorobenzene	ND	ug/L	25.0	25		06/11/18 18:19	108-90-7	
Chloroethane	ND	ug/L	25.0	25		06/11/18 18:19	75-00-3	
Chloroform	<b>60.3</b>	ug/L	25.0	25		06/11/18 18:19	67-66-3	
Chloromethane	ND	ug/L	25.0	25		06/11/18 18:19	74-87-3	
2-Chlorotoluene	ND	ug/L	25.0	25		06/11/18 18:19	95-49-8	
4-Chlorotoluene	ND	ug/L	25.0	25		06/11/18 18:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	50.0	25		06/11/18 18:19	96-12-8	
Dibromochloromethane	ND	ug/L	25.0	25		06/11/18 18:19	124-48-1	
Dibromomethane	ND	ug/L	25.0	25		06/11/18 18:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	25.0	25		06/11/18 18:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	25.0	25		06/11/18 18:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	25.0	25		06/11/18 18:19	106-46-7	
Dichlorodifluoromethane	ND	ug/L	25.0	25		06/11/18 18:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	25.0	25		06/11/18 18:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	25.0	25		06/11/18 18:19	107-06-2	
1,1-Dichloroethylene	ND	ug/L	25.0	25		06/11/18 18:19	75-35-4	
cis-1,2-Dichloroethene	<b>2690</b>	ug/L	25.0	25		06/11/18 18:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	25.0	25		06/11/18 18:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	25.0	25		06/11/18 18:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	25.0	25		06/11/18 18:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	25.0	25		06/11/18 18:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	25.0	25		06/11/18 18:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	25.0	25		06/11/18 18:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	25.0	25		06/11/18 18:19	10061-02-6	
Diisopropyl ether	ND	ug/L	25.0	25		06/11/18 18:19	108-20-3	
Ethylbenzene	ND	ug/L	25.0	25		06/11/18 18:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	25.0	25		06/11/18 18:19	87-68-3	
2-Hexanone	ND	ug/L	125	25		06/11/18 18:19	591-78-6	
p-Isopropyltoluene	ND	ug/L	25.0	25		06/11/18 18:19	99-87-6	
Methylene Chloride	ND	ug/L	50.0	25		06/11/18 18:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	125	25		06/11/18 18:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	25.0	25		06/11/18 18:19	1634-04-4	
Naphthalene	ND	ug/L	25.0	25		06/11/18 18:19	91-20-3	
Styrene	ND	ug/L	25.0	25		06/11/18 18:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	25.0	25		06/11/18 18:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	25.0	25		06/11/18 18:19	79-34-5	
Tetrachloroethene	ND	ug/L	25.0	25		06/11/18 18:19	127-18-4	
Toluene	ND	ug/L	25.0	25		06/11/18 18:19	108-88-3	

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## ANALYTICAL RESULTS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

Sample: MW11	Lab ID: 92387151004	Collected: 06/04/18 09:45	Received: 06/05/18 14:07	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level SC</b>	Analytical Method: EPA 8260							
1,2,3-Trichlorobenzene	ND	ug/L	25.0	25		06/11/18 18:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	25.0	25		06/11/18 18:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	25.0	25		06/11/18 18:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	25.0	25		06/11/18 18:19	79-00-5	
Trichloroethylene	<b>100</b>	ug/L	25.0	25		06/11/18 18:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	25.0	25		06/11/18 18:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	25.0	25		06/11/18 18:19	96-18-4	
1,2,3-Trimethylbenzene	ND	ug/L	25.0	25		06/11/18 18:19	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	25.0	25		06/11/18 18:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	25.0	25		06/11/18 18:19	108-67-8	
Vinyl acetate	ND	ug/L	50.0	25		06/11/18 18:19	108-05-4	
Vinyl chloride	<b>28.8</b>	ug/L	25.0	25		06/11/18 18:19	75-01-4	
Xylene (Total)	ND	ug/L	25.0	25		06/11/18 18:19	1330-20-7	
m&p-Xylene	ND	ug/L	50.0	25		06/11/18 18:19	179601-23-1	
o-Xylene	ND	ug/L	25.0	25		06/11/18 18:19	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	70-130	25		06/11/18 18:19	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-130	25		06/11/18 18:19	17060-07-0	
Toluene-d8 (S)	105	%	70-130	25		06/11/18 18:19	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORMER BURRIS CHEMICAL

Pace Project No.: 92387151

QC Batch:	414766	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level SC
Associated Lab Samples:	92387151001, 92387151002, 92387151003, 92387151004		

METHOD BLANK: 2300052                                  Matrix: Water

Associated Lab Samples: 92387151001, 92387151002, 92387151003, 92387151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	06/11/18 09:20	
1,1,1-Trichloroethane	ug/L	ND	1.0	06/11/18 09:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/11/18 09:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	06/11/18 09:20	
1,1-Dichloroethane	ug/L	ND	1.0	06/11/18 09:20	
1,1-Dichloroethene	ug/L	ND	1.0	06/11/18 09:20	
1,1-Dichloropropene	ug/L	ND	1.0	06/11/18 09:20	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	06/11/18 09:20	
1,2,3-Trichloropropane	ug/L	ND	1.0	06/11/18 09:20	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	06/11/18 09:20	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	06/11/18 09:20	
1,2-Dichlorobenzene	ug/L	ND	1.0	06/11/18 09:20	
1,2-Dichloroethane	ug/L	ND	1.0	06/11/18 09:20	
1,2-Dichloropropene	ug/L	ND	1.0	06/11/18 09:20	
1,3-Dichlorobenzene	ug/L	ND	1.0	06/11/18 09:20	
1,3-Dichloropropane	ug/L	ND	1.0	06/11/18 09:20	
1,4-Dichlorobenzene	ug/L	ND	1.0	06/11/18 09:20	
2,2-Dichloropropane	ug/L	ND	1.0	06/11/18 09:20	
2-Butanone (MEK)	ug/L	ND	5.0	06/11/18 09:20	
2-Chlorotoluene	ug/L	ND	1.0	06/11/18 09:20	
2-Hexanone	ug/L	ND	5.0	06/11/18 09:20	
4-Chlorotoluene	ug/L	ND	1.0	06/11/18 09:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	06/11/18 09:20	
Acetone	ug/L	ND	25.0	06/11/18 09:20	
Benzene	ug/L	ND	1.0	06/11/18 09:20	
Bromobenzene	ug/L	ND	1.0	06/11/18 09:20	
Bromochloromethane	ug/L	ND	1.0	06/11/18 09:20	
Bromodichloromethane	ug/L	ND	1.0	06/11/18 09:20	
Bromoform	ug/L	ND	1.0	06/11/18 09:20	
Bromomethane	ug/L	ND	5.0	06/11/18 09:20	
Carbon tetrachloride	ug/L	ND	1.0	06/11/18 09:20	
Chlorobenzene	ug/L	ND	1.0	06/11/18 09:20	
Chloroethane	ug/L	ND	1.0	06/11/18 09:20	
Chloroform	ug/L	ND	1.0	06/11/18 09:20	
Chloromethane	ug/L	ND	1.0	06/11/18 09:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	06/11/18 09:20	
cis-1,3-Dichloropropene	ug/L	ND	1.0	06/11/18 09:20	
Dibromochloromethane	ug/L	ND	1.0	06/11/18 09:20	
Dibromomethane	ug/L	ND	1.0	06/11/18 09:20	
Dichlorodifluoromethane	ug/L	ND	1.0	06/11/18 09:20	
Diisopropyl ether	ug/L	ND	1.0	06/11/18 09:20	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORMER BURRIS CHEMICAL

Pace Project No.: 92387151

METHOD BLANK: 2300052

Matrix: Water

Associated Lab Samples: 92387151001, 92387151002, 92387151003, 92387151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	ND	1.0	06/11/18 09:20	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	06/11/18 09:20	
m&p-Xylene	ug/L	ND	2.0	06/11/18 09:20	
Methyl-tert-butyl ether	ug/L	ND	1.0	06/11/18 09:20	
Methylene Chloride	ug/L	ND	2.0	06/11/18 09:20	
Naphthalene	ug/L	ND	1.0	06/11/18 09:20	
o-Xylene	ug/L	ND	1.0	06/11/18 09:20	
p-Isopropyltoluene	ug/L	ND	1.0	06/11/18 09:20	
Styrene	ug/L	ND	1.0	06/11/18 09:20	
Tetrachloroethene	ug/L	ND	1.0	06/11/18 09:20	
Toluene	ug/L	ND	1.0	06/11/18 09:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	06/11/18 09:20	
trans-1,3-Dichloropropene	ug/L	ND	1.0	06/11/18 09:20	
Trichloroethene	ug/L	ND	1.0	06/11/18 09:20	
Trichlorofluoromethane	ug/L	ND	1.0	06/11/18 09:20	
Vinyl acetate	ug/L	ND	2.0	06/11/18 09:20	
Vinyl chloride	ug/L	ND	1.0	06/11/18 09:20	
Xylene (Total)	ug/L	ND	1.0	06/11/18 09:20	
1,2-Dichloroethane-d4 (S)	%	105	70-130	06/11/18 09:20	
4-Bromofluorobenzene (S)	%	102	70-130	06/11/18 09:20	
Toluene-d8 (S)	%	108	70-130	06/11/18 09:20	

LABORATORY CONTROL SAMPLE: 2300053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	51.5	103	70-130	
1,1,1-Trichloroethane	ug/L	50	55.1	110	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.2	98	70-130	
1,1,2-Trichloroethane	ug/L	50	52.5	105	70-130	
1,1-Dichloroethane	ug/L	50	51.1	102	70-130	
1,1-Dichloroethene	ug/L	50	56.8	114	70-130	
1,1-Dichloropropene	ug/L	50	56.6	113	70-130	
1,2,3-Trichlorobenzene	ug/L	50	48.8	98	70-130	
1,2,3-Trichloropropane	ug/L	50	51.3	103	70-130	
1,2,4-Trichlorobenzene	ug/L	50	48.1	96	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	44.1	88	70-130	
1,2-Dichlorobenzene	ug/L	50	51.1	102	70-130	
1,2-Dichloroethane	ug/L	50	51.5	103	70-130	
1,2-Dichloropropene	ug/L	50	52.1	104	70-130	
1,3-Dichlorobenzene	ug/L	50	49.7	99	70-130	
1,3-Dichloropropene	ug/L	50	52.7	105	70-130	
1,4-Dichlorobenzene	ug/L	50	49.9	100	70-130	
2,2-Dichloropropene	ug/L	50	50.0	100	70-130	
2-Butanone (MEK)	ug/L	100	106	106	70-130	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

LABORATORY CONTROL SAMPLE: 2300053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	48.0	96	70-130	
2-Hexanone	ug/L	100	96.2	96	70-130	
4-Chlorotoluene	ug/L	50	48.4	97	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	99.8	100	70-130	
Acetone	ug/L	100	111	111	70-130	
Benzene	ug/L	50	50.6	101	70-130	
Bromobenzene	ug/L	50	50.5	101	70-130	
Bromochloromethane	ug/L	50	52.6	105	70-130	
Bromodichloromethane	ug/L	50	48.4	97	70-130	
Bromoform	ug/L	50	45.3	91	70-130	
Bromomethane	ug/L	50	35.3	71	70-130 1g	
Carbon tetrachloride	ug/L	50	49.5	99	70-130	
Chlorobenzene	ug/L	50	50.9	102	70-130	
Chloroethane	ug/L	50	41.5	83	70-130 1g	
Chloroform	ug/L	50	55.4	111	70-130	
Chloromethane	ug/L	50	34.9	70	70-130	
cis-1,2-Dichloroethene	ug/L	50	52.7	105	70-130	
cis-1,3-Dichloropropene	ug/L	50	50.8	102	70-130	
Dibromochloromethane	ug/L	50	49.1	98	70-130	
Dibromomethane	ug/L	50	50.8	102	70-130	
Dichlorodifluoromethane	ug/L	50	50.8	102	70-130	
Diisopropyl ether	ug/L	50	57.0	114	70-130	
Ethylbenzene	ug/L	50	50.0	100	70-130	
Hexachloro-1,3-butadiene	ug/L	50	47.1	94	70-130	
m&p-Xylene	ug/L	100	100	100	70-130	
Methyl-tert-butyl ether	ug/L	50	54.2	108	70-130	
Methylene Chloride	ug/L	50	53.2	106	70-130 1g	
Naphthalene	ug/L	50	48.4	97	70-130	
o-Xylene	ug/L	50	50.5	101	70-130	
p-Isopropyltoluene	ug/L	50	48.1	96	70-130	
Styrene	ug/L	50	48.9	98	70-130	
Tetrachloroethene	ug/L	50	50.4	101	70-130	
Toluene	ug/L	50	48.9	98	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.7	105	70-130	
trans-1,3-Dichloropropene	ug/L	50	50.4	101	70-130	
Trichloroethene	ug/L	50	53.6	107	70-130	
Trichlorofluoromethane	ug/L	50	52.6	105	70-130 1g	
Vinyl acetate	ug/L	100	120	120	70-130 1g	
Vinyl chloride	ug/L	50	47.5	95	70-130	
Xylene (Total)	ug/L	150	151	100	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			96	70-130	

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**QUALITY CONTROL DATA**

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 2300054      2300055

Parameter	Units	Result	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	RPD	Qual
			92387151004	Spike Conc.				% Rec				
1,1,1,2-Tetrachloroethane	ug/L	ND	500	500	476	493	95	99	70-130	4		
1,1,1-Trichloroethane	ug/L	ND	500	500	584	616	117	123	70-130	5		
1,1,2-Tetrachloroethane	ug/L	ND	500	500	470	491	94	98	70-130	4		
1,1,2-Trichloroethane	ug/L	ND	500	500	541	555	108	111	70-130	2		
1,1-Dichloroethane	ug/L	ND	500	500	542	575	108	115	70-130	6		
1,1-Dichloroethene	ug/L	ND	500	500	604	641	121	128	70-130	6		
1,1-Dichloropropene	ug/L	ND	500	500	569	598	114	120	70-130	5		
1,2,3-Trichlorobenzene	ug/L	ND	500	500	469	500	94	100	70-130	6		
1,2,3-Trichloropropane	ug/L	ND	500	500	493	504	99	101	70-130	2		
1,2,4-Trichlorobenzene	ug/L	ND	500	500	476	492	95	98	70-130	3		
1,2-Dibromo-3-chloropropane	ug/L	ND	500	500	409	441	82	88	70-130	7		
1,2-Dichlorobenzene	ug/L	ND	500	500	515	535	103	107	70-130	4		
1,2-Dichloroethane	ug/L	ND	500	500	544	558	109	112	70-130	3		
1,2-Dichloropropane	ug/L	ND	500	500	549	571	110	114	70-130	4		
1,3-Dichlorobenzene	ug/L	ND	500	500	505	518	101	104	70-130	2		
1,3-Dichloropropane	ug/L	ND	500	500	514	534	103	107	70-130	4		
1,4-Dichlorobenzene	ug/L	ND	500	500	514	529	103	106	70-130	3		
2,2-Dichloropropane	ug/L	ND	500	500	520	546	104	109	70-130	5		
2-Butanone (MEK)	ug/L	ND	1000	1000	1050	1110	105	111	70-130	5		
2-Chlorotoluene	ug/L	ND	500	500	498	512	100	102	70-130	3		
2-Hexanone	ug/L	ND	1000	1000	945	984	95	98	70-130	4		
4-Chlorotoluene	ug/L	ND	500	500	496	517	99	103	70-130	4		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	1000	1000	1010	1050	101	105	70-130	3		
Acetone	ug/L	ND	1000	1000	1100	1170	110	117	70-130	6		
Benzene	ug/L	ND	500	500	545	583	109	117	70-130	7		
Bromobenzene	ug/L	ND	500	500	512	525	102	105	70-130	3		
Bromochloromethane	ug/L	ND	500	500	575	609	115	122	70-130	6		
Bromodichloromethane	ug/L	ND	500	500	495	533	99	107	70-130	7		
Bromoform	ug/L	ND	500	500	403	416	81	83	70-130	3		
Bromomethane	ug/L	ND	500	500	371	401	74	80	70-130	8		
Carbon tetrachloride	ug/L	ND	500	500	541	570	108	114	70-130	5		
Chlorobenzene	ug/L	ND	500	500	524	536	105	107	70-130	2		
Chloroethane	ug/L	ND	500	500	508	524	102	105	70-130	3		
Chloroform	ug/L	60.3	500	500	623	606	113	109	70-130	3		
Chloromethane	ug/L	ND	500	500	361	365	71	72	70-130	1		
cis-1,2-Dichloroethene	ug/L	2690	500	500	3050	3070	72	76	70-130	1		
cis-1,3-Dichloropropene	ug/L	ND	500	500	507	525	101	105	70-130	3		
Dibromochloromethane	ug/L	ND	500	500	448	476	90	95	70-130	6		
Dibromomethane	ug/L	ND	500	500	520	565	104	113	70-130	8		
Dichlorodifluoromethane	ug/L	ND	500	500	520	542	104	108	70-130	4		
Diisopropyl ether	ug/L	ND	500	500	547	544	109	109	70-130	1		
Ethylbenzene	ug/L	ND	500	500	523	540	105	108	70-130	3		
Hexachloro-1,3-butadiene	ug/L	ND	500	500	469	503	94	101	70-130	7		
m&p-Xylene	ug/L	ND	1000	1000	1050	1090	105	109	70-130	3		
Methyl-tert-butyl ether	ug/L	ND	500	500	499	563	100	113	70-130	12		
Methylene Chloride	ug/L	ND	500	500	552	591	110	118	70-130	7		

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## QUALITY CONTROL DATA

Project: FORMER BURRIS CHEMICAL

Pace Project No.: 92387151

Parameter	Units	92387151004		MS		MSD		2300055		RPD	Qual
		Result	Conc.	Spike	Spike	MS	MSD	MS	MSD		
				Conc.	Result	Result	% Rec	% Rec	Limits		
Naphthalene	ug/L	ND	500	500	468	490	94	98	70-130	4	
o-Xylene	ug/L	ND	500	500	529	547	106	109	70-130	3	
p-Isopropyltoluene	ug/L	ND	500	500	497	511	99	102	70-130	3	
Styrene	ug/L	ND	500	500	502	511	100	102	70-130	2	
Tetrachloroethene	ug/L	ND	500	500	517	536	103	107	70-130	4	
Toluene	ug/L	ND	500	500	535	555	107	111	70-130	4	
trans-1,2-Dichloroethene	ug/L	ND	500	500	567	604	111	118	70-130	6	
trans-1,3-Dichloropropene	ug/L	ND	500	500	497	513	99	103	70-130	3	
Trichloroethene	ug/L	100	500	500	700	728	120	126	70-130	4	
Trichlorofluoromethane	ug/L	ND	500	500	606	646	121	129	70-130	6	
Vinyl acetate	ug/L	ND	1000	1000	1210	1220	121	122	70-130	1	
Vinyl chloride	ug/L	28.8	500	500	535	551	101	104	70-130	3	
Xylene (Total)	ug/L	ND	1500	1500	1580	1630	105	109	70-130	3	
1,2-Dichloroethane-d4 (S)	%						94	98	70-130		
4-Bromofluorobenzene (S)	%						99	98	70-130		
Toluene-d8 (S)	%						101	100	70-130		

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## QUALIFIERS

Project: FORMER BURRIS CHEMICAL  
Pace Project No.: 92387151

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

1g Initial calibration evaluation met acceptance criteria. Compound did not meet additional accuracy assessment for percent error

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER BURRIS CHEMICAL

Pace Project No.: 92387151

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92387151001	MW9	EPA 8260	414766		
92387151002	MW10	EPA 8260	414766		
92387151003	MW4	EPA 8260	414766		
92387151004	MW11	EPA 8260	414766		

## REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville  Eden  Greenwood  Huntersville  Raleigh  Mechanicsville

Sample Condition Upon Receipt	Client Name: <i>Peak Hydro.</i>	Project
-------------------------------	------------------------------------	---------

WO# : 92387151



92387151

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other:

Custody Seal Present?  Yes  No Seals Intact?  Yes  No

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Biological Tissue Frozen?  
 Yes  No  N/A

Thermometer:  IR Gun ID: *TD41* Type of Ice:  Wet  Blue  None

Cooler Temp (°C): *5.0* Correction Factor: Add/Subtract (°C) *0*

Cooler Temp Corrected (°C): *5.0*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil  N/A, water sample

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?  
 Yes  No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?  Yes  No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC? <i>WT</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required?  Yes  No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

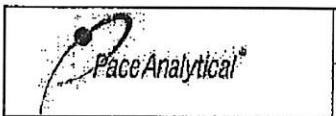
Person contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager SCURF Review: *(Signature)*

Date: *2/14/18*

Project Manager SRF Review: *(Signature)*

Date: *2/14/18*



Document Name:  
Sample Condition Upon Receipt(SCUR)  
Document No.:  
F-CAR-CS-033-Rev.06

Document Revised: February 7, 2018  
Page 1 of 2  
Issuing Authority:  
Pace Carolinas Quality Office

\*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LiHg

\*\*Bottom half of box is to list number of bottle

WO# : 92387151

Proj PM: PTE

Due Date: 06/12/18

CLIENT: 92-Peak Hydr

Item #	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A[DG3A]-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VGGT-40 mL VOA Na2S2O3 (N/A)	VGSU-40 mL VOA Urp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
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7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
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10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		

#### pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).

## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A  
Required Client Information:

Company:  
**Peachtree Sediment PLC**

Address:  
**470 Heggard Rd**

Troyan NC 28772

Email to:  
**jerst@peachtreeplc.com**

Phone:  
**828 317 5209**

Requested Due Date/TAT:  
**Std**

Section B  
Required Project Information:

Report To:  
**COPY TO:**

Purchase Order No.:  
**Project Name: Form-Burns Chemical**

Project Number:  
**160-18**

Section C  
Invoice Information:

Attention:  
**Company Name:**

Address:  
**Project Quote Reference:**

Pace Quote Reference:  
**Pace Project Manager:**

Pace Profile #:  
**SC**

Section D  
Required Client Information:

Matrix Codes

Drinking Water DW

Water WWT

Waste Water WW

Product P

Sediment S

Oil O

Wipe WP

Air AR

Tissue TS

Other OT

MATRIX CODE (see valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

Page:  
**1885769**

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**1**

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Section E  
REgulatory Agency

NPDES

GROUND-WATER

DRINKING WATER

UST

RCRA

OTHER

Section F  
Requested Analysis Filtered (Y/N)

Preservatives

Y/N

# OF CONTAINERS

Unpreserved

H<sub>2</sub>SO<sub>4</sub>

HNO<sub>3</sub>

HCl

NaOH

Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>

Methanol

Other

↓ Analysis Test ↓

VOC 8260

Residual Chlorine (Y/N)

0.238

7/15

Pace Project No./Lab ID.

00000000000000000000000000000000

ADDITIONAL COMMENTS

RElinquished By Affiliation

DATE

TIME

Accepted By Affiliation

DATE

TIME

Sample Conditions

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)
		DATE	TIME					
1	MW9	WT	6	6/18 0800	3			
2	MW10	WT	6	6/18 0800	3			
3	MW4	WT	6	6/18 0800	3			
4	MW11	WT	6	6/18 0800	3			
5								
6								
7								
8								
9								
10								
11								
12								

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of Sampler: **Jonathan Green**

SIGNATURE of Sampler: 

DATE Signed  
(MM/DD/YY): **6/5/18**