

## McKnight, Kevin - DNR

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**From:** Woelfel, Heidi <Heidi.Woelfel@cbi.com>  
**Sent:** Tuesday, February 07, 2017 2:48 PM  
**To:** McKnight, Kevin - DNR  
**Cc:** Cindy Vander Zanden  
**Subject:** Busy Bea Status Update BRRTS No. 02-71-536999  
**Attachments:** 2016 Busy Bea VMS OM and Sampling.pdf

Good Afternoon Mr. McKnight,

Attached is the Status Update letter for the former Busy Bea site (BRRTS No 02-71-536999) in Menasha, WI. This Status Update letter presents the findings from the vapor mitigation O&M assessment as well as groundwater data from a limited groundwater sampling event. The O&M of the vapor system updated the fans in each unit as well as sealed for floors to ensure optimal suction of vapor from beneath the floor slab. The groundwater data presented data which supports natural attenuation is continuing to occur at the site. The groundwater plume has remained stable and is reducing. Based on these findings, CB&I, on behalf of the Cinda Corporation, is requesting that a Vapor Mitigation Operation and Maintenance Plan be prepared and submitted for the former Busy Bea site in support of the Site closure.

Please let me know if you have any questions regarding the letter. A hard copy will also be sent to your attention.

Thank you,  
Heidi



**Heidi Woelfel**  
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February 7, 2017

Mr. Kevin McKnight  
Hydrogeologist  
Wisconsin Department of Natural Resources  
625 E County Road Y, Suite 700  
Oshkosh, WI 54901

**Subject: *Status Update for Vapor Mitigation System and Groundwater Sampling  
Former Busy Bea  
1077 Racine Street  
Menasha, Wisconsin  
WDNR BRRTS Nos. 02-71-536999***

Dear Mr. McKnight:

CB&I Environmental & Infrastructure, Inc. (CB&I), on behalf of CINDA Corporation, is presenting this Status Update for the former Busy Bea facility located at 1077 Racine Street in Menasha, Wisconsin. This Status Update presents the findings from the Site work request outlined in the December 9, 2013 Wisconsin Department of Natural Resources (WDNR) closure denial letter. The scope of work consisted of the inspection and repairs, as needed, of the vapor mitigation systems, the installation of a floor slab pressure port system, and the collection of groundwater samples from select monitoring wells.

#### **Vapor Mitigation System Operation and Maintenance Inspection**

The vapor mitigation systems, which were installed in 2007, in the former Busy Bea unit (1077 Racine Street) and in the adjacent unit (1083 Racine Street) were inspected and assessed by Radon Abatement of Hales Corners, Wisconsin on December 5, 2016. Radon Abatement had originally installed the mitigation systems.

The operation and maintenance (O&M) of the vapor mitigation systems included the replacement of the fans for each unit. An RP-265 fan and a RP-145 fan were replaced in the Busy Bea Unit and the adjacent unit, respectively, and the fans were manufactured by Spruce Environmental of Massachusetts. The floors cracks, joints, and drain pipes in each unit were sealed to provide a better slab seal. Additionally, five floor pressure ports were installed between the two units for sub-slab pressure testing of the system. The results of the testing showed negative pressure beneath the floor slabs of the two units indicating the vapor mitigation systems were properly pulling vapor from beneath the units. The air flow measurements of each system, as indicated by the U-tube manometers on the system piping, presented readings of -0.560 cubic feet per minute (cfm) in the former Busy Bea Unit (1077 Racine Street) and -0.721 cfm in the 1083 Racine Street unit. **Attachment A** presents the O&M report prepared by Radon Abatement, the site figure showing the units with the vapor systems and the pressure points, and the results of the system testing.

The indoor air samples which were collected in 2007 and 2008 during the site investigation activities are presented on **Table A.4**. This table has had the standards updated to reflect the indoor air action levels which are based upon the May 2016 USEPA Regional Screening Level Tables. The updated vapor tables indicate that the indoor air had trichlorethene (TCE) exceedances of the action levels in the samples collected in June 2007 from the former Busy Bea site and in June 2008 from the adjacent 1071 Racine Street unit. The previous air action levels were based upon older standards published by the Wisconsin Department of Natural Resources.

### **Groundwater Sampling Activities**

Groundwater sampling and water level gauging activities were conducted by CB&I on October 27, 2016. The groundwater elevations are presented on **Table A.6**. A number of the wells in the monitoring well network were not gauged; TW-8, TW-12, and TW-13 could not be located, TW-14 had a missing well cap and was obstructed with mud, MW-103 and PZ-112 could not be located as they were under standing water. **Figure B.3.c** presents the groundwater flow map for the site and **Figure B.3.a** presents the piezometric groundwater flow. Groundwater flow at the site is to the north northwest and the piezometric flow is towards the south, with mounding near Unit 1077, which is consistent with historic flows.

As requested in the December 9, 2013 WDNR closure denial letter, seven monitoring wells (TW-13, TW14, MW-4, MW-105, PZ-108, PZ-111, and PZ-113) were requested to have additional Chlorinated Volatile Organic Compounds (CVOCs) sampling by EPA Method 8260 analysis. Monitoring wells TW-13 and TW-14 were not sampled. Each monitoring well location was low flow purged using disposable tubing. Groundwater was purged from each well through a flow through cell to monitor the aquifer parameters of dissolved oxygen, specific conductivity, oxidation reduction potential, and temperature. The aquifer parameters were recorded until they stabilized to within 10% and then a groundwater sample was collected into laboratory supplied jars and were shipped under chain of custody to Pace Analytical of Green Bay, Wisconsin for the analyses.

The results of the groundwater sampling showed a reduction in the dissolved CVOC concentrations in the monitoring wells sampled. Piezometers PZ-111 and PZ-113 had non-detects for all CVOCs analyzed and PZ-108 was non-detect for CVOCs except for a minimal concentration of cis-1,2-dichloroethene (cis 1,2 DCE) which was below the NR 140.10 Preventative Action Level (PAL). Monitoring well MW-4 was non-detect for CVOCs except for cis 1,2 DCE and vinyl chloride. The concentration of vinyl chloride was 2,060 micrograms per liter (ug/l) and cis 1,2 DCE was reported at 79 ug/l. Both of these compounds were above the NR 140.10 Enforcement Standards. Monitoring well MW-105 had a reported concentration of cis 1,2 DCE at 34.6 ug/l which exceeds the PAL, and a concentration of vinyl chloride at 183 ug/l which exceeds the ES. Additionally, a concentration of benzene was reported at 1.2 ug/l which exceeds the PAL. Benzene has not been reported in MW-105 since the sampling conducted in 2007 at concentrations over the PAL. All other CVOC compounds in MW-105 were non-detect.

**Table A.1** presents the analytical data and the aquifer parameters for the wells sampled. **Attachment B** presents the Pace Analytical Reports. **Figure B.3.b** presents the groundwater vinyl chloride isconcentration figure for the October 2016 sampling activities.

### Site Summary

The groundwater dissolved CVOC plume has shown reduction in extent, is stable, and has not migrated off site. **Figure B.3.b** presents the vinyl chloride isconcentration for the 2016 sampling event as compared to the 2013 and 2012 sampling events. The plume is continuing to show reducing conditions as evident by the negative oxidation potential (ORP) readings. The negative ORP will assist with the biodegradation of the TCE into daughter products. The elevated dissolved oxygen readings reported in the piezometers PZ-108, PZ-111, and PZ-113 have assisted in the breakdown of vinyl chloride to concentrations which are no longer detected in these wells. The source near MW-4 still shows elevated TCE and vinyl chloride dissolved concentrations, but data of the aquifer geochemical parameters supports the continued biodegradation of the CVOCs within the groundwater.

CBI, on behalf of CINDA Corporation, is requesting that Site closure be approved for the former Busy Bea site in Menasha, Wisconsin. A Vapor Mitigation Operation and Maintenance Plan will be prepared and submitted for the former Busy Bea site in support of the Site closure.

CB&I appreciates the opportunity to submit this site status update for the Busy Bea site and the time that you have taken to review it. If you have any questions or need additional information, please do not hesitate to contact me at (414) 687-3313.

Sincerely,



Heidi Woelfel

Geologist

Please Reply To: Heidi Woelfel

Telephone: (414) 687-3313

E-Mail Address: [heidi.woelfel@cbi.com](mailto:heidi.woelfel@cbi.com)

## Tables

**Summary of Groundwater Elevations**  
**Busy Bea Cleaners**  
**1077 Racine Street**  
**Menasha, Wisconsin**

Well Number	Measurement Date	Top of Casing Elevation (ft msl)	Screen Interval		Depth to Water (ft btoc)	Water Elevation (ft msl)	Change in Water Elevation (ft)
			Top (ft msl)	Bottom (ft msl)			
PZ-104	3/22/2007	757.4	732.1	727.1	29.42	727.98	
	6/12/2007	757.4	732.1	727.1	29.45	727.95	-0.03
	7/24/2007	757.4	732.1	727.1	29.75	727.65	-0.3
	8/23/2007	757.4	732.1	727.1	29.45	727.95	0.3
	7/28/2008	757.4	732.1	727.1	24.09	733.31	-5.36
	11/14/2008	757.4	732.1	727.1	27.75	729.65	-3.66
	2/18/2009	757.4	732.1	727.1	29.39	728.01	-1.64
	3/24/2009	757.4	732.1	727.1	29.68	727.72	-0.29
	6/25/2009	757.4	732.1	727.1	26.81	730.59	2.87
	1/21/2010	757.4	732.1	727.1	29.49	727.91	-2.68
	4/21/2010	757.4	732.1	727.1	28.77	728.63	0.72
	8/5/2010	757.4	732.1	727.1	24.09	733.31	4.68
	11/2/2011	757.4	732.1	727.1	27.68	729.72	-3.59
	2/22/2012	757.4	732.1	727.1	27.24	730.16	0.44
	5/22/2012	757.4	732.1	727.1	23.72	733.68	3.52
	4/4/2013	757.4	732.1	727.1	27.38	730.02	-3.66
	7/30/2013	757.4	732.1	727.1	24.96	732.44	2.42
10/27/2016	757.4	732.1	727.1	24.79	732.61	0.17	
TW-4	3/22/2007	759.63	754.73	744.73	4.67	754.96	
	6/12/2007	759.63	754.73	744.73	3.09	756.54	1.58
	7/24/2007	759.63	754.73	744.73	3.63	756.00	-0.54
	8/23/2007	759.63	754.73	744.73	3.53	756.10	0.1
	7/28/2008	759.63	754.73	744.73	2.66	756.97	0.087
	11/14/2008	759.63	754.73	744.73	3.65	755.98	-0.99
	2/18/2009	759.63	754.73	744.73	7.88	751.75	-4.23
	3/25/2009	759.63	754.73	744.73	10.74	748.89	-2.86
	6/25/2009	759.63	754.73	744.73	3.46	756.17	7.28
	Abandoned 1/14/2010, Replaced with MW-4						
TW-14	3/22/2007	759.65	754.55	744.55	14.95	744.70	
	6/12/2007	759.65	754.55	744.55	5.04	754.61	9.91
	7/24/2007	759.65	754.55	744.55	4.69	754.96	0.35
	8/23/2007	759.65	754.55	744.55	4.14	755.51	0.55
	7/28/2008	759.65	754.55	744.55	3.84	755.81	0.03
	11/14/2008	759.65	754.55	744.55	6.67	752.98	-2.83
	2/18/2009	759.65	754.55	744.55	11.11	748.54	-4.44
	3/25/2009	759.65	754.55	744.55	11.05	748.60	0.06
	6/25/2009	759.65	754.55	744.55	3.44	756.21	7.61
	1/21/2010	759.65	754.55	744.55	6.48	753.17	-3.04
	4/21/2010	759.65	754.55	744.55	3.38	756.27	3.1
	8/5/2010	759.65	754.55	744.55	2.2	757.45	1.18
	11/2/2011	759.65	754.55	744.55	4.53	755.12	-2.33
	2/22/2012	759.65	754.55	744.55	5.33	754.32	-0.8
	5/22/2012	759.65	754.55	744.55	2.58	757.07	2.75
4/4/2013	759.65	754.55	744.55	3.64	756.01	-1.06	
7/30/2013	759.65	754.55	744.55	4.73	754.92	-1.09	
10/27/2016	No Elevation Collected -Top of Well Filled with Mud and Missing Well Cap						
TW-13	3/22/2007	759.15	753.75	743.75	5.15	754.00	
	6/12/2007	759.15	753.75	743.75	3.38	755.77	1.77
	7/24/2007	759.15	753.75	743.75	4.89	754.26	-1.51
	8/23/2007	759.15	753.75	743.75	4.65	754.5	0.24
	7/28/2008	759.15	753.75	743.75	3.54	755.61	1.11
	11/14/2008	759.15	753.75	743.75	9.01	750.14	-5.47
	2/18/2009	759.15	753.75	743.75	11.06	748.09	-2.05
	3/25/2009	759.15	753.75	743.75	DRY	DRY	DRY
	6/25/2009	759.15	753.75	743.75	3.79	755.36	NA
	1/21/2010	759.15	753.75	743.75	9.52	749.63	-5.73
	4/21/2010	759.15	753.75	743.75	3.77	755.38	5.75
	8/5/2010	759.15	753.75	743.75	3.58	755.57	0.19
	11/2/2011	759.15	753.75	743.75	4.74	754.41	-1.16
	2/22/2012	759.15	753.75	743.75	6.51	752.64	-1.77
	5/22/2012	759.15	753.75	743.75	3.52	755.63	2.99
	4/4/2013	759.15	753.75	743.75	2.22	756.93	1.3
	7/30/2013	759.15	753.75	743.75	4.36	754.79	-2.14
10/27/2016	Could not Locate						

**Summary of Groundwater Elevations  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin**

Well Number	Measurement Date	Top of Casing		Screen Interval		Depth to Water (ft btoc)	Water Elevation (ft msl)	Change in Water Elevation (ft)
		Elevation (ft msl)	Top (ft msl)	Bottom (ft msl)	Top (ft msl)			
PZ-109	3/22/2007	758.87	737.07	732.07		26.15	732.72	
	6/12/2007	758.87	737.07	732.07		26.16	732.71	-0.01
	7/24/2007	758.87	737.07	732.07		26.2	732.67	-0.04
	8/23/2007	758.87	737.07	732.07		26.43	732.44	-0.23
	7/28/2008	758.87	737.07	732.07		24.25	734.62	2.18
	11/14/2008	758.87	737.07	732.07		26.27	732.60	-2.02
	2/18/2009	758.87	737.07	732.07		26.51	732.36	-0.24
	3/24/2009	758.87	737.07	732.07		26.24	732.63	0.27
	6/25/2009	758.87	737.07	732.07		25.17	733.7	1.07
	1/21/2010	758.87	737.07	732.07		26.26	732.61	-1.09
	4/21/2010	758.87	737.07	732.07		26.21	732.66	0.05
	8/5/2010	758.87	737.07	732.07		23.57	735.3	2.64
	11/2/2011	758.87	737.07	732.07		26.18	732.69	-2.61
	5/22/2012	758.87	737.07	732.07		22.51	736.36	3.67
	4/4/2013	758.87	737.07	732.07		23.71	735.16	-1.2
7/30/2013	758.87	737.07	732.07		23.65	735.22	0.06	
10/27/2016	758.87	737.07	732.07		23.78	735.09	-0.13	
MW-101	3/22/2007	758.79	754.89	744.89		2.81	755.98	
	6/12/2007	758.79	754.89	744.89		7.42	751.37	-4.61
	7/24/2007	758.79	754.89	744.89		10.61	748.18	-3.19
	8/23/2007	758.79	754.89	744.89		10.13	748.66	0.48
	7/28/2008	758.79	754.89	744.89		7.17	751.62	2.96
	11/14/2008	758.79	754.89	744.89		12.91	745.88	-5.74
	2/18/2009	758.79	754.89	744.89		2.95	755.84	9.96
	3/24/2009	758.79	754.89	744.89		2.78	756.01	0.17
	6/25/2009	758.79	754.89	744.89		4.10	754.69	-1.32
	1/21/2010	758.79	754.89	744.89		4.34	754.45	-0.24
	4/21/2010	758.79	754.89	744.89		3.09	755.7	1.25
	8/5/2010	758.79	754.89	744.89		5.72	753.07	-2.63
	11/2/2011	758.79	754.89	744.89		8.79	750.00	-3.07
	5/22/2012	758.79	754.89	744.89		4.79	754.00	4
	4/4/2013	758.79	754.89	744.89		3.62	755.17	1.17
7/30/2013	758.79	754.89	744.89		7.24	751.55	-3.62	
10/27/2016	758.79	754.89	744.89		8.35	750.44	-1.11	
MW-110	3/22/2007	757.49	753.49	743.49		5.10	752.39	
	6/12/2007	757.49	753.49	743.49		2.65	754.84	2.45
	7/24/2007	757.49	753.49	743.49		3.73	753.76	-1.08
	8/23/2007	757.49	753.49	743.49		NM	NM	
	7/28/2008	757.49	753.49	743.49		2.68	754.81	1.05
	11/14/2008	757.49	753.49	743.49		2.82	754.67	-0.14
	2/18/2009	757.49	753.49	743.49		7.00	750.49	-4.18
	3/24/2009	757.49	753.49	743.49		5.02	752.47	1.98
	6/25/2009	757.49	753.49	743.49		3.76	753.73	1.26
	1/21/2010	757.49	753.49	743.49		5.69	751.80	-1.93
	4/21/2010	757.49	753.49	743.49		3.79	753.70	1.9
	8/5/2010	757.49	753.49	743.49		3.57	753.92	0.22
	11/2/2011	757.49	753.49	743.49		3.39	754.10	0.18
	5/22/2012	757.49	753.49	743.49		2.32	755.17	1.07
	4/4/2013	757.49	753.49	743.49		3.05	754.44	-0.73
7/30/2013	757.49	753.49	743.49		1.81	755.68	1.24	
10/27/2016	757.49	753.49	743.49		3.99	753.50	-2.18	
PZ-111	3/22/2007	757.57	735.77	722.85		30.55	727.02	
	6/12/2007	757.57	735.77	722.85		29.02	728.55	1.53
	7/24/2007	757.57	735.77	722.85		30.64	726.93	-1.62
	8/23/2007	757.57	735.77	722.85		31.09	726.48	-0.45
	7/28/2008	757.57	735.77	722.85		24.02	733.55	7.07
	11/14/2008	757.57	735.77	722.85		29.03	728.54	-5.01
	2/18/2009	757.57	735.77	722.85		29.23	728.34	-0.2
	3/24/2009	757.57	735.77	722.85		27.54	730.03	1.69
	6/25/2009	757.57	735.77	722.85		25.54	732.03	2.00
	1/21/2010	757.57	735.77	722.85		30.30	727.27	-4.76
	4/21/2010	757.57	735.77	722.85		27.64	729.93	2.66
	8/5/2010	757.57	735.77	722.85		23.25	734.32	4.39
	11/2/2011	757.57	735.77	722.85		27.52	730.05	-4.27
	2/22/2012	757.57	735.77	722.85		27.26	730.31	0.26
	5/22/2012	757.57	735.77	722.85		23.50	734.07	3.76
4/4/2013	757.57	735.77	722.85		25.75	731.82	-2.25	
7/30/2013	757.57	735.77	722.85		25.20	732.37	0.55	
10/27/2016	757.57	735.77	722.85		24.50	733.07	0.70	

**Summary of Groundwater Elevations**  
**Busy Bea Cleaners**  
**1077 Racine Street**  
**Menasha, Wisconsin**

Well Number	Measurement Date	Top of Casing Elevation (ft msl)	Screen Interval		Depth to Water (ft btoc)	Water Elevation (ft msl)	Change in Water Elevation (ft)
			Top	Bottom			
MW-102	3/22/2007	758.07	754.57	745.13	5.45	752.62	
	6/12/2007	758.07	754.57	745.13	4.40	753.67	1.05
	7/24/2007	758.07	754.57	745.13	4.62	753.45	-0.22
	8/23/2007	758.07	754.57	745.13	4.23	753.84	0.39
	7/28/2008	758.07	754.57	745.13	4.21	753.86	0.02
	11/14/2008	758.07	754.57	745.13	5.49	752.58	-1.28
	2/18/2009	758.07	754.57	745.13	6.30	751.77	-0.81
	3/24/2009	758.07	754.57	745.13	5.62	752.45	0.68
	6/25/2009	758.07	754.57	745.13	5.51	752.56	0.11
	1/21/2010	758.07	754.57	745.13	6.34	751.73	-0.83
	4/21/2010	758.07	754.57	745.13	4.33	753.74	2.01
	8/5/2010	758.07	754.57	745.13	5.46	752.61	-1.13
	11/2/2011	758.07	754.57	745.13	3.66	754.41	1.8
	2/22/2012	758.07	754.57	745.13	5.29	752.78	-1.63
	5/22/2012	758.07	754.57	745.13	3.31	754.76	1.98
	4/4/2013	758.07	754.57	745.13	0.84	757.23	2.47
7/30/2013	758.07	754.57	745.13	5.00	753.07	-4.16	
10/27/2016	758.07	754.57	745.13	4.90	753.17	0.1	
PZ-108	3/22/2007	757.43	732.13	727.7	29.09	728.34	
	6/12/2007	757.43	732.13	727.7	27.97	729.46	1.12
	7/24/2007	757.43	732.13	727.7	28.15	729.28	-0.18
	8/23/2007	757.43	732.13	727.7	28.03	729.40	0.12
	7/28/2008	757.43	732.13	727.7	23.40	734.03	4.63
	11/14/2008	757.43	732.13	727.7	27.23	730.20	-3.83
	2/18/2009	757.43	732.13	727.7	28.32	729.11	-1.09
	3/25/2009	757.43	732.13	727.7	27.17	730.26	1.15
	6/25/2009	757.43	732.13	727.7	24.64	732.79	2.53
	1/21/2010	757.43	732.13	727.7	28.9	728.53	-4.26
	4/21/2010	757.43	732.13	727.7	27.21	730.22	1.69
	8/5/2010	757.43	732.13	727.7	22.55	734.88	4.66
	11/2/2011	757.43	732.13	727.7	26.29	731.14	-3.74
	2/22/2012	757.43	732.13	727.7	25.81	731.62	0.48
	5/22/2012	757.43	732.13	727.7	22.12	735.31	3.69
	4/4/2013	757.43	732.13	727.7	25.69	731.74	-3.57
7/30/2013	757.43	732.13	727.7	23.95	733.48	1.74	
10/27/2016	757.43	732.13	727.7	23.32	734.11	0.63	
MW-103	3/22/2007	NM	NM	NM	NM	NM	
	6/12/2007	NM	NM	NM	NM	NM	
	7/24/2007	NM	NM	NM	NM	NM	
	8/23/2007	NM	NM	NM	NM	NM	
	7/29/2008	NM	NM	NM	1.34	NM	
	11/14/2008	NM	NM	NM	4.14	NM	
	2/18/2009	NM	NM	NM	0.51	NM	
	3/25/2009	NM	NM	NM	NM	NM	
	6/25/2009	NM	NM	NM	NM	NM	
	1/21/2010	NM	NM	NM	1.6	NM	
	4/21/2010	NM	NM	NM	1.38	NM	
	8/5/2010	NM	NM	NM	1.33	NM	
	11/2/2011	NM	NM	NM	1.25	NM	
	5/22/2012	NM	NM	NM	1.78	NM	
	4/4/2013	NM	NM	NM	NM	NM	
	7/30/2013	NM	NM	NM	NM	NM	
10/27/2016	NM	NM	NM	NM	NM		



**Summary of Groundwater Elevations  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin**

Well Number	Measurement Date	Top of Casing Elevation (ft msl)	Screen Interval Top (ft msl)	Screen Interval Bottom (ft msl)	Depth to Water (ft btoc)	Water Elevation (ft msl)	Change in Water Elevation (ft)
TW-5	3/22/2007	759.64	754.64	744.99	5.14	754.50	
	6/12/2007	759.64	754.64	744.99	5.22	754.42	-0.08
	7/24/2007	759.64	754.64	744.99	5.79	753.85	-0.57
	8/23/2007	759.64	754.64	744.99	3.19	756.45	2.6
	7/28/2008	759.64	754.64	744.99	3.05	756.59	0.14
	11/14/2008	759.64	754.64	744.99	5.41	754.23	-2.36
	2/18/2009	759.64	754.64	744.99	8.23	751.41	-2.82
	3/25/2009	759.64	754.64	744.99	8.44	751.20	-0.21
	6/25/2009	759.64	754.64	744.99	3.19	756.45	5.25
	1/21/2010	759.64	754.64	744.99	7.8	751.84	-4.61
	4/21/2010	759.64	754.64	744.99	2.37	757.27	5.43
	8/5/2010	759.64	754.64	744.99	2.11	757.53	0.26
	11/2/2011	759.64	754.64	744.99	3.09	756.55	-0.98
	2/22/2012	759.64	754.64	744.99	4.82	754.82	-1.73
	5/22/2012	759.64	754.64	744.99	2.53	757.11	2.29
	4/4/2013	759.64	754.64	744.99	2.04	757.60	0.49
7/30/2013	759.64	754.64	744.99	2.69	756.95	-0.65	
10/27/2016	759.64	754.64	744.99	3.83	755.81	-1.14	
TW-12	3/22/2007	759.63	754.63	744.96	1.47	758.16	
	6/12/2007	759.63	754.63	744.96	1.49	758.14	-0.02
	7/24/2007	759.63	754.63	744.96	1.92	757.71	-0.43
	8/23/2007	759.63	754.63	744.96	1.59	758.04	0.33
	7/29/2008	759.63	754.63	744.96	1.20	758.43	0.39
	11/14/2008	759.63	754.63	744.96	2.14	757.49	-0.94
	2/18/2009	759.63	754.63	744.96	2.45	757.18	-0.31
	3/25/2009	759.63	754.63	744.96	0.70	758.93	1.75
	6/25/2009	759.63	754.63	744.96	0.79	758.84	-0.09
	1/21/2010	759.63	754.63	744.96	2.79	756.84	-2
	4/21/2010	759.63	754.63	744.96	1.18	758.45	1.61
	11/2/2011					Could not Locate - Well likely Damaged / Destroyed	
	5/22/2012					Could not Locate - Well likely Damaged / Destroyed	
	4/4/2013					Could not Locate - Well likely Damaged / Destroyed	
7/30/2013					Could not Locate - Well likely Damaged / Destroyed		
10/27/2016					Could not Locate - Well likely Damaged / Destroyed		
MW-107	3/22/2007	759.88	756.48	746.96	2.32	757.56	
	6/12/2007	759.88	756.48	746.96	2.21	757.67	0.11
	7/24/2007	759.88	756.48	746.96	2.79	757.09	-0.58
	8/23/2007	759.88	756.48	746.96	2.87	757.01	-0.08
	7/29/2008	759.88	756.48	746.96	2.17	757.71	0.70
	11/14/2008	759.88	756.48	746.96	2.62	757.26	-0.45
	2/18/2009	759.88	756.48	746.96	4.10	755.78	-1.48
	3/24/2009	759.88	756.48	746.96	1.26	758.62	2.84
	6/25/2009	759.88	756.48	746.96	2.33	757.55	-1.07
	1/21/2010	759.88	756.48	746.96	4.72	755.16	-2.39
	4/21/2010	759.88	756.48	746.96	2.04	757.84	2.68
	8/5/2010	759.88	756.48	746.96	2.11	757.77	-0.07
	11/3/2011	759.88	756.48	746.96	2.25	757.63	-0.14
	5/22/2012	759.88	756.48	746.96	2.11	757.77	0.14
	4/4/2013	759.88	756.48	746.96	1.39	758.49	0.72
7/30/2013	759.88	756.48	746.96	2.02	757.86	-0.63	
10/27/2016	759.88	756.48	746.96	2.29	757.59	-0.27	
TW-8	3/22/2007	760.16	755.16	745.51	2.24	757.92	
	6/12/2007	760.16	755.16	745.51	1.68	758.48	0.56
	7/24/2007	760.16	755.16	745.51	2.29	757.87	-0.61
	8/23/2007	760.16	755.16	745.51	1.42	758.74	0.87
	7/29/2008	760.16	755.16	745.51	1.62	758.54	-0.2
	11/14/2008	760.16	755.16	745.51	3.93	756.23	-2.31
	2/18/2009	760.16	755.16	745.51	3.79	756.37	0.14
	3/25/2009	760.16	755.16	745.51	7.09	753.07	-3.3
	6/25/2009	760.16	755.16	745.51	2.63	757.53	4.46
	1/21/2010	760.16	755.16	745.51	3.76	756.4	-1.13
	4/21/2010	760.16	755.16	745.51	1.68	758.48	2.08
	8/5/2010	760.16	755.16	745.51	1.94	758.22	-0.26
	11/3/2011	760.16	755.16	745.51	0*	760.16	1.94
	5/22/2012	760.16	755.16	745.51	1.42	758.74	-1.42
	4/4/2013	760.16	755.16	745.51	0.90	759.26	0.52
7/30/2013	760.16	755.16	745.51	1.45	758.71	-0.55	
10/27/2016					Could not Locate		

**Summary of Groundwater Elevations  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin**

Well Number	Measurement Date	Top of Casing Elevation (ft msl)	Screen Interval Top (ft msl)	Screen Interval Bottom (ft msl)	Depth to Water (ft btoc)	Water Elevation (ft msl)	Change in Water Elevation (ft)
MW-105	3/22/2007	760.34	756.74	747.33	2.81	757.53	
	6/12/2007	760.34	756.74	747.33	2.18	758.16	0.63
	7/24/2007	760.34	756.74	747.33	2.90	757.44	-0.72
	8/23/2007	760.34	756.74	747.33	2.02	758.32	0.88
	7/29/2008	760.34	756.74	747.33	2.02	758.32	0
	11/14/2008	760.34	756.74	747.33	3.36	756.98	-1.34
	2/18/2009	760.34	756.74	747.33	5.97	754.37	-2.61
	3/25/2009	760.34	756.74	747.33	7.44	752.9	-1.47
	6/25/2009	760.34	756.74	747.33	2.23	758.11	5.21
	1/21/2010	760.34	756.74	747.33	5.78	754.56	-3.55
	4/21/2010	760.34	756.74	747.33	3.49	756.85	2.29
	8/5/2010	760.34	756.74	747.33	5.24	755.1	-1.75
	11/3/2011	760.34	756.74	747.33	4.85	755.49	0.39
	2/22/2012	760.34	756.74	747.33	5.64	754.7	-0.79
	5/22/2012	760.34	756.74	747.33	2.80	757.54	2.84
	4/4/2013	760.34	756.74	747.33	1.58	758.76	1.22
7/30/2013	760.34	756.74	747.33	1.73	758.61	-0.15	
10/27/2016	760.34	756.74	747.33	2.01	758.33	-0.28	
MW-106	3/22/2007	759.36	755.66	746.41	2.89	756.47	
	6/12/2007	759.36	755.66	746.41	2.49	756.87	0.4
	7/24/2007	759.36	755.66	746.41	3.75	755.61	-1.26
	8/23/2007	759.36	755.66	746.41	2.94	756.42	0.81
	7/29/2008	759.36	755.66	746.41	2.51	756.85	0.43
	11/14/2008	759.36	755.66	746.41	2.46	756.9	0.05
	2/18/2009	759.36	755.66	746.41	3.80	755.56	-1.34
	3/24/2009	759.36	755.66	746.41	2.21	757.15	1.59
	6/25/2009	759.36	755.66	746.41	2.81	756.55	-0.6
	1/21/2010	759.36	755.66	746.41	4.25	755.11	-1.44
	4/21/2010	759.36	755.66	746.41	3.03	756.33	1.22
	8/5/2010	759.36	755.66	746.41	3.29	756.07	-0.26
	11/2/2011	759.36	755.66	746.41	3.60	755.76	-0.31
	5/22/2012	759.36	755.66	746.41	2.54	756.82	1.06
	4/4/2013	759.36	755.66	746.41	1.60	757.76	0.94
	7/30/2013	759.36	755.66	746.41	3.28	756.08	-1.68
10/27/2016	759.36	755.66	746.41	2.39	756.97	0.89	
TW-11	3/22/2007	759.1	753.9	744.35	5.79	753.31	
	6/12/2007	759.1	753.9	744.35	3.98	755.12	1.81
	7/24/2007	759.1	753.9	744.35	4.17	754.93	-0.19
	8/23/2007	759.1	753.9	744.35	3.82	755.28	0.35
	7/29/2008	NM	NM	NM	NM	NM	ABANDONED
PZ-112	1/21/2010	755.50	727.5	722.50	28.42	727.08	
	4/21/2010	755.50	727.5	722.50	26.77	728.73	1.65
	8/5/2010	755.50	727.5	722.50	22.05	733.45	4.72
	11/2/2011	755.50	727.5	722.50	25.60	729.9	-3.55
	2/22/2012	755.50	727.5	722.50	25.30	730.2	0.3
	5/22/2012	755.50	727.5	722.50	21.70	733.8	3.6
	4/4/2013	755.50	727.5	722.50	25.40	730.1	-3.7
	7/30/2013	755.50	727.5	722.50	23.09	732.41	2.31
10/27/2016				Could not Locate			
PZ-113	1/21/2010	756.84	729.92	724.92	31.2	725.64	
	4/21/2010	756.84	729.92	724.92	28.59	728.25	2.61
	8/5/2010	756.84	729.92	724.92	24.55	732.29	4.04
	11/3/2011	756.84	729.92	724.92	27.60	729.24	-3.05
	2/22/2012	756.84	729.92	724.92	27.23	729.61	0.37
	5/22/2012	756.84	729.92	724.92	23.35	733.49	3.88
	4/4/2013	756.84	729.92	724.92	26.58	730.26	-3.23
	7/30/2013	756.84	729.92	724.92	25.86	730.98	0.72
	10/27/2016	756.84	729.92	724.92	24.47	732.37	1.39
PZ-114	1/21/2010	757.4	710.4	705.4	31.38	726.02	
	4/21/2010	757.4	710.4	705.4	28.73	728.67	2.65
	8/5/2010	757.4	710.4	705.4	24.59	732.81	4.14
	11/3/2011	757.4	710.4	705.4	28.81	728.59	-4.22
	2/22/2012	757.4	710.4	705.4	28.54	728.86	0.27
	5/22/2012	757.4	710.4	705.4	24.30	733.10	4.24
	4/4/2013	757.4	710.4	705.4	26.87	730.53	-2.57
	7/30/2013	757.4	710.4	705.4	26.38	731.02	0.49
	10/27/2016	757.4	710.4	705.4	25.43	731.97	0.95

**Summary of Groundwater Elevations**  
**Busy Bea Cleaners**  
**1077 Racine Street**  
**Menasha, Wisconsin**

Well Number	Measurement Date	Top of Casing Elevation (ft msl)	Screen Interval		Depth to Water (ft btoc)	Water Elevation (ft msl)	Change in Water Elevation (ft)
			Top (ft msl)	Bottom (ft msl)			
PZ-115	1/21/2010	757.39	736.38	731.38	DRY		
	4/21/2010	757.39	736.38	731.38	DRY		
	8/5/2010	757.39	736.38	731.38	24.95	732.44	
	11/3/2011	757.39	736.38	731.38	25.48	731.91	-0.53
	2/22/2012	757.39	736.38	731.38	25.71	731.68	-0.23
	5/22/2012	757.39	736.38	731.38	23.61	733.78	2.1
	4/4/2013	757.39	736.38	731.38	25.32	732.07	-1.71
	7/30/2013	757.39	736.38	731.38	24.57	732.82	0.75
	10/27/2016	757.39	736.38	731.38	24.63	732.76	-0.06
MW-4	1/21/2010	757.44	752.89	742.89	10.28	747.16	
	4/21/2010	757.44	752.89	742.89	2.56	754.88	7.72
	8/5/2010	757.44	752.89	742.89	3.35	754.09	-0.79
	11/2/2011	757.44	752.89	742.89	4.60	752.84	-1.25
	2/22/2012	757.44	752.89	742.89	4.82	752.62	-0.22
	5/22/2012	757.44	752.89	742.89	2.15	755.29	2.67
	4/4/2013	757.44	752.89	742.89	1.43	756.01	0.72
	7/30/2013	757.44	752.89	742.89	3.11	754.33	-1.68
	10/27/2016	757.44	752.89	742.89	4.40	753.04	-1.29

NOTES

- ft bgs = feet below ground surface
- ft bm = feet relative to benchmark
- ft btoc = feet below top of casing
- ft msl = feet relative to mean sea level
- NM = not measured
- \* = Well filled with rainwater

**Table A.4**

**Detected Indoor Air VOC Results  
Summary of Ambient Air VOC Results (Detects Only)  
Busy Bea Cleaners  
1077 Racine Street  
Menasha, Wisconsin**

Sample Location	Units	Indoor Air Vapor Action Levels Based on May 2016 USEPA Regional Screening Level Tables for Small Commercial Settings	Former Busy Bee 1077 Racine Road		Patricia's Hair Salon 1071 Racine Road	Vacant 1083 Racine Road
			6/12/2007	6/3/2008	6/3/2008	6/3/2008
Sample Date			24-hr	24-hr	24-hr	24-hr
Sample Duration						
Benzene	ug/m <sup>3</sup>	16	<32	0.86	0.99	0.79
Carbon Tetrachloride	ug/m <sup>3</sup>	20	<61	0.81 J	0.59 J	0.68 J
Chloroform	ug/m <sup>3</sup>	5.3	<48	0.26 J	0.39 J	0.18 J
Chloromethane	ug/m <sup>3</sup>	390	<20	2.3	<1.0	2.0
Dichlorodifluoromethane	ug/m <sup>3</sup>	440	<48	3.9	4.5	3.9
Ethylbenzene	ug/m <sup>3</sup>	49	<43	<0.87	0.6 J	0.4 J
Methylene Chloride	ug/m <sup>3</sup>	2600	<35	1.4 JB	1.7 JB	1.4 JB
Propylene	ug/m <sup>3</sup>	NES	121	NA	NA	NA
Tetrachloroethene (PCE)	ug/m <sup>3</sup>	180	<68	1.9	1.9	1.7
Toluene	ug/m <sup>3</sup>	22000	<38	2.3	26	2.6
1,1,1-Trichloroethane	ug/m <sup>3</sup>	22000	<54	<1.1	0.35 J	<1.1
Trichloroethene (TCE)	ug/m <sup>3</sup>	8.8	1740	<1.1	15	<1.1
Trichlorofluoromethane	ug/m <sup>3</sup>	NES	<54	2.0	5.8	1.9
1,1,2-Trichlorotrifluoroethane	ug/m <sup>3</sup>	NES	<76	0.8 J	0.67 J	0.8 J
Vinyl Chloride	ug/m <sup>3</sup>	28	<25	0.25 J	<0.51	<0.51
Xylene, o	ug/m <sup>3</sup>	440	<43	<0.87	0.58 J	0.38 J
Xylenes, m + p	ug/m <sup>3</sup>	440	<83	<0.87	1.7 J	1.1

NOTES:

NES = no established standard

Red/Bold = Exceeds the Indoor Air Vapor Action Levels

Table A.1 Groundwater Analytical Table

Summary of Groundwater Data  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin

TW-4/MW-4				Alpha Terra Sampling				Shaw Pilot Testing Program				Full-Scale Testing Program				Quarterly Performance Monitoring Program											
				4/20/2005	8/23/2005	11/21/2005	5/10/2006	Baseline 3/22/2007	3 Month Performance 6/12/2007 7/24/2007 8/23/2007			Baseline 7/28/2008	3 Month Performance 11/14/2008 2/18/2009 3/25/2009			1Q 6/25/2009	2Q 1/21/2010	3Q 4/21/2010	4Q 8/5/2010	1Q 11/2/2011	2Q 2/22/2012	3Q 5/22/2012	4/4/2013	7/30/2013	10/27/2016		
NR 140.10 Table 1												MW-4															
PAL				ES																							
Detected VOCs	1,1-Dichloroethene	µg/l	0.7	7	ND	ND	< 14	ND	< 20	< 40	4.1	7.3	< 28.5	< 57	< 114	< 57	< 114	< 57	< 57	< 57	< 57	< 28.5	< 42.7	< 8.2			
	Benzene	µg/l	0.5	5	ND	ND	< 10	ND	< 20	< 16	< 0.2	< 0.2	< 20.5	< 41	< 82	< 41	< 82.0	< 41	< 41	< 41	< 41	NA	NA	< 10			
	Chloroform	µg/l	0.6	6	ND	ND	< 9.2	ND	< 20	< 16	< 0.2	< 0.2	< 18.5	< 130	< 260	< 130	< 260.0	< 130	< 130	< 130	< 130	NA	NA	< 10			
	cis-1,2-Dichloroethene (DCE)	µg/l	7	70	1800	1400	2000	3000	2700	2400	1400	3800	3800	9960	15800	21700	21700	43000	15300	14500	12800	876	754	676	440	266	79
	Tetrachloroethene (PCE)	µg/l	0.5	5	1100	1400	2000	4700	4300	3800	6700	5800	6630	3610	2150	2410	3130	< 45	< 45	< 45	< 45	< 45	< 22.5	< 47.2	< 10		
	Toluene	µg/l	200	1000	ND	ND	< 17	ND	< 20	< 16	0.41	0.25	< 33.5	< 67	< 134	< 67	< 134.0	< 67	< 67	< 67	< 67	< 67	NA	NA	< 10		
	trans-1,2-Dichloroethene (DCE)	µg/l	20	100	34	31	130	48	< 50	< 40	41	65	109	157	246	265	523	414	457	329	89	89	< 89	< 44.5	< 37.1	< 5.1	
	Trichloroethene (TCE)	µg/l	0.5	5	730	480	760	1400	1500	1100	2500	2400	2880	1140	2030	2220	3860	61.2	< 48	< 48	< 48	< 48	< 24	< 42.9	< 6.6		
	Vinyl Chloride	µg/l	0.02	0.2	200	130	130	160	74	140	150	130	238	309	843	566	1570	453	1160	2550	8890	8720	8080	8070	6740	2060	
Field Measurements	Temperature	deg. C	--	--	--	--	--	9.56	13.72	NA*	15.79	NA*	NA*	NA*	NA*	NA*	9.44	8.65	19.82	15.31	8.64	20.4	6.2	20.4	15.6		
	pH	--	--	--	--	--	--	7.75	7.32	NA*	7.14	NA*	NA*	NA*	NA*	NA*	7.03	7.03	4.92*	6.79	6.87	6.79	6.78	6.79	6.81		
	Dissolved Oxygen	mg/l	--	--	--	--	--	1.98	1.37	NA*	0.65	NA*	NA*	NA*	NA*	NA*	2.05	0.43	1.57	0.26	0.64	1.74	1.02	17.4	0.34		
	Specific Conductivity	µs/cm	--	--	--	--	--	924	923	NA*	1698	NA*	NA*	NA*	NA*	NA*	1717	1976	1985	1872	4400	1930	2014	1930	1910		
	ORP	mV	--	--	--	--	--	13.3	285.5	NA*	381.1	NA*	NA*	NA*	NA*	NA*	109.90	-79	-89.1*	-66.8	-120	-99.1	-159	-99.1	-139.9		
Geochemical Parameters	TOC	mg/l	--	--	--	--	--	NA*	1.56	NA*	2.62	NA*	NA*	NA*	697	613	138	109	75	NA	NA	NA	NA	NA	NA		
	Ammonia as N	mg/l	--	--	--	--	--	NA*	NA	NA	NA	NA*	NA*	NA*	NA*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	Dissolved Iron	µg/l	--	--	--	--	--	NA*	<0.042	<0.042	0.048	NA*	NA*	NA*	< 0.026	< 0.018	0.50^	NA	< 5.0^	NA	NA	NA	NA	NA	NA		
	Dissolved Manganese	µg/l	--	--	--	--	--	NA*	NA	NA	NA	NA*	NA*	NA*	NA*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	Total Alkalinity (CaCO <sub>3</sub> )	mg/l	--	--	--	--	--	NA*	NA	NA	NA	NA*	NA*	NA*	NA*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	Dissolved Nitrate/Nitrite	mg/l	--	--	--	--	--	NA*	NA	NA	NA	NA	NA*	NA*	NA*	NA*	< 0.12	< 0.12	< 0.12	< 0.12	NA	NA	NA	NA	NA		
	Dissolved Sulfate	mg/l	--	--	--	--	--	NA	NA	NA	NA	NA*	NA*	NA*	NA*	NA	3.2	24.2	4.8	2.6	NA	NA	NA	NA	NA		
	Dissolved Ethane	µg/l	--	--	--	--	--	<14	NA	<14.0	<14.0	<14.0	5.0	NA	5.5	22.5	2.4	0.32	< 0.32	< 0.32	NA	NA	NA	< 0.36	< 0.36		
	Dissolved Ethene	µg/l	--	--	--	--	--	<11	NA	27	<11.0	<11.0	< 1.4	NA	< 1.4	5.9	48.8	24.1	51.4	55	NA	NA	NA	843	617		
	Dissolved Methane	µg/l	--	--	--	--	--	<15	182	106	126	126	52.7	NA*	239	875	3610	5470	9160	8920	NA	NA	NA	10000	4570		
	Acetic Acid	mg/l	--	--	--	--	--	NA	< 1.0	< 1.0	< 1.0	< 1.0	NA	NA*	130	120	210	NA	NA	NA	NA	NA	NA	NA	NA		
	Butyric Acid	mg/l	--	--	--	--	--	NA	< 1.0	< 1.0	< 1.0	< 1.0	NA	NA*	16	3.2	4	NA	NA	NA	NA	NA	NA	NA	NA		
	Lactic Acid	mg/l	--	--	--	--	--	NA	< 25.0	< 25.0	< 25.0	< 25.0	NA	NA*	< 250	UM < 25	U < 25	U	NA	NA	NA	NA	NA	NA	NA		
Propionic Acid	mg/l	--	--	--	--	--	NA	< 1.0	< 1.0	< 1.0	< 1.0	NA	NA*	180	140	86	NA	NA	NA	NA	NA	NA	NA	NA			
Pyruvic Acid	mg/l	--	--	--	--	--	NA	< 10.0	< 10.0	< 10.0	< 10.0	NA	NA*	< 100	U < 10	U < 10	U	NA	NA	NA	NA	NA	NA	NA			

NOTES  
 deg. C = degrees Celsius  
 mg/l = milligrams per liter  
 µs/cm = micro siemens per centimeter  
 µg/l = micrograms per liter  
 mV = milli-volts  
 ORP = oxidation-reduction potential  
 TOC = Total Organic Carbon  
 J = results reported between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.  
 NA = not analyzed, per SAP  
 NA\*=not analyzed, well ran dry during sampling  
 ND = Not detected  
 ^ = Ferrous Iron by Hach Kit  
 \* = Suspected YSI probe reading errors  
**Well Abandoned 1/14/2010, Replaced with MW-4**  
 Red/Bold = ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) exceedence  
 Blue/Italic = ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) exceedence

Table A.1 Groundwater Analytical Table (continued)

Summary of Groundwater Data  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin

MW-105				Alpha Terra Sampling			Pilot Testing Program				Full-Scale Testing Program				Quarterly Performance Monitoring Program											
				8/23/2005	11/21/2005	5/12/2006	Baseline 3/22/2007	3 Month Performance 6/12/2007 7/24/2007 8/23/2007			Baseline 7/29/2008	3 Month Performance 11/14/2008 2/18/2009 3/25/2009			1Q 6/25/2009	2Q 1/21/2010	3Q 4/21/2010	4Q 8/5/2010	1Q 11/3/2011	2Q 2/22/2012	3Q 5/22/2012	4/4/2013	7/30/2013	10/27/2016		
Detected VOCs	NR 140.10 Table 1 PAL ES																									
	1,1-Dichloroethene	µg/l	0.7	7	ND	< 28	ND	< 20	< 20	6.7	5.4	< 11.4	< 28.5	< 22.8	< 14.2	< 15	< 14.2	< 14.2	< 14.2	< 14.2	< 11.4	< 5.7	< 0.57	< 4.3	< 1	
	Benzene	µg/l	0.5	5	ND	< 20	ND	< 8.0	< 8.0	4.7	3.6	< 8.2	< 20.5	< 16.4	< 10.2	< 8.2	< 10.2	< 10.2	< 10.2	< 10.2	< 8.2	< 4.1	< NA	< NA	< 2.1	
	Chloroform	µg/l	0.6	6	ND	< 18	ND	< 8.0	< 8.0	0.5	J < 0.2	< 7.4	< 65	< 52	< 32.5	< 26.0	< 32.5	< 32.5	< 32.5	< 32.5	< 26	< 13	< NA	< NA	< 6.2	
	cis-1,2-Dichloroethene (DCE)	µg/l	7	70	3800	3900	3200	3100	3200	3100	2800	3920	5300	3410	3780	3140	2830	2230	1790	1060	1010	960	2.8	36.7	34.5	
	Tetrachloroethene (PCE)	µg/l	0.5	5	< 9	< 22	< 11	< 20	< 20	< 25	< 0.5	< 9	< 22.5	< 18	< 11.2	< 9.0	< 11.2	< 11.2	< 11.2	< 11.2	< 9	< 4.5	< 0.45	< 4.7	< 1.2	
	Toluene	µg/l	200	1000	ND	< 34	ND	< 8.0	< 8.0	0.27	J < 0.2	< 13.4	< 33.5	< 26.8	< 16.8	< 13.4	< 16.8	< 16.8	< 16.8	< 16.8	< 13.4	< 6.7	< NA	< NA	< 1.2	
	trans-1,2-Dichloroethene (DCE)	µg/l	20	100	88	82	82	36	J < 20	36	25	162	104	93.8	93.0	75.9	43.7	28.1	< 22.2	< 22.2	< 17.8	< 8.9	< 0.89	< 3.7	< 0.64	
	Trichloroethene (TCE)	µg/l	0.5	5	64	< 24	12	< 8.0	< 8.0	< 10	4.6	27.3	< 24	< 19.2	< 12	< 9.6	< 12	< 12	< 12	< 12	< 9.6	< 4.8	< 0.48	< 4.3	< 0.83	
	Vinyl Chloride	µg/l	0.02	0.2	510	620	750	750	680	640	340	973	1190	1090	927	1140	1310	1480	1200	1430	1560	1390	119	1270	183	
Field Measurements	Temperature	deg. C	--	--	17.15	18.08	--	11.16	15.71	18.10	18.86	15.92	14.41	9.87	9.89	14.93	9.49	10.31	16.86	13.77	9.43	17.4	8.03	17.4	15.2	
	pH	--	--	--	6.88	6.61	--	7.29	5.8	5.29	6.95	6.88	6.78	6.40	6.69	6.46	6.85	6.83	2.17*	6.67	6.8	6.89	6.79	6.89	6.8	
	Dissolved Oxygen	mg/l	--	--	0.85	0.09	--	0.37	0.27	0.56	1.12	1.50	1.28	0.65	0.37	2.58	1.25	0.57	1.02	0.24	0.76	3.63	0.79	36.3	0.25	
	Specific Conductivity	µs/cm	--	--	1.096	1.154	--	1160	1225	1276	1295	1471	1938	2434	2292	2100	2814	2425	2294	1865	8700	1720	1773	1720	1600	
	ORP	mV	--	--	-19.2	-59.7	--	-13.9	290.04	614.8	-67.3	-201	-64.9	-25	-52	-91.0	32.8	-72	-66.7*	-74.2	-102.2	-110.7	-96	-110.7	-203.1	
Geochemical Parameters	TOC	mg/l	--	--	--	--	--	4.12	4.07	4.60	10.8	2.5	832	763	521	383	540	194	34.6	NA	NA	NA	NA	NA	NA	
	Ammonia as N	mg/l	--	--	--	--	--	0.36	NA	NA	NA	< 0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Dissolved Iron	µg/l	--	--	200	NA	--	0.53	1.3	0.27	0.19	< 0.026	83.4	37.5	17.6	10.3	4.5^	NA	4.5^	NA	NA	NA	NA	NA	NA	
	Dissolved Manganese	µg/l	--	--	130	NA	--	0.39	NA	NA	NA	265	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Total Alkalinity (CaCO <sub>3</sub> )	mg/l	--	--	--	--	--	550	NA	NA	NA	498	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Dissolved Nitrate/Nitrite	mg/l	--	--	<0.061	NA	--	<10	NA	NA	NA	< 0.096	NA	NA	NA	0.22	J < 0.12	< 0.12	< 0.12	< 0.12	NA	NA	NA	NA	NA	NA
	Dissolved Sulfate	mg/l	--	--	43	NA	--	30	J	NA	NA	23.1	NA	NA	NA	< 2.5	< 3.8	< 2	2	J	NA	NA	NA	NA	NA	
	Dissolved Ethane	µg/l	--	--	<10	NA	--	<14	NA	<14.0	<14.0	293	217	150	165	< 0.32	< 0.32	< 0.32	< 0.32	NA	NA	NA	< 0.36	63.8	NA	
	Dissolved Ethene	µg/l	--	--	<10	NA	--	193	NA	100	68	< 1.4	3.1	J < 1.4	< 1.4	76.6	133	47.8	86.6	NA	NA	NA	753	701	NA	
	Dissolved Methane	µg/l	--	--	<10	NA	--	2250	1900	200	404	2080	6070	11200	8410	9170	15700	13500	16000	NA	NA	NA	8930	7880	NA	
	Acetic Acid	mg/l	--	--	--	--	--	NA	< 1.0	< 1.0	< 1.0	NA	330	890	640	480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Butyric Acid	mg/l	--	--	--	--	--	NA	< 1.0	< 1.0	< 1.0	NA	9.6	110.0	79	59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lactic Acid	mg/l	--	--	--	--	--	NA	< 25.0	< 25.0	< 25.0	NA	< 25	< 250	UM < 25	U	2.3	J	NA	NA	NA	NA	NA	NA	NA	NA
	Propionic Acid	mg/l	--	--	--	--	--	NA	< 1.0	< 1.0	< 1.0	NA	200	120.0	77	39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyruvic Acid	mg/l	--	--	--	--	--	NA	< 10.0	< 10.0	< 10.0	NA	1.1	< 100	U < 10	U	< 10	U	NA	NA	NA	NA	NA	NA	NA	NA	

NOTES  
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 µg/l = micrograms per liter  
 mV = milli-volts  
 ORP = oxidation-reduction potential  
 TOC = Total Organic Carbon  
 J = results reported between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.  
 NA = not analyzed, per SAP  
 ND = Not detected  
 ^ = Ferrous Iron by Hach Kit  
 \* = Suspected YSI probe reading errors  
 Red/Bold = ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) exceedence  
 Blue/Italic = ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) exceedence

Table A.1 Groundwater Analytical Table (continued)

Summary of Groundwater Data  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin

PZ-108					Alpha Terra Sampling			Pilot Testing Program				Full-Scale Testing Program				Quarterly Performance Monitoring Program											
					8/23/2005	11/21/2005	5/10/2006	Baseline 3/22/2007	6/12/2007	3 Month Performance 7/24/2007 8/23/2007		Baseline 7/28/2008	11/13/2008	3 Month Performance 2/18/2009 3/25/2009		1Q 6/25/2009	2Q 1/21/2010	3Q 4/21/2010	4Q 8/5/2010	1Q 11/2/2011	2Q 2/22/2012	3Q 5/22/2012	4/4/2013	7/30/2013	10/27/2016		
					NR 140.10 Table 1																						
					PAL				ES																		
Detected VOCs	1,1-Dichloroethene	µg/l	0.7	7	ND	< 0.57	ND	NS	NS	NS	NS	< 0.57	< 0.57	< 1.1	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.43	<0.24		
	Benzene	µg/l	0.5	5	ND	< 0.41	ND	NS	NS	NS	NS	< 0.41	< 0.41	< 0.82	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	NA	NA	<0.5	
	Chloroform	µg/l	0.6	6	ND	< 0.37	ND	NS	NS	NS	NS	< 0.37	< 1.3	< 2.6	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	NS	NS	<2.5	
	cis-1,2-Dichloroethene (DCE)	µg/l	7	70	59	58	40	NS	NS	NS	NS	40.9	95.5	112	110	44.5	57.1	82.0	65.9	13.0	16.7	3.7	9.9	24.4	0.28		
	Tetrachloroethene (PCE)	µg/l	0.5	5	< 0.45	< 0.45	< 0.45	NS	NS	NS	NS	< 0.45	< 0.45	< 0.9	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.47	<0.5		
	Toluene	µg/l	200	1000	ND	< 0.67	ND	NS	NS	NS	NS	< 0.67	0.68	< 1.3	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	NS	NS	<0.5	
	trans-1,2-Dichloroethene (DCE)	µg/l	20	100	< 0.89	0.94	< 0.89	NS	NS	NS	NS	2.4	4.5	7.2	6.4	2.9	1.6	4.8	4.5	< 0.89	0.94	< 0.89	< 0.89	< 0.89	1.7	<0.26	
	Trichloroethene (TCE)	µg/l	0.5	5	< 0.48	0.54	< 0.48	NS	NS	NS	NS	1.7	1.9	2.6	2.1	0.66	J	0.72	1.0	0.96	J	< 0.48	< 0.48	< 0.48	< 0.48	< 0.43	<0.33
	Vinyl Chloride	µg/l	0.02	0.2	3.6	2.4	4.5	NS	NS	NS	NS	4.50	7.5	9.9	8.1	5	2.3	8.2	9	3.9	3.5	< 0.18	2.0	6.1	<0.18		
Field Measurements	Temperature	deg. C	--	--	11.9	11.1	--	NS	NS	NS	NS	12.95	11.24	9.53	11.22	16.38	NA*	11.77	12.49	10.81	10.06	14	12.39	14	11		
	pH	--	--	--	7.06	7.11	--	NS	NS	NS	NS	7.04	7.14	7.29	7.33	7.13	NA*	7.39	7.26	7.42	7.42	7.33	7.24	7.33	7.33		
	Dissolved Oxygen	mg/l	--	--	2.29	1.95	--	NS	NS	NS	NS	1.16	0.69	0.53	0.38	2.01	NA*	0.42	0.25	0.50	0.6	9.7	0.56	9.7	1.98		
	Specific Conductivity	µs/cm	--	--	1.143	1.158	--	NS	NS	NS	NS	1890	1489	1441	1525	2109	NA*	2032	2439	989	2630	2890	5983	2890	117		
	ORP	mV	--	--	222.3	70.8	--	NS	NS	NS	NS	-185	-76.9	-18	-54	-71.3	NA*	-71	-171	-98.2	-135.4	-115.3	-156	-155.3	-134.3		
	Geochemical Parameters	TOC	mg/l	--	--	--	--	--	NS	NS	NS	NS	3.0	3.1	3.2	2.5	NA	5.4	< 1	2.7	NA	NA	NA	NS	NS	NS	NS
Ammonia as N		mg/l	--	--	--	--	NS	NS	NS	NS	NS	0.15	J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Dissolved Iron		µg/l	--	--	<17	NA	--	NS	NS	NS	NS	< 0.026	< .026	< 0.026	< 0.026	NA	NA*	NA	3.2	NA	NA	NA	NS	NS	NS	NS	
Dissolved Manganese		µg/l	--	--	52	NA	--	NS	NS	NS	NS	199	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Total Alkalinity (CaCO <sub>3</sub> )		mg/l	--	--	--	--	--	NS	NS	NS	NS	543	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Dissolved Nitrate/Nitrite		mg/l	--	--	<0.061	NA	--	NS	NS	NS	NS	< 0.096	NA	NA	NA	NA	< 0.12	< 0.12	< 0.12	NA	NA	NA	NA	NS	NS	NS	NS
Dissolved Sulfate		mg/l	--	--	54	NA	--	NS	NS	NS	NS	199	NA	NA	NA	NA	136	177	161	NA	NA	NA	NA	NS	NS	NS	
Dissolved Ethane		µg/l	--	--	<10	NA	--	NS	NS	NS	NS	NA	1.6	< 1.6	< 1.6	NA	< 0.32	< 0.32	< 0.32	NA	NA	NA	< 0.36	< 0.36	NS	NS	
Dissolved Ethene		µg/l	--	--	<10	NA	--	NS	NS	NS	NS	NA	1.4	< 1.4	< 1.4	NA	< 0.47	< 0.47	< 0.47	NA	NA	NA	0.48	1.1J	NS	NS	
Dissolved Methane		µg/l	--	--	21	NA	--	NS	NS	NS	NS	27	86.1	147	173	NA	479	1790	1840	NA	NA	NA	65.4	154	NS	NS	
Acetic Acid		mg/l	--	--	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Butyric Acid		mg/l	--	--	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Lactic Acid		mg/l	--	--	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Propionic Acid		mg/l	--	--	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	
Pyruvic Acid		mg/l	--	--	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	

NOTES  
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 mg/l = milligrams per liter  
 µs/cm = micro siemens per centimeter  
 µg/l = micrograms per liter  
 mV = milli-volts  
 ORP = oxidation-reduction potential  
 TOC = Total Organic Carbon  
 J = results reported between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ) are less certain that results at or above the LOQ.  
 NS= not sampled, per SAP  
 NA = not analyzed, per SAP  
 NA\* = not analyzed, well ran dry during sampling  
 ND = Not detected  
 Red/Bold = ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) exceedence  
 Blue/Italic = ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) exceedence

Table A.1 Groundwater Analytical Table (continued)

Summary of Groundwater Data  
 Busy Bea Cleaners  
 1077 Racine Street  
 Menasha, Wisconsin

PZ-111				Alpha Terra	Pilot Testing Program				Full-Scale Testing Program				Quarterly Performance Monitoring Program																									
				5/10/2006	Baseline 3/22/2007	6/12/2007	3 Month Performance 7/24/2007 8/23/2007		Baseline 7/28/2008	11/14/2008	3 Month Performance 2/18/2009 3/24/2009		1Q 6/25/2009	2Q 1/21/2010	3Q 4/21/2010	4Q 8/5/2010	1Q 11/2/2011	2Q 2/22/2012	3Q 5/22/2012	10/27/2016																		
Detected VOCs	NR 140.10 Table 1			5/10/2006	Baseline 3/22/2007	6/12/2007	7/24/2007	8/23/2007	7/28/2008	11/14/2008	2/18/2009	3/24/2009	6/25/2009	1/21/2010	4/21/2010	8/5/2010	11/2/2011	2/22/2012	5/22/2012	10/27/2016																		
	PAL		ES																																			
	1,1-Dichloroethene	µg/l	0.7																		7	ND	NS	NS	NS	NS	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.57	< 0.41
	Benzene	µg/l	0.5																		5	ND	NS	NS	NS	NS	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.5
	Chloroform	µg/l	0.6																		6	ND	NS	NS	NS	NS	< 0.37	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 2.5
	cis-1,2-Dichloroethene (DCE)	µg/l	7																		70	< 0.83	NS	NS	NS	NS	< 0.83	3.2	1.5	2.4	1.9	1.1	1.0	1.5	< 0.83	2.3	0.84	< 0.26
	Tetrachloroethene (PCE)	µg/l	0.5																		5	< 0.45	NS	NS	NS	NS	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.5
	Toluene	µg/l	200																		1000	ND	NS	NS	NS	NS	0.78	J < 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.5
	trans-1,2-Dichloroethene (DCE)	µg/l	20																		100	< 0.89	NS	NS	NS	NS	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.89	< 0.26
	Trichloroethene (TCE)	µg/l	0.5																		5	< 0.48	NS	NS	NS	NS	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.33
Vinyl Chloride	µg/l	0.02	0.2	< 0.18	NS	NS	NS	NS	< 0.18	1.1	< 0.18	0.38	0.54	J	0.22	< 0.18	0.61	J	< 0.18	1.3	0.55	< 0.18																
Field Measurements	Temperature	deg. C	--	--	--	NS	NS	NS	NS	13.39	13.43	7.95	8.98	14.27	6.75	12.05	12.56	9.84	10.66	NA	10.9																	
	pH	--	--	--	--	NS	NS	NS	NS	7.00	7.34	7.37	7.41	7.31	7.41	7.40	7.24	7.99	7.59	NA	7.93																	
	Dissolved Oxygen	mg/l	--	--	--	NS	NS	NS	NS	1.14	1.11	3.29	1.06	1.67	0.85	0.54	0.26	11.84	0.55	NA	2.02																	
	Specific Conductivity	µs/cm	--	--	--	NS	NS	NS	NS	1295	1415	1451	1356	1301	1215	1644	1473	0.116	-35.6	NA	307																	
	ORP	mV	--	--	--	NS	NS	NS	NS	-249	-62.2	24	327	2.4	69.4	8	-164	70.9	-102.3	NA	-10.9																	
Geochemical Parameters	TOC	mg/l	--	--	--	NS	NS	NS	NS	2.0	2.6	2.9	3.2	NA	3.8	< 1	4.4	NA	NA	NA	NA																	
	Ammonia as N	mg/l	--	--	--	NS	NS	NS	NS	0.51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																	
	Dissolved Iron	µg/l	--	--	--	NS	NS	NS	NS	< 0.026	< 0.026	< 0.026	< 0.026	NA	NA*	NA	0.5	NA	NA	NA	NA																	
	Dissolved Manganese	µg/l	--	--	--	NS	NS	NS	NS	207	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																	
	Total Alkalinity (CaCO <sub>3</sub> )	mg/l	--	--	--	NS	NS	NS	NS	568	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																	
	Dissolved Nitrate/Nitrite	mg/l	--	--	--	NS	NS	NS	NS	< 0.096	NA	NA	NA	NA	< 0.12	< 0.12	< 0.12	NA	NA	NA	NA																	
	Dissolved Sulfate	mg/l	--	--	--	NS	NS	NS	NS	69.4	NA	NA	NA	NA	53.7	63.0	68.9	NA	NA	NA	NA																	
	Dissolved Ethane	µg/l	--	--	--	NS	NS	NS	NS	NA	1.6	< 1.6	< 1.6	NA	< 0.32	< 0.32	< 0.32	NA	NA	NA	NA																	
	Dissolved Ethene	µg/l	--	--	--	NS	NS	NS	NS	NA	1.4	< 1.4	< 1.4	NA	< 0.47	< 0.47	< 0.47	NA	NA	NA	NA																	
	Dissolved Methane	µg/l	--	--	--	NS	NS	NS	NS	45.2	19.9	< 2	25.3	NA	204	75.6	235	NA	NA	NA	NA																	
	Acetic Acid	mg/l	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																
	Butyric Acid	mg/l	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																
	Lactic Acid	mg/l	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																
	Propionic Acid	mg/l	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																
	Pyruvic Acid	mg/l	--	--	--	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA																

NOTES  
 deg. C = degrees Celsius  
 mg/l = milligrams per liter  
 µs/cm = micro siemens per centimeter  
 µg/l = micrograms per liter  
 mV = milli-volts  
 ORP = oxidation-reduction potential  
 TOC = Total Organic Carbon  
 J = results reported between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.  
 NS= not sampled, per SAP  
 NA = not analyzed, per SAP  
 NA\* = not analyzed, well ran dry during sampling  
 ND = Not detected  
 Red/Bold = ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) exceedence  
 Blue/Italic = ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) exceedence



Table A.1 Groundwater Analytical Table (continued)

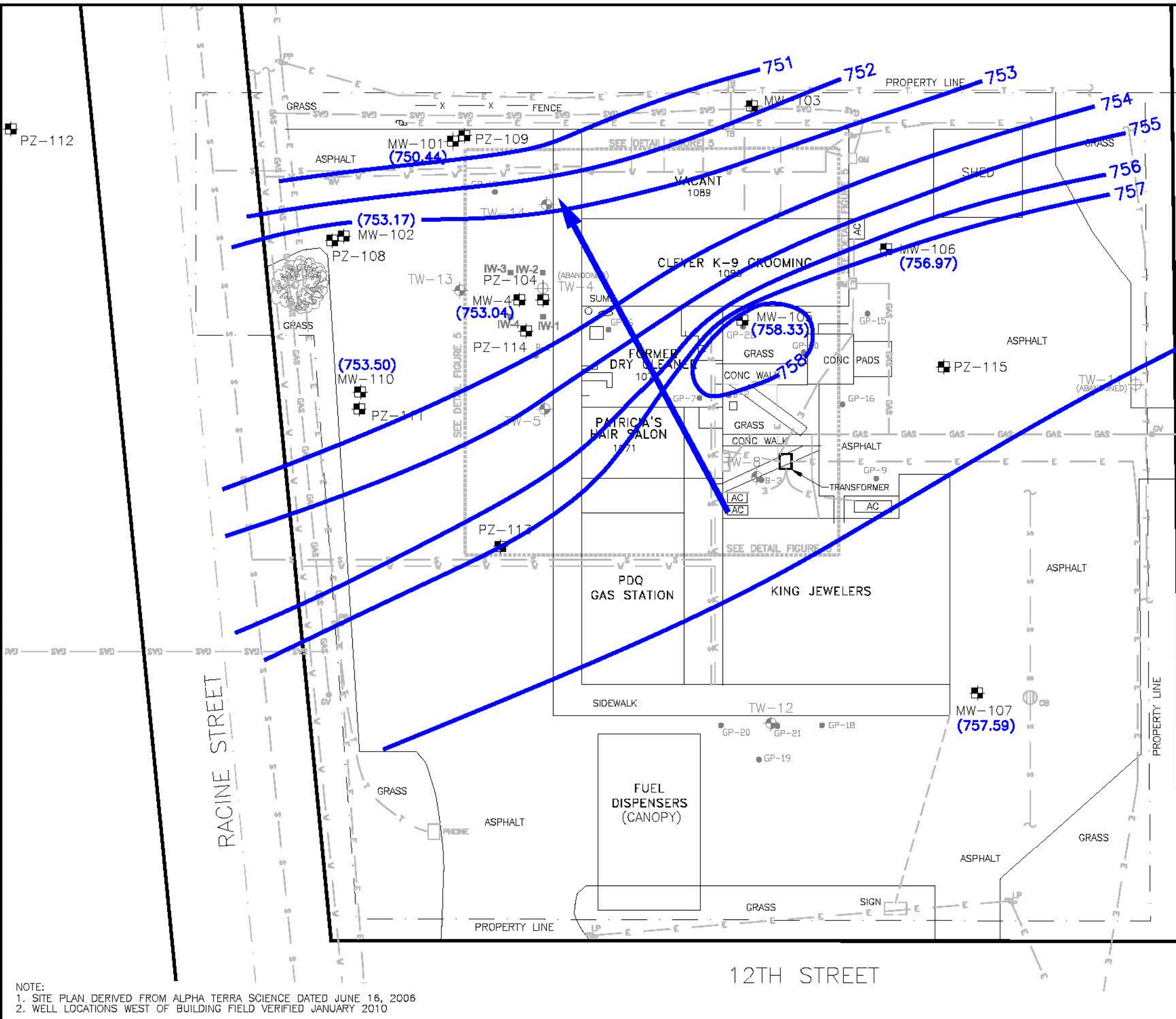
**Summary of Groundwater Data**  
**Busy Bea Cleaners**  
**1077 Racine Street**  
**Menasha, Wisconsin**

PZ-113					2Q	3Q	4Q	1Q	2Q	3Q	
					1/21/2010	4/21/2010	8/5/2010	11/3/2011	2/22/2012	5/22/2012	10/27/2016
Detected VOCs			NR 140.10 Table 1								
			PAL	ES							
1,1-Dichloroethene	µg/l	0.7	7		< 0.57	< 0.57	< 0.75	< 0.57	< 0.57	< 0.57	<0.24
Benzene	µg/l	0.5	5		< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	< 0.41	<0.5
Chloroform	µg/l	0.6	6		< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	<2.5
cis-1,2-Dichloroethene (DCE)	µg/l	7	70		11.7	8.8	8.4	17.5	33.1	4.5	<0.26
Tetrachloroethene (PCE)	µg/l	0.5	5		< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	< 0.45	<0.5
Toluene	µg/l	200	1000		< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	< 0.67	<0.5
trans-1,2-Dichloroethene (DCE)	µg/l	20	100		< 0.89	< 0.89	< 0.89	1.0	0.98	< 0.89	<0.26
Trichloroethene (TCE)	µg/l	0.5	5		< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	<0.33
Vinyl Chloride	µg/l	0.02	0.2		0.59	0.61	0.72 J	2.1	14.7	0.64	<0.18
Field Measurements	Temperature	deg. C	--	--	NA*	NA*	14.36	NA**	9.73	NA	11.3
	pH	--	--	--	NA*	NA*	2.69*	NA**	7.35	NA	7.74
	Dissolved Oxygen	mg/l	--	--	NA*	NA*	0.58	NA**	1.04	NA	7.84
	Specific Conductivity	µs/cm	--	--	NA*	NA*	1538	NA**	-20.7	NA	0.078
	ORP	mV	--	--	NA*	NA*	-84.7*	NA**	-117.9	NA	22.1
Geochemical Parameters	TOC	mg/l	--	--	12.6	6.7	NA	NA	NA	NA	NA
	Ammonia as N	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA
	Dissolved Iron	µg/l	--	--	NA	NA	3.2^	NA	NA	NA	NA
	Dissolved Manganese	µg/l	--	--	NA	NA	NA	NA	NA	NA	NA
	Total Alkalinity (CaCO <sub>3</sub> )	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA
	Dissolved Nitrate/Nitrite	mg/l	--	--	NA	< 0.12	< 0.12	NA	NA	NA	NA
	Dissolved Sulfate	mg/l	--	--	NA	279	181	NA	NA	NA	NA
	Dissolved Ethane	µg/l	--	--	< 0.32	< 0.32	< 0.32	NA	NA	NA	NA
	Dissolved Ethene	µg/l	--	--	< 0.47	< 0.47	< 0.47	NA	NA	NA	NA
	Dissolved Methane	µg/l	--	--	139	70.1	98.2	NA	NA	NA	NA
	Acetic Acid	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA
	Butyric Acid	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA
	Lactic Acid	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA
Propionic Acid	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA	
Pyruvic Acid	mg/l	--	--	NA	NA	NA	NA	NA	NA	NA	

NOTES  
deg. C = degrees Celsius  
mg/l = milligrams per liter  
µs/cm = micro siemens per centimeter  
µg/l = micrograms per liter  
mV = milli-volts  
ORP = oxidation-reduction potential  
TOC = Total Organic Carbon  
J = results reported between the Method Detection Limit (MDL) and the Limit of Quantitation (LOQ) are less certain that results at or above the LOQ.  
NS= not sampled, per SAP  
NA = not analyzed, per SAP  
NA\* = not analyzed, well ran dry during sampling  
NA\*\* = not analyzed, well was hand bailed  
\* = Suspected YSI probe reading errors  
Red/Bold = ch. NR 140 Wis. Adm. Code Enforcement Standard (ES) exceedence  
Blue/Italic = ch. NR 140 Wis. Adm. Code Preventive Action Limit (PAL) exceedence

## Figures

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Milwaukee, WI	09/29/10	JMS	BEB	HAW		124506-05



**LEGEND**

- ABANDONED GEOPROBE BORING
- ⊕ TEMPORARY WELL
- ⊕ ABANDONED WELL
- ⊕ NR141 MONITORING WELL/PIEZOMETER
- INJECTION WELL
- E — ELECTRIC LINE
- S — SEWER LINE
- GAS — NATURAL GAS LINE
- T — TELEPHONE LINE
- W — WATER LINE
- X — FENCE
- (727) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- GROUNDWATER ELEVATION CONTOUR INTERVAL: 1.0'
- GROUNDWATER FLOW

N

APPROXIMATE SCALE IN FEET

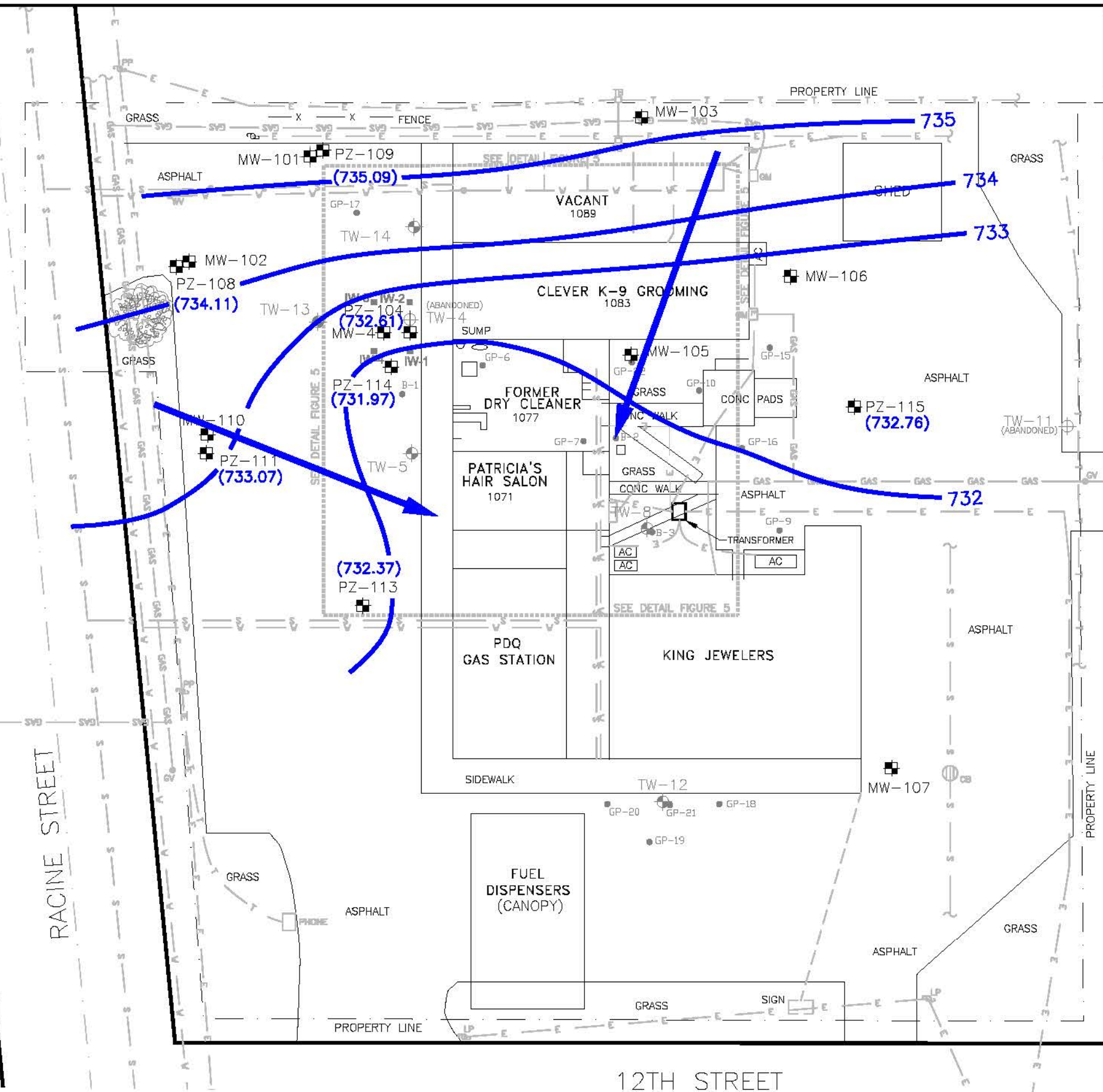
0 15 30 45

NOTE:  
 1. SITE PLAN DERIVED FROM ALPHA TERRA SCIENCE DATED JUNE 16, 2006  
 2. WELL LOCATIONS WEST OF BUILDING FIELD VERIFIED JANUARY 2010

		BUSY BEA DRY CLEANERS 1077 RACINE STREET MENASHA, WISCONSIN			
		FIGURE B.3.c GROUNDWATER FLOW DIRECTION 10/27/2016			
DESIGNED BY		CHECKED BY			
DRAWN BY	JRD	12/05/16	APPROVED BY		
SIZE:	SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.	
B	1"=30'	124506-05		-	

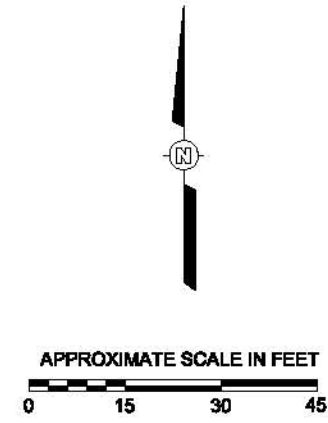


OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Milwaukee, WI	09/29/10	JMS	BEB	HAW		124506-05



**LEGEND**

- ABANDONED GEOPROBE BORING
- ⊕ TEMPORARY WELL
- ⊕ ABANDONED WELL
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- (727) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- GROUNDWATER ELEVATION CONTOUR INTERVAL: 1.0'
- GROUNDWATER FLOW



NOTE:  
 1. SITE PLAN DERIVED FROM ALPHA TERRA SCIENCE DATED JUNE 16, 2006  
 2. WELL LOCATIONS WEST OF BUILDING FIELD VERIFIED JANUARY 2010

	BUSY BEA DRY CLEANERS 1077 RACINE STREET MENASHA, WISCONSIN			
	FIGURE B.3.c PIEZOMETRIC GROUNDWATER FLOW DIRECTION 10/27/2016			
DESIGNED BY		CHECKED BY		
DRAWN BY	JRD	12/05/16	APPROVED BY	
SIZE:	SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.
B	1"=30'	124506-05		-

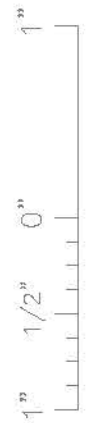


**LEGEND**

- ABANDONED GEOPROBE BORING
- ⊕ TEMPORARY WELL
- ⊕ ABANDONED WELL
- ⊕ NR141 MONITORING WELL/PIEZOMETER
- INJECTION WELL
- E — ELECTRIC LINE
- S — SEWER LINE
- GAS — NATURAL GAS LINE
- T — TELEPHONE LINE
- W — WATER LINE
- X — FENCE
- ➔ GROUNDWATER FLOW DIRECTION
- 10/27/2016 ES EXCEEDANCES  
WELLS SAMPLED: MW-4, MW-105,  
PZ-108, PZ-111, PZ-113
- 7/20/2013 AND 4/4/2013 ES  
EXCEEDANCES  
WELLS SAMPLED: MW-4, MW-101,  
MW-105, PZ-108, PZ-109
- 5/22/2012 ES EXCEEDANCES  
WELLS SAMPLED: MW-4, TW-13, TW-14,  
MW-105, PZ-104, PZ-108, PZ-111,  
PZ-113, PZ-115

APPROXIMATE SCALE IN FEET

0 15 30 45



NOTE:  
 1. SITE PLAN DERIVED FROM ALPHA TERRA SCIENCE DATED JUNE 16, 2006  
 2. WELL LOCATIONS WEST OF BUILDING FIELD VERIFIED JANUARY 2010

		BUSY BEA DRY CLEANERS 1077 RACINE STREET MENASHA, WISCONSIN			
		FIGURE B.3.b GROUNDWATER ISOCONCENTRATION VINYL CHLORIDE			
DESIGNED BY		CHECKED BY			
DRAWN BY	JRD	12/05/16	APPROVED BY		
SIZE:	SCALE:	DRAWING NO.	SHEET NO.	REVISION NO.	
B	1"=30'	124506-05		-	

**Attachment A**





**Corporate Office 12221 West Rockne Avenue Hales Corners, WI 53130**  
**414-303-4038 [www.radonprofessionalcare.com](http://www.radonprofessionalcare.com) [radabt1@wi.rr.com](mailto:radabt1@wi.rr.com)**

## O&M REPORT

Date: 122116

Contact: CB&I  
Representative: Heidi Woefel  
Project Manager / Geologist  
Environmental and Sustainability  
414-687-3313  
[heidi.woefel@cbi.com](mailto:heidi.woefel@cbi.com)

Vapor Extraction Location: Winnebago County  
Original Busy Bea Cleaners  
Owner: Cindy Vander Zanden  
1077 and 1083 Racine Street  
Menasha, WI 54952  
920-470-1195  
[cindyjvanderzanden@gmail.com](mailto:cindyjvanderzanden@gmail.com)

## REPORT

In late November of 2016 a request was made for an O&M, at the captioned location, by Heidi Woefel of CB&I. Several years ago Radon Abatement Incorporated installed a vapor extraction, sub-slab depressurization system, to remediate dry cleaning by-product fumes affecting the captioned commercial building. The exterior portion of the two systems, which contains the mechanicals, were applied to the rear portions of the strip mall commercial building. Refer to attachment "A".

The internal portions of the systems were developed in the posterior sections of units 1077 and 1083. The drop pits were developed to sub-soil in both units. The aggregate was a combination of sand and clay.

At the initial evaluation of the SSD system was conducted on 120516. The SSD systems were found to be in need of repair, fan replacement, foundation slab sealing, floor penetration sealing and assessment for efficiency and safety.

The system was evaluated and repaired to assure compliance with USEPA and AARST-NRPP standards. President and owner of Radon Abatement Incorporated Thomas J. Heine conducted the evaluations.

On the 19<sup>th</sup> of December 2016 the repairs and maintenance of both systems were made with a three man crew from Radon Abatement Incorporated.

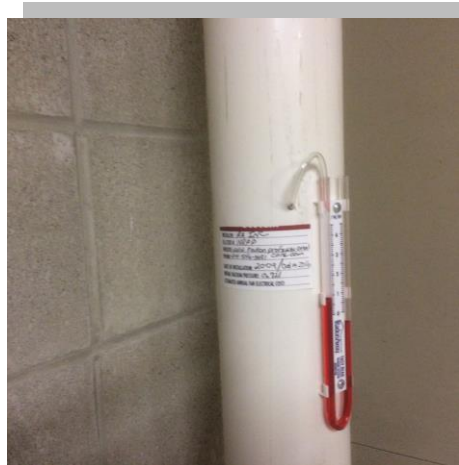
Two new replacement fans were applied to both system locations. The fans are respectfully a RP-265 for the 1077 Racine Street system and a RP-145 applied to the 1083 Racine system. The suction fans are manufactured by Spruce Environmental of Massachusetts. The fans limited manufacturer's warranty is for five years.



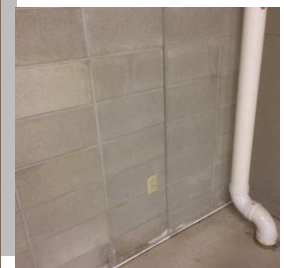
At the drop pipe in 1077 Racine Street the system is pulling a  $-0.560$  cfm in inches of water column. At the drop pipe in 1083 Racine Street that system is pulling a  $-0.721$ . The system at 1077 is drawing approximately 98 watts of electrical energy and the system at 1083 is drawing approximately 70 watts of electrical energy.



1077



1083



Mechanical diagnostics identified the failing of the originally installed fans and verified the new fans efficiency. Vapor extraction efficiency data was based on the volume and velocity of the exhausting, as well as the sub-slab suction communication effectiveness with both systems.



Each system assessment was found to be efficient after the new fan replacement and proper sealing of the slab cracks, cold joints, slab penetration and the un-trapped floor drain which gained a retro-fit drain trap.



**BEFORE**



**TRAPPED**



**SEALING**

Pressure Field Extension communication testing was conducted with the new fans functioning. Data gained at the main drop pipes and the five communication vapor pin ports that were developed are described in attachments "A" and "B". The vapor pin communication ports were developed for later testing and evaluations.



**VAPOR PINS**

Safety checks were run to determine leakage and proper sealing at the remediation fan, floor, ventilation pipes and exhausting piping. No breach was discovered.



This vapor extraction system was over-due for maintenance and repair. After the stated repairs and replacement were made, the system was found to be safe and efficient.

**Notes:** We strongly suggest a maintenance program for these systems. If requested, we will coordinate the next O&M with CBI representatives, to assure permission and access to the property.

If there is a requirement for any additional governmentally requested reports, they can be generated at a cost of one-hundred fifty dollars (\$150.00). This O&M report was conducted in line with coordinated contracting.

Payment is required immediately following receipt of the invoicing, in line with contracted agreements between RAI and CBI.

It must be understood that the property owner is responsible to report any damage or component part failure of the vapor extraction system. This includes damage, common wear and environmental effects.

**Further, it is the client's responsibility to report any malfunctions.**

**It is also the property owner's responsibility to report any property ownership transfer. All the data that surrounds any property transfer must be extensive and include the new owners contact information. The new owner must be informed of the contracting and any reports that have been generated by Radon Abatement Incorporated.**

**Submitted by Radon Abatement Incorporated President Thomas J. Heine**



**122116**

**If there are further questions or additional information needed, please do not hesitate to contact us by email or phone. Contact information is in this reports heading.**

**COMMUNICATION TESTING RESULTS refer to Schematic 122016**

Measurements are in inches of water column conducted with a Infiltec digital micromanometer

**BUSY BEA** 1077 and 1083 Racine Street, Menasha Wisconsin 54952

MAIN DROP POINT at Vertical riser 1077 Racine Street -0.560

MAIN DROP POINT at vertical riser 1083 Racine Street -0.721

1077 vapor extraction points

A. -0.005

B. -0.009

C. -0.019

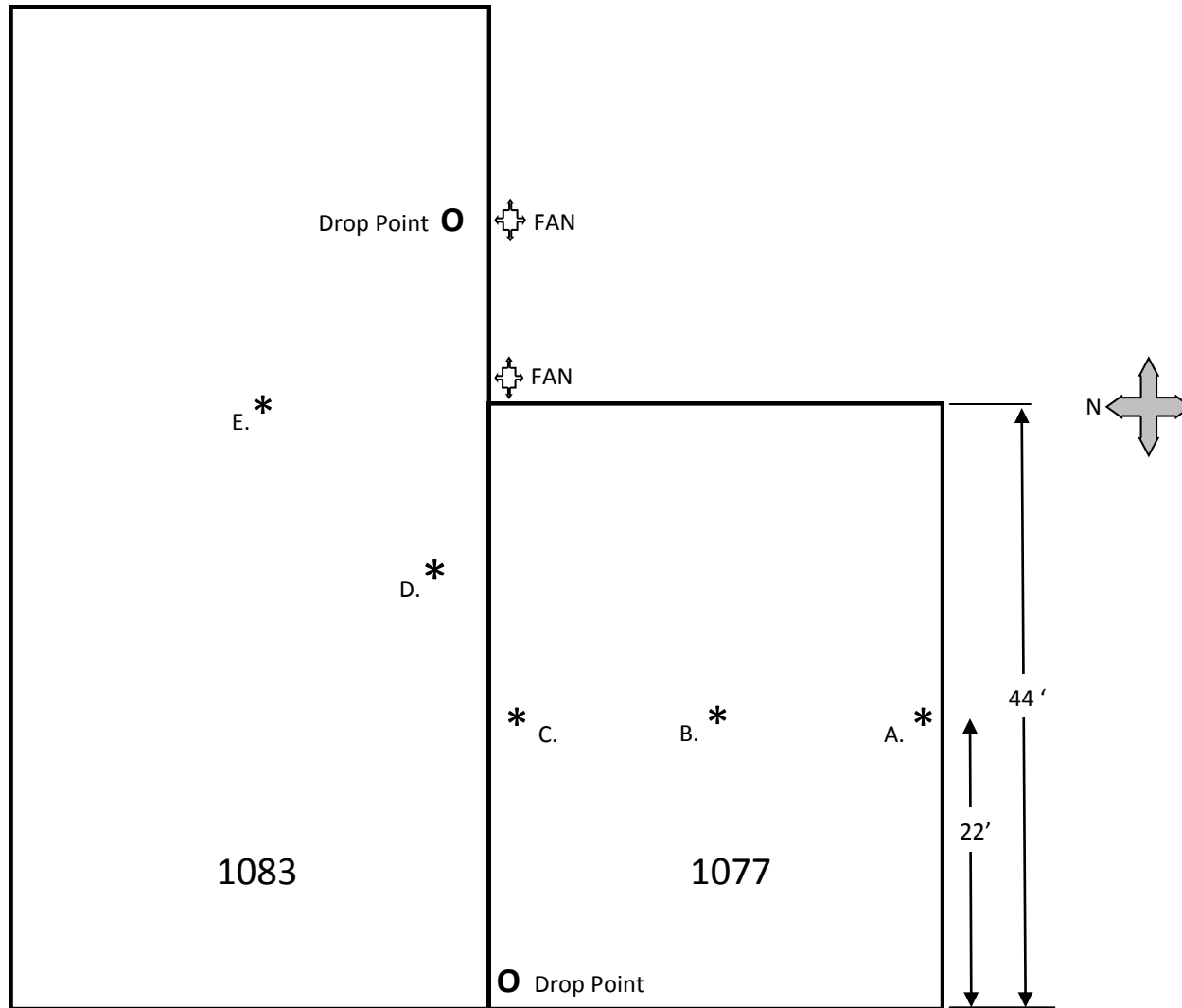
1083 vapor extraction points

D. -0.008

E. -0.013

Weather conditions: -3 degrees Fahrenheit; clear skies; 9 mph wind gusts





**Attachment B**

November 03, 2016

Heidi Woelfel  
CB & I  
3757 Maplewood Ct  
Hubertus, WI 53033

RE: Project: 631221367 BUSY BEA  
Pace Project No.: 40141014

Dear Heidi Woelfel:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2016. 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,



Christopher Hyska  
christopher.hyska@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

---

### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40141014001	MW-4	Water	10/27/16 14:30	10/28/16 15:25
40141014002	MW-105	Water	10/27/16 13:35	10/28/16 15:25
40141014003	PZ-108	Water	10/27/16 10:45	10/28/16 15:25
40141014004	PZ-111	Water	10/27/16 11:55	10/28/16 15:25
40141014005	PZ-113	Water	10/27/16 12:50	10/28/16 15:25
40141014006	TRIP BLANK	Water	10/27/16 00:00	10/28/16 15:25

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40141014001	MW-4	EPA 8260	MDS	64	PASI-G
40141014002	MW-105	EPA 8260	MDS	64	PASI-G
40141014003	PZ-108	EPA 8260	SMT	64	PASI-G
40141014004	PZ-111	EPA 8260	SMT	64	PASI-G
40141014005	PZ-113	EPA 8260	SMT	64	PASI-G
40141014006	TRIP BLANK	EPA 8260	SMT	64	PASI-G

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

---

**Method:** EPA 8260

**Description:** 8260 MSV

**Client:** CB&I\_WI

**Date:** November 03, 2016

**General Information:**

6 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: MW-4**      **Lab ID: 40141014001**      Collected: 10/27/16 14:30      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	71-43-2	
Bromobenzene	<4.6	ug/L	20.0	4.6	20		11/02/16 12:53	108-86-1	
Bromochloromethane	<6.8	ug/L	20.0	6.8	20		11/02/16 12:53	74-97-5	
Bromodichloromethane	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	75-27-4	
Bromoform	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	75-25-2	
Bromomethane	<48.7	ug/L	100	48.7	20		11/02/16 12:53	74-83-9	
n-Butylbenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	104-51-8	
sec-Butylbenzene	<43.7	ug/L	100	43.7	20		11/02/16 12:53	135-98-8	
tert-Butylbenzene	<3.6	ug/L	20.0	3.6	20		11/02/16 12:53	98-06-6	
Carbon tetrachloride	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	56-23-5	
Chlorobenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	108-90-7	
Chloroethane	<7.5	ug/L	20.0	7.5	20		11/02/16 12:53	75-00-3	
Chloroform	<50.0	ug/L	100	50.0	20		11/02/16 12:53	67-66-3	
Chloromethane	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	74-87-3	
2-Chlorotoluene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	95-49-8	
4-Chlorotoluene	<4.3	ug/L	20.0	4.3	20		11/02/16 12:53	106-43-4	
1,2-Dibromo-3-chloropropane	<43.3	ug/L	100	43.3	20		11/02/16 12:53	96-12-8	
Dibromochloromethane	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	124-48-1	
1,2-Dibromoethane (EDB)	<3.6	ug/L	20.0	3.6	20		11/02/16 12:53	106-93-4	
Dibromomethane	<8.5	ug/L	20.0	8.5	20		11/02/16 12:53	74-95-3	
1,2-Dichlorobenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	95-50-1	
1,3-Dichlorobenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	541-73-1	
1,4-Dichlorobenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	106-46-7	
Dichlorodifluoromethane	<4.5	ug/L	20.0	4.5	20		11/02/16 12:53	75-71-8	
1,1-Dichloroethane	<4.8	ug/L	20.0	4.8	20		11/02/16 12:53	75-34-3	
1,2-Dichloroethane	<3.4	ug/L	20.0	3.4	20		11/02/16 12:53	107-06-2	
1,1-Dichloroethene	<8.2	ug/L	20.0	8.2	20		11/02/16 12:53	75-35-4	
cis-1,2-Dichloroethene	79.0	ug/L	20.0	5.1	20		11/02/16 12:53	156-59-2	
trans-1,2-Dichloroethene	<5.1	ug/L	20.0	5.1	20		11/02/16 12:53	156-60-5	
1,2-Dichloropropane	<4.7	ug/L	20.0	4.7	20		11/02/16 12:53	78-87-5	
1,3-Dichloropropane	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	142-28-9	
2,2-Dichloropropane	<9.7	ug/L	20.0	9.7	20		11/02/16 12:53	594-20-7	
1,1-Dichloropropene	<8.8	ug/L	20.0	8.8	20		11/02/16 12:53	563-58-6	
cis-1,3-Dichloropropene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	10061-01-5	
trans-1,3-Dichloropropene	<4.6	ug/L	20.0	4.6	20		11/02/16 12:53	10061-02-6	
Diisopropyl ether	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	108-20-3	
Ethylbenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	100-41-4	
Hexachloro-1,3-butadiene	<42.1	ug/L	100	42.1	20		11/02/16 12:53	87-68-3	
Isopropylbenzene (Cumene)	<2.9	ug/L	20.0	2.9	20		11/02/16 12:53	98-82-8	
p-Isopropyltoluene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	99-87-6	
Methylene Chloride	<4.7	ug/L	20.0	4.7	20		11/02/16 12:53	75-09-2	
Methyl-tert-butyl ether	<3.5	ug/L	20.0	3.5	20		11/02/16 12:53	1634-04-4	
Naphthalene	<50.0	ug/L	100	50.0	20		11/02/16 12:53	91-20-3	
n-Propylbenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	103-65-1	
Styrene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	100-42-5	
1,1,1,2-Tetrachloroethane	<3.6	ug/L	20.0	3.6	20		11/02/16 12:53	630-20-6	

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### ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: MW-4**      **Lab ID: 40141014001**      Collected: 10/27/16 14:30      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<5.0	ug/L	20.0	5.0	20		11/02/16 12:53	79-34-5	
Tetrachloroethene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	127-18-4	
Toluene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	108-88-3	
1,2,3-Trichlorobenzene	<42.7	ug/L	100	42.7	20		11/02/16 12:53	87-61-6	
1,2,4-Trichlorobenzene	<44.2	ug/L	100	44.2	20		11/02/16 12:53	120-82-1	
1,1,1-Trichloroethane	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	71-55-6	
1,1,2-Trichloroethane	<3.9	ug/L	20.0	3.9	20		11/02/16 12:53	79-00-5	
Trichloroethene	<6.6	ug/L	20.0	6.6	20		11/02/16 12:53	79-01-6	
Trichlorofluoromethane	<3.7	ug/L	20.0	3.7	20		11/02/16 12:53	75-69-4	
1,2,3-Trichloropropane	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	96-18-4	
1,2,4-Trimethylbenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	95-63-6	
1,3,5-Trimethylbenzene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	108-67-8	
Vinyl chloride	2060	ug/L	20.0	3.5	20		11/02/16 12:53	75-01-4	
m&p-Xylene	<20.0	ug/L	40.0	20.0	20		11/02/16 12:53	179601-23-1	
o-Xylene	<10.0	ug/L	20.0	10.0	20		11/02/16 12:53	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	70-130		20		11/02/16 12:53	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		20		11/02/16 12:53	1868-53-7	
Toluene-d8 (S)	103	%	70-130		20		11/02/16 12:53	2037-26-5	

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## ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: MW-105**      **Lab ID: 40141014002**      Collected: 10/27/16 13:35      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	<b>2.1J</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	71-43-2	
Bromobenzene	<b>&lt;0.58</b>	ug/L	2.5	0.58	2.5		11/02/16 13:14	108-86-1	
Bromochloromethane	<b>&lt;0.85</b>	ug/L	2.5	0.85	2.5		11/02/16 13:14	74-97-5	
Bromodichloromethane	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	75-27-4	
Bromoform	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	75-25-2	
Bromomethane	<b>&lt;6.1</b>	ug/L	12.5	6.1	2.5		11/02/16 13:14	74-83-9	
n-Butylbenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	104-51-8	
sec-Butylbenzene	<b>&lt;5.5</b>	ug/L	12.5	5.5	2.5		11/02/16 13:14	135-98-8	
tert-Butylbenzene	<b>&lt;0.45</b>	ug/L	2.5	0.45	2.5		11/02/16 13:14	98-06-6	
Carbon tetrachloride	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	56-23-5	
Chlorobenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	108-90-7	
Chloroethane	<b>&lt;0.94</b>	ug/L	2.5	0.94	2.5		11/02/16 13:14	75-00-3	
Chloroform	<b>&lt;6.2</b>	ug/L	12.5	6.2	2.5		11/02/16 13:14	67-66-3	
Chloromethane	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	74-87-3	
2-Chlorotoluene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	95-49-8	
4-Chlorotoluene	<b>&lt;0.53</b>	ug/L	2.5	0.53	2.5		11/02/16 13:14	106-43-4	
1,2-Dibromo-3-chloropropane	<b>&lt;5.4</b>	ug/L	12.5	5.4	2.5		11/02/16 13:14	96-12-8	
Dibromochloromethane	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	124-48-1	
1,2-Dibromoethane (EDB)	<b>&lt;0.44</b>	ug/L	2.5	0.44	2.5		11/02/16 13:14	106-93-4	
Dibromomethane	<b>&lt;1.1</b>	ug/L	2.5	1.1	2.5		11/02/16 13:14	74-95-3	
1,2-Dichlorobenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	95-50-1	
1,3-Dichlorobenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	541-73-1	
1,4-Dichlorobenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	106-46-7	
Dichlorodifluoromethane	<b>&lt;0.56</b>	ug/L	2.5	0.56	2.5		11/02/16 13:14	75-71-8	
1,1-Dichloroethane	<b>&lt;0.60</b>	ug/L	2.5	0.60	2.5		11/02/16 13:14	75-34-3	
1,2-Dichloroethane	<b>&lt;0.42</b>	ug/L	2.5	0.42	2.5		11/02/16 13:14	107-06-2	
1,1-Dichloroethene	<b>&lt;1.0</b>	ug/L	2.5	1.0	2.5		11/02/16 13:14	75-35-4	
cis-1,2-Dichloroethene	<b>34.5</b>	ug/L	2.5	0.64	2.5		11/02/16 13:14	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;0.64</b>	ug/L	2.5	0.64	2.5		11/02/16 13:14	156-60-5	
1,2-Dichloropropane	<b>&lt;0.58</b>	ug/L	2.5	0.58	2.5		11/02/16 13:14	78-87-5	
1,3-Dichloropropane	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	142-28-9	
2,2-Dichloropropane	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	594-20-7	
1,1-Dichloropropene	<b>&lt;1.1</b>	ug/L	2.5	1.1	2.5		11/02/16 13:14	563-58-6	
cis-1,3-Dichloropropene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	10061-01-5	
trans-1,3-Dichloropropene	<b>&lt;0.57</b>	ug/L	2.5	0.57	2.5		11/02/16 13:14	10061-02-6	
Diisopropyl ether	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	108-20-3	
Ethylbenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	100-41-4	
Hexachloro-1,3-butadiene	<b>&lt;5.3</b>	ug/L	12.5	5.3	2.5		11/02/16 13:14	87-68-3	
Isopropylbenzene (Cumene)	<b>&lt;0.36</b>	ug/L	2.5	0.36	2.5		11/02/16 13:14	98-82-8	
p-Isopropyltoluene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	99-87-6	
Methylene Chloride	<b>&lt;0.58</b>	ug/L	2.5	0.58	2.5		11/02/16 13:14	75-09-2	
Methyl-tert-butyl ether	<b>0.50J</b>	ug/L	2.5	0.44	2.5		11/02/16 13:14	1634-04-4	
Naphthalene	<b>&lt;6.2</b>	ug/L	12.5	6.2	2.5		11/02/16 13:14	91-20-3	
n-Propylbenzene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	103-65-1	
Styrene	<b>&lt;1.2</b>	ug/L	2.5	1.2	2.5		11/02/16 13:14	100-42-5	
1,1,1,2-Tetrachloroethane	<b>&lt;0.45</b>	ug/L	2.5	0.45	2.5		11/02/16 13:14	630-20-6	

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## ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: MW-105**      **Lab ID: 40141014002**      Collected: 10/27/16 13:35      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.62	ug/L	2.5	0.62	2.5		11/02/16 13:14	79-34-5	
Tetrachloroethene	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	127-18-4	
Toluene	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	108-88-3	
1,2,3-Trichlorobenzene	<5.3	ug/L	12.5	5.3	2.5		11/02/16 13:14	87-61-6	
1,2,4-Trichlorobenzene	<5.5	ug/L	12.5	5.5	2.5		11/02/16 13:14	120-82-1	
1,1,1-Trichloroethane	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	71-55-6	
1,1,2-Trichloroethane	<0.49	ug/L	2.5	0.49	2.5		11/02/16 13:14	79-00-5	
Trichloroethene	<0.83	ug/L	2.5	0.83	2.5		11/02/16 13:14	79-01-6	
Trichlorofluoromethane	<0.46	ug/L	2.5	0.46	2.5		11/02/16 13:14	75-69-4	
1,2,3-Trichloropropane	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	96-18-4	
1,2,4-Trimethylbenzene	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	95-63-6	
1,3,5-Trimethylbenzene	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	108-67-8	
Vinyl chloride	183	ug/L	2.5	0.44	2.5		11/02/16 13:14	75-01-4	
m&p-Xylene	<2.5	ug/L	5.0	2.5	2.5		11/02/16 13:14	179601-23-1	
o-Xylene	<1.2	ug/L	2.5	1.2	2.5		11/02/16 13:14	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		2.5		11/02/16 13:14	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		2.5		11/02/16 13:14	1868-53-7	
Toluene-d8 (S)	101	%	70-130		2.5		11/02/16 13:14	2037-26-5	

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### ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: PZ-108**      **Lab ID: 40141014003**      Collected: 10/27/16 10:45      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		11/01/16 18:12	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		11/01/16 18:12	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		11/01/16 18:12	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 18:12	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		11/01/16 18:12	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		11/01/16 18:12	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		11/01/16 18:12	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		11/01/16 18:12	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		11/01/16 18:12	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		11/01/16 18:12	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		11/01/16 18:12	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		11/01/16 18:12	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		11/01/16 18:12	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		11/01/16 18:12	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		11/01/16 18:12	75-35-4	
cis-1,2-Dichloroethene	0.28J	ug/L	1.0	0.26	1		11/01/16 18:12	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 18:12	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		11/01/16 18:12	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		11/01/16 18:12	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		11/01/16 18:12	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		11/01/16 18:12	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		11/01/16 18:12	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		11/01/16 18:12	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		11/01/16 18:12	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		11/01/16 18:12	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		11/01/16 18:12	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		11/01/16 18:12	630-20-6	

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### ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: PZ-108**      **Lab ID: 40141014003**      Collected: 10/27/16 10:45      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		11/01/16 18:12	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		11/01/16 18:12	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 18:12	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		11/01/16 18:12	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		11/01/16 18:12	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		11/01/16 18:12	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		11/01/16 18:12	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		11/01/16 18:12	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:12	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/01/16 18:12	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		11/01/16 18:12	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/01/16 18:12	2037-26-5	

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### ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: PZ-111**      **Lab ID: 40141014004**      Collected: 10/27/16 11:55      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		11/01/16 18:33	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		11/01/16 18:33	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		11/01/16 18:33	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 18:33	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		11/01/16 18:33	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		11/01/16 18:33	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		11/01/16 18:33	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		11/01/16 18:33	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		11/01/16 18:33	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		11/01/16 18:33	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		11/01/16 18:33	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		11/01/16 18:33	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		11/01/16 18:33	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		11/01/16 18:33	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		11/01/16 18:33	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 18:33	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 18:33	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		11/01/16 18:33	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		11/01/16 18:33	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		11/01/16 18:33	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		11/01/16 18:33	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		11/01/16 18:33	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		11/01/16 18:33	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		11/01/16 18:33	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		11/01/16 18:33	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		11/01/16 18:33	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		11/01/16 18:33	630-20-6	

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### ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: PZ-111**      **Lab ID: 40141014004**      Collected: 10/27/16 11:55      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		11/01/16 18:33	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		11/01/16 18:33	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 18:33	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		11/01/16 18:33	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		11/01/16 18:33	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		11/01/16 18:33	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		11/01/16 18:33	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		11/01/16 18:33	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:33	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/01/16 18:33	460-00-4	
Dibromofluoromethane (S)	96	%	70-130		1		11/01/16 18:33	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/01/16 18:33	2037-26-5	

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### ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: PZ-113**      **Lab ID: 40141014005**      Collected: 10/27/16 12:50      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 8260							
Benzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		11/01/16 18:54	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		11/01/16 18:54	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		11/01/16 18:54	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 18:54	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		11/01/16 18:54	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		11/01/16 18:54	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		11/01/16 18:54	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		11/01/16 18:54	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		11/01/16 18:54	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		11/01/16 18:54	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		11/01/16 18:54	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		11/01/16 18:54	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		11/01/16 18:54	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		11/01/16 18:54	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		11/01/16 18:54	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 18:54	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 18:54	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		11/01/16 18:54	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		11/01/16 18:54	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		11/01/16 18:54	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		11/01/16 18:54	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		11/01/16 18:54	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		11/01/16 18:54	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		11/01/16 18:54	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		11/01/16 18:54	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		11/01/16 18:54	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		11/01/16 18:54	630-20-6	

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## ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: PZ-113**      **Lab ID: 40141014005**      Collected: 10/27/16 12:50      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		11/01/16 18:54	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		11/01/16 18:54	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 18:54	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		11/01/16 18:54	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		11/01/16 18:54	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		11/01/16 18:54	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		11/01/16 18:54	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		11/01/16 18:54	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		11/01/16 18:54	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/01/16 18:54	460-00-4	
Dibromofluoromethane (S)	93	%	70-130		1		11/01/16 18:54	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/01/16 18:54	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: TRIP BLANK**      **Lab ID: 40141014006**      Collected: 10/27/16 00:00      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 8260									
Benzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		11/01/16 16:48	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		11/01/16 16:48	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		11/01/16 16:48	74-83-9	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	104-51-8	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 16:48	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		11/01/16 16:48	98-06-6	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		11/01/16 16:48	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		11/01/16 16:48	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	74-87-3	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		11/01/16 16:48	106-43-4	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		11/01/16 16:48	96-12-8	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	124-48-1	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		11/01/16 16:48	106-93-4	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		11/01/16 16:48	74-95-3	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	95-50-1	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	541-73-1	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	106-46-7	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		11/01/16 16:48	75-71-8	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		11/01/16 16:48	75-34-3	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		11/01/16 16:48	107-06-2	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		11/01/16 16:48	75-35-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 16:48	156-59-2	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		11/01/16 16:48	156-60-5	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		11/01/16 16:48	78-87-5	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	142-28-9	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		11/01/16 16:48	594-20-7	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		11/01/16 16:48	563-58-6	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	10061-01-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		11/01/16 16:48	10061-02-6	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		11/01/16 16:48	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		11/01/16 16:48	98-82-8	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	99-87-6	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		11/01/16 16:48	75-09-2	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		11/01/16 16:48	1634-04-4	
Naphthalene	<2.5	ug/L	5.0	2.5	1		11/01/16 16:48	91-20-3	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	103-65-1	
Styrene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	100-42-5	
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		11/01/16 16:48	630-20-6	

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## ANALYTICAL RESULTS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

**Sample: TRIP BLANK**      **Lab ID: 40141014006**      Collected: 10/27/16 00:00      Received: 10/28/16 15:25      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 8260									
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		11/01/16 16:48	79-34-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	108-88-3	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		11/01/16 16:48	87-61-6	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		11/01/16 16:48	120-82-1	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		11/01/16 16:48	79-00-5	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		11/01/16 16:48	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		11/01/16 16:48	75-69-4	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	96-18-4	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	108-67-8	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		11/01/16 16:48	75-01-4	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		11/01/16 16:48	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		11/01/16 16:48	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/01/16 16:48	460-00-4	
Dibromofluoromethane (S)	95	%	70-130		1		11/01/16 16:48	1868-53-7	
Toluene-d8 (S)	101	%	70-130		1		11/01/16 16:48	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

QC Batch: 239769 Analysis Method: EPA 8260  
 QC Batch Method: EPA 8260 Analysis Description: 8260 MSV  
 Associated Lab Samples: 40141014001, 40141014002, 40141014003, 40141014004, 40141014005, 40141014006

METHOD BLANK: 1420488 Matrix: Water  
 Associated Lab Samples: 40141014001, 40141014002, 40141014003, 40141014004, 40141014005, 40141014006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	11/01/16 14:42	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	11/01/16 14:42	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	11/01/16 14:42	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	11/01/16 14:42	
1,1-Dichloroethane	ug/L	<0.24	1.0	11/01/16 14:42	
1,1-Dichloroethene	ug/L	<0.41	1.0	11/01/16 14:42	
1,1-Dichloropropene	ug/L	<0.44	1.0	11/01/16 14:42	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	11/01/16 14:42	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	11/01/16 14:42	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	11/01/16 14:42	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	11/01/16 14:42	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	11/01/16 14:42	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	11/01/16 14:42	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	11/01/16 14:42	
1,2-Dichloroethane	ug/L	<0.17	1.0	11/01/16 14:42	
1,2-Dichloropropane	ug/L	<0.23	1.0	11/01/16 14:42	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	11/01/16 14:42	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	11/01/16 14:42	
1,3-Dichloropropane	ug/L	<0.50	1.0	11/01/16 14:42	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	11/01/16 14:42	
2,2-Dichloropropane	ug/L	<0.48	1.0	11/01/16 14:42	
2-Chlorotoluene	ug/L	<0.50	1.0	11/01/16 14:42	
4-Chlorotoluene	ug/L	<0.21	1.0	11/01/16 14:42	
Benzene	ug/L	<0.50	1.0	11/01/16 14:42	
Bromobenzene	ug/L	<0.23	1.0	11/01/16 14:42	
Bromochloromethane	ug/L	<0.34	1.0	11/01/16 14:42	
Bromodichloromethane	ug/L	<0.50	1.0	11/01/16 14:42	
Bromoform	ug/L	<0.50	1.0	11/01/16 14:42	
Bromomethane	ug/L	<2.4	5.0	11/01/16 14:42	
Carbon tetrachloride	ug/L	<0.50	1.0	11/01/16 14:42	
Chlorobenzene	ug/L	<0.50	1.0	11/01/16 14:42	
Chloroethane	ug/L	<0.37	1.0	11/01/16 14:42	
Chloroform	ug/L	<2.5	5.0	11/01/16 14:42	
Chloromethane	ug/L	<0.50	1.0	11/01/16 14:42	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	11/01/16 14:42	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	11/01/16 14:42	
Dibromochloromethane	ug/L	<0.50	1.0	11/01/16 14:42	
Dibromomethane	ug/L	<0.43	1.0	11/01/16 14:42	
Dichlorodifluoromethane	ug/L	<0.22	1.0	11/01/16 14:42	
Diisopropyl ether	ug/L	<0.50	1.0	11/01/16 14:42	
Ethylbenzene	ug/L	<0.50	1.0	11/01/16 14:42	

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### QUALITY CONTROL DATA

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

METHOD BLANK: 1420488

Matrix: Water

Associated Lab Samples: 40141014001, 40141014002, 40141014003, 40141014004, 40141014005, 40141014006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	11/01/16 14:42	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	11/01/16 14:42	
m&p-Xylene	ug/L	<1.0	2.0	11/01/16 14:42	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	11/01/16 14:42	
Methylene Chloride	ug/L	<0.23	1.0	11/01/16 14:42	
n-Butylbenzene	ug/L	<0.50	1.0	11/01/16 14:42	
n-Propylbenzene	ug/L	<0.50	1.0	11/01/16 14:42	
Naphthalene	ug/L	<2.5	5.0	11/01/16 14:42	
o-Xylene	ug/L	<0.50	1.0	11/01/16 14:42	
p-Isopropyltoluene	ug/L	<0.50	1.0	11/01/16 14:42	
sec-Butylbenzene	ug/L	<2.2	5.0	11/01/16 14:42	
Styrene	ug/L	<0.50	1.0	11/01/16 14:42	
tert-Butylbenzene	ug/L	<0.18	1.0	11/01/16 14:42	
Tetrachloroethene	ug/L	<0.50	1.0	11/01/16 14:42	
Toluene	ug/L	<0.50	1.0	11/01/16 14:42	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	11/01/16 14:42	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	11/01/16 14:42	
Trichloroethene	ug/L	<0.33	1.0	11/01/16 14:42	
Trichlorofluoromethane	ug/L	<0.18	1.0	11/01/16 14:42	
Vinyl chloride	ug/L	<0.18	1.0	11/01/16 14:42	
4-Bromofluorobenzene (S)	%	102	70-130	11/01/16 14:42	
Dibromofluoromethane (S)	%	94	70-130	11/01/16 14:42	
Toluene-d8 (S)	%	102	70-130	11/01/16 14:42	

LABORATORY CONTROL SAMPLE: 1420489

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.4	107	70-131	
1,1,2,2-Tetrachloroethane	ug/L	50	48.4	97	67-130	
1,1,2-Trichloroethane	ug/L	50	49.7	99	70-130	
1,1-Dichloroethane	ug/L	50	52.8	106	70-133	
1,1-Dichloroethene	ug/L	50	50.0	100	70-130	
1,2,4-Trichlorobenzene	ug/L	50	52.1	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	53.8	108	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	50.8	102	70-130	
1,2-Dichlorobenzene	ug/L	50	48.2	96	70-130	
1,2-Dichloroethane	ug/L	50	49.9	100	70-130	
1,2-Dichloropropane	ug/L	50	50.4	101	70-130	
1,3-Dichlorobenzene	ug/L	50	49.3	99	70-130	
1,4-Dichlorobenzene	ug/L	50	47.7	95	70-130	
Benzene	ug/L	50	50.9	102	60-135	
Bromodichloromethane	ug/L	50	53.5	107	70-130	
Bromoform	ug/L	50	45.6	91	70-130	
Bromomethane	ug/L	50	37.8	76	33-130	

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### QUALITY CONTROL DATA

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

LABORATORY CONTROL SAMPLE: 1420489

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	51.2	102	70-138	
Chlorobenzene	ug/L	50	49.5	99	70-130	
Chloroethane	ug/L	50	53.5	107	51-130	
Chloroform	ug/L	50	54.6	109	70-130	
Chloromethane	ug/L	50	36.0	72	25-132	
cis-1,2-Dichloroethene	ug/L	50	55.2	110	69-130	
cis-1,3-Dichloropropene	ug/L	50	50.4	101	70-130	
Dibromochloromethane	ug/L	50	51.3	103	70-130	
Dichlorodifluoromethane	ug/L	50	47.3	95	23-130	
Ethylbenzene	ug/L	50	53.8	108	70-136	
Isopropylbenzene (Cumene)	ug/L	50	53.4	107	70-140	
m&p-Xylene	ug/L	100	105	105	70-138	
Methyl-tert-butyl ether	ug/L	50	59.6	119	66-138	
Methylene Chloride	ug/L	50	49.0	98	70-130	
o-Xylene	ug/L	50	53.3	107	70-134	
Styrene	ug/L	50	52.9	106	70-133	
Tetrachloroethene	ug/L	50	51.4	103	70-138	
Toluene	ug/L	50	52.5	105	70-130	
trans-1,2-Dichloroethene	ug/L	50	51.0	102	70-131	
trans-1,3-Dichloropropene	ug/L	50	50.6	101	69-130	
Trichloroethene	ug/L	50	53.1	106	70-130	
Trichlorofluoromethane	ug/L	50	53.9	108	50-150	
Vinyl chloride	ug/L	50	55.3	111	49-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			101	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1420846 1420847

Parameter	Units	40141014004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
1,1,1-Trichloroethane	ug/L	<0.50	50	50	51.3	52.0	103	104	70-134	1	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	45.9	47.0	92	94	67-130	2	20		
1,1,2-Trichloroethane	ug/L	<0.20	50	50	49.2	50.5	98	101	70-130	2	20		
1,1-Dichloroethane	ug/L	<0.24	50	50	49.5	50.9	99	102	70-134	3	20		
1,1-Dichloroethene	ug/L	<0.41	50	50	47.5	49.1	95	98	68-136	3	20		
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	51.6	53.4	103	107	62-139	3	20		
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	49.4	50.8	99	102	50-150	3	20		
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	49.6	50.5	99	101	70-130	2	20		
1,2-Dichlorobenzene	ug/L	<0.50	50	50	47.1	48.5	94	97	70-130	3	20		
1,2-Dichloroethane	ug/L	<0.17	50	50	46.5	49.2	93	98	70-130	6	20		
1,2-Dichloropropane	ug/L	<0.23	50	50	48.5	50.6	97	101	70-130	4	20		
1,3-Dichlorobenzene	ug/L	<0.50	50	50	47.7	49.8	95	100	70-131	4	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	46.4	48.2	93	96	70-130	4	20		

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1420846		1420847		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		40141014004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Benzene	ug/L	<0.50	50	50	49.3	51.1	99	102	57-138	4	20	
Bromodichloromethane	ug/L	<0.50	50	50	51.7	54.5	103	109	70-130	5	20	
Bromoform	ug/L	<0.50	50	50	43.8	45.7	88	91	70-130	4	20	
Bromomethane	ug/L	<2.4	50	50	40.5	45.9	80	91	33-130	12	27	
Carbon tetrachloride	ug/L	<0.50	50	50	50.4	51.1	101	102	70-138	1	20	
Chlorobenzene	ug/L	<0.50	50	50	48.6	50.7	97	101	70-130	4	20	
Chloroethane	ug/L	<0.37	50	50	50.1	51.6	100	103	51-130	3	20	
Chloroform	ug/L	<2.5	50	50	51.2	53.1	102	106	70-130	4	20	
Chloromethane	ug/L	<0.50	50	50	33.7	36.7	67	73	25-132	9	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	52.2	54.4	104	109	61-140	4	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	49.8	51.9	100	104	70-130	4	20	
Dibromochloromethane	ug/L	<0.50	50	50	51.0	52.9	102	106	70-130	4	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	44.2	45.0	88	90	23-130	2	20	
Ethylbenzene	ug/L	<0.50	50	50	52.5	54.7	105	109	70-138	4	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	52.2	54.3	104	109	70-152	4	20	
m&p-Xylene	ug/L	<1.0	100	100	104	108	104	108	70-140	4	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	55.5	57.2	111	114	66-139	3	20	
Methylene Chloride	ug/L	<0.23	50	50	45.7	47.7	91	95	70-130	4	20	
o-Xylene	ug/L	<0.50	50	50	51.5	54.6	103	109	70-134	6	20	
Styrene	ug/L	<0.50	50	50	51.3	53.8	103	108	70-138	5	20	
Tetrachloroethene	ug/L	<0.50	50	50	50.9	52.0	102	104	70-148	2	20	
Toluene	ug/L	<0.50	50	50	51.5	52.9	103	106	70-130	3	20	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	47.9	49.7	96	99	70-133	4	20	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	49.3	51.2	99	102	69-130	4	20	
Trichloroethene	ug/L	<0.33	50	50	51.3	52.8	103	106	70-131	3	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	51.7	52.8	103	106	50-150	2	20	
Vinyl chloride	ug/L	<0.18	50	50	52.0	54.6	104	109	49-133	5	20	
4-Bromofluorobenzene (S)	%						104	105	70-130			
Dibromofluoromethane (S)	%						98	96	70-130			
Toluene-d8 (S)	%						103	102	70-130			

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## QUALIFIERS

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

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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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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 at or above the adjusted LOD.

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-G Pace Analytical Services - Green Bay

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 631221367 BUSY BEA

Pace Project No.: 40141014

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40141014001	MW-4	EPA 8260	239769		
40141014002	MW-105	EPA 8260	239769		
40141014003	PZ-108	EPA 8260	239769		
40141014004	PZ-111	EPA 8260	239769		
40141014005	PZ-113	EPA 8260	239769		
40141014006	TRIP BLANK	EPA 8260	239769		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Pace Analytical Services, Inc.  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302



Project # **WO# : 40141014**

Client Name: CB&I



Courier:  Fed Ex  UPS  Client  Pace Other: \_\_\_\_\_

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROJ /Corr: \_\_\_\_\_ Biological Tissue is Frozen:  yes

Temp Blank Present:  yes  no  no

Person examining contents:  
Date: 10/28/16  
Initials: BA

Temp should be above freezing to 6°C for all sample except Biota.  
Frozen Biota Samples should be received ≤ 0°C.

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <u>no 1st relinquish time BH 10/28/16</u>
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>W</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lab Std #/ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	<u>309</u>	

Client Notification/ Resolution: \_\_\_\_\_ If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 10-31-16