From: Michelle Peed <MPeed@gilesengr.com>
Sent: Wednesday, August 31, 2022 3:30 PM
To: Grittner, Paul V - DNR
Subject: RE: Request for additional investigation - 333 N. Water St.
Attachments: Methane Sampling Results Table.pdf; 333 Water St Soil Analytical Table.pdf; Figure 2 (Detailed Site Map) 8-31-2022.pdf; Figure X1 (Remedial Excavation) 8-31-2022.pdf

CAUTION: This email originated from outside the organization.
Do not click links or open attachments unless you recognize the sender and know the content is safe.

Paul,

Attached are the most recent soil analytical results for the delineation of the TCE around MW-3 and SB-1. The excavation planned at MW-3 will be staying the same as originally proposed, as the planned area incorporates the 50 J ug/kg identified in MW-3. TCE was not detected in the surrounding MW-3A, MW-3B, and MW-3C samples. The TCE at SB-1 (48 J ug/kg) has been delineated by SB-1AA, SB-1BB, and SB-1CC. This area will be excavated and disposed of at WM's Orchard Ridge Landfill. The Material Management Plan has been revised to reflect this change and has been resubmitted via the RR Uploader portal today.

I have also attached the table of the methane sampling results from the three monitoring wells on site and from the soil gas probe we installed near SB-1, the thickest area of peat.

The excavation at MW-3 and SB-1 are planned for Sept 6th and 7th, therefore, we plan on abandoning the monitoring wells on site on September 2nd, prior to the excavations. Please let me know if you have any questions or comments.

Thank you,
Michelle

Michelle L. Peed, P.G.
Project Manager

GILES ENGINEERING ASSOCIATES, INC.
P: 262.544.0118
M: 414.467.3256

From: Grittner, Paul V - DNR <Paul.Grittner@wisconsin.gov>
Sent: Friday, August 12, 2022 4:09 PM
To: Michelle Peed <MPeed@gilesengr.com>
Subject: Request for additional investigation - 333 N. Water St.

Michelle,

The Department of Natural Resources has completed its review of the documents recently submitted for the 333 N Water St LLC site (BRRTS # 02-41-589921). The need to complete additional investigation has been identified.

The extent of soil contaminated with TCE at MW-3 and SB-1 is not defined. Further investigation is needed to determine if the TCE contamination is insignificant in degree and extent or if this contamination is an indication of a larger plume. This is necessary to complete the site investigation and to demonstrate the TCE contaminated soil will not be disposed at the Falk Landfill.

You have proposed segregating and landfilling contaminated soil at the MW-3 location. Demonstrating that TCE contamination identified there will also be removed by this remedial action, and taking the additional step of removing TCE contamination identified at SB-1, would support an argument for not investigating the potential for vapor intrusion once the building is constructed. A sub-slab vapor investigation may be needed if TCE impacted soil is known to be present on the property (under the building or not) once construction is complete.

Elevated methane concentrations were not identified at the locations sampled. However, reading were not collected in areas where peat (the expected source of the methane) was identified. Additional methane monitoring is therefore needed to confirm that it will not accumulate within the structure. At a minimum, readings need to be collected where peat was identified, preferably near SB-1 where the thickest peat layer was identified. The DNR still needs to review the methane results collected previously at the monitoring wells, and the methods used to obtain those measurements, before we can agree that methane will not pose a risk and approve your request to build on a historic fill site.

The information requested earlier this week also must also be provided. The DNR will review this and assess whether or not further investigation or information must be obtained.

Please contact me at the email or number listed below if you have any questions. I will otherwise follow up with you next week.

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Paul Grittner
Hydrogeologist - Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Phone: (414) 405-0764
paul.grittner@wisconsin.gov

dnr.wi.gov

Table 2
Soil Analytical Results
333 Water Street
Milwaukee, WI
Project Number 1E-2108005

Sample Location	**SB-1^**		**SB-1A**	**SB-1AA**	**SB-1B**	**SB-1BB**	**SB-1C**	**SB-1CC**	**SB-2^**			**SB-3^**			**SB-4^**		**NR 720 RCLs[1]**			**Background Threshold Value[2]**
Sample Depth (feet bgs)	2-4'	4-6'	2-4'	2-4'	2-4'	2-4'	2-4'	2-4'	2-4'	6-8'	8-10'	2-4'	6-8'	8-10'	2-4'	6-8'	**Soil to Groundwater Pathway**	**Direct Contact Pathway**		
Sample Date	1/20/17		8/19/22	8/19/22	8/19/22	8/19/22	8/19/22	8/19/22	1/20/17			1/20/17			1/20/17			**Non-Industrial Land Use**	**Industrial Land Use**	
Saturated/Unsaturated (S or U)	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U				
Fill/Native (F or N)	F	F	F	F	F	F	F	F	F	F	N	F	F	F/N	F	F				
PID (instrument units)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Detected VOCs (µg/kg)																				
1,1,2-Trichloroethane	<33	<33	<21.6	<24.4	<22.3	<22.3	<24.3	<23.4	<33	--	<33	<33	--	<33	<33	<33	3.2	1,590	7,010	Not Applicable
1,2,4-Trimethylbenzene	<78	<78	<17.7	<20.0	53.9 J	<18.3	<19.9	<19.1	<78	--	<78	<78	--	<78	<78	<78	1,379	219,000	219,000	
1,3,5-Trimethylbenzene	<89	<89	<19.1	<21.6	44.6 J	<19.7	<21.5	<20.7	<89	--	<89	<89	--	<89	<89	<89	1,379	182,000	182,000	
Carbon tetrachloride	<21	<21	<13.1	<14.7	<13.5	<13.5	22.5 J	<14.1	<21	--	<21	<21	--	<21	<21	<21	3.9	916	4,030	
cis-1,2-Dichloroethene	<21	<21	<12.7	<14.3	124	<13.1	16.6 J	<13.8	<21	--	<21	<21	--	<21	<21	<21	41	156,000	2,340,000	
Ethylbenzene	<27	<27	<14.1	<15.9	<14.6	<14.6	<15.9	<15.3	<27	--	<27	<27	--	<27	<27	<27	1,570	8,020	35,400	
Methylene Chloride	<220	<220	<16.5	<18.6	<17.0	19.0	<18.6	<17.9	<220	--	<220	<220	--	<220	<220	<220	2.6	61,800	1,150,000	
Naphthalene	<87	<87	861	517	1030	107	700	<20.0	<87	--	122.5 J	<87	--	<87	<87	<87	658	5,520	24,100	
Toluene	<31	<31	18.9 J	<16.9	26.6 J	<15.4	<16.9	<16.2	<31	--	<31	<31	--	58 J	<31	<31	1,107	818,000	818,000	
trans-1,2-Dichloroethene	<24	<24	<12.8	<14.5	64.4	<13.2	<14.4	<13.9	<24	--	<24	<24	--	<24	<24	<24	63	1,560,000	1,850,000	
Trichloroethene (TCE)	48 J	<42	106	<25.0	(1800)	<22.9	(1810)	<24.0	<42	--	<42	<42	--	<42	<42	<42	3.6	1,260	8,410	
Xylenes, Total	<99	<99	<42.9	<48.3	68.5 J	<44.2	<48.3	<46.4	<99	--	<99	<99	--	38 J	<99	<99	3,960	260,000	260,000	
Detected PAHs (µg/kg)																				
1-Methylnaphthalene	21.8 J	--	--	--	--	--	--	--	<14.3	--	--	29 J	--	--	<14.3	--	NS	17,600	72,700	Not Applicable
2-Methylnaphthalene	<11.9	--	--	--	--	--	--	--	<11.9	--	--	17 J	--	--	<11.9	--	NS	239,000	3,010,000	
Acenaphthene	82	--	--	--	--	--	--	--	<13.5	--	--	70	--	--	<13.5	--	NS	3,590,000	45,200,000	
Acenaphthylene	<12	--	--	--	--	--	--	--	<12	--	--	91	--	--	<12	--	NS	NS	NS	
Anthracene	230	--	--	--	--	--	--	--	<12.4	--	--	320	--	--	<12.4	--	196,949	17,900,000	100,000,000	
Benzo(a)anthracene	410	--	--	--	--	--	--	--	<11.6	--	--	730	--	--	17.8 J	--	NS	1,140	20,800	
Benzo(a)pyrene	(380)	--	--	--	--	--	--	--	<11.3	--	--	(750)	--	--	12.8 J	--	470	115	2,110	
Benzo(b)fluoranthene	560	--	--	--	--	--	--	--	<13	--	--	990	--	--	20.5 J	--	478	1,150	21,100	
Benzo(g,h,i)perylene	275	--	--	--	--	--	--	--	<11.4	--	--	620	--	--	13.6 J	--	NS	NS	NS	
Benzo(k)fluoranthene	235	--	--	--	--	--	--	--	<11.7	--	--	320	--	--	<11.7	--	NS	11,500	211,000	
Chrysene	470	--	--	--	--	--	--	--	<13.8	--	--	790	--	--	19 J	--	144	115,000	2,110,000	
Dibenz(a,h)anthracene	55	--	--	--	--	--	--	--	<14.2	--	--	97	--	--	<14.2	--	NS	115	2,110	
Fluoranthene	1,030	--	--	--	--	--	--	--	<13.1	--	--	1,570	--	--	37 J	--	88,878	2,390,000	30,100,000	
Fluorene	56	--	--	--	--	--	--	--	<13.5	--	--	55	--	--	<13.5	--	14,830	2,390,000	30,100,000	
Indeno(1,2,3-cd)pyrene	230	--	--	--	--	--	--	--	<15	--	--	470	--	--	<15	--	NS	1,150	21,100	
Naphthalene	16.7	--	--	--	--	--	--	--	<12.2	--	--	30.7 J	--	--	<12.2	--	658	5,520	24,100	
Phenanthrene	780	--	--	--	--	--	--	--	<10.9	--	--	1,070	--	--	19.1 J	--	NS	NS	NS	
Pyrene	900	--	--	--	--	--	--	--	<12.6	--	--	1,640	--	--	28 J	--	54,546	1,790,000	22,600,000	
Detected RCRA Metals (mg/kg)																				
Arsenic	[9.21]	--	--	--	--	--	--	--	--	**5.46**	--	--	**3.48**	--	**3.23**	--	0.584	0.677	3.00	8.00
Barium	99.4	--	--	--	--	--	--	--	--	126	--	--	86.8	--	81	--	165	15,300	100,000	364
Cadmium	0.152 J	--	--	--	--	--	--	--	--	<0.08	--	--	<0.02	--	<0.02	--	0.752	71.1	985	1.00
Chromium (Total)	15.2	--	--	--	--	--	--	--	--	13.7	--	--	16.1	--	23.4	--	360,000	NS	NS	44
Lead	143	--	--	--	--	--	--	--	--	(711)	--	--	197	--	21.6	--	27	400	800	52
Mercury	<0.0131	--	--	--	--	--	--	--	--	1.32	--	--	0.239	--	0.0493	--	0.208	3.13	3.13	NS
Selenium	<0.52	--	--	--	--	--	--	--	--	<0.52	--	--	<0.52	--	<0.52	--	0.520	391	5,840	NS
Silver	<0.57	--	--	--	--	--	--	--	--	<0.57	--	--	<0.57	--	<0.57	--	0.849	391	5,840	NS

Notes:

[1]Wisconsin Administrative Code Natural Resources Chapter (NR) 720 Residual Contaminant Levels **(RCLs)** obtained from the Wisconsin Department of Natural Resources (WDNR) "RCL spreadsheet", last updated December 2018.

[2]Background Threshold Value (BTV) only applies to metals. Concentrations below the BTV are considered naturally occuring, however the Soil to Groundwater Pathway value still applies.

^Samples collected by The Sigma Group

PID: Photoionization Detector
VOCs: Volatile Organic Compounds
PAHs: Polynuclear Aromatic Hydrocarbons
RCRA: Resource Conservation and Recovery Act
<xx.x: Result detected below the method detection limit of x
xx.x: Underlined results exceed the Soil to Groundwater Pathway RCL
(xx.x): Parenthesized results exceed the Non-Industrial Direct Contact RCL
[xx.x]: Bracketed results exceed the Non-Industrial and Industrial Direct Contact RCL
xx.x: Black bolded metals results are above a direct contact RCL but below its BTV. Note that the BTV for arsenic superceeds the Direct Contact RCL.

mg/kg: Milligrams per kilogram; equivalent to parts per million (ppm)
µg/kg: Micrograms per kilogram; equivalent to parts per billion (ppb)
J: Result is an estimate value (detected between the laboratory method detection limit and reporting limit)
B: Analyte detected in the laboratory method blank
NS: No Standard Established
-- : Not Analyzed

Table 2 (Continued)
Soil Analytical Results
333 Water Street
Milwaukee, WI
Project Number 1E-2108005

Sample Location	**MW-1^**		**MW-2^**		**MW-3^**		**MW-3D**		**MW-3A**		**MW-3AA**	**MW-3B**		**MW-3BB**	**MW-3C**		**MW-3CC**	**NR 720 RCLs[1]**			**Background Threshold Value[2]**
Sample Depth (feet bgs)	2.5-5'	5-7.5'	2.5-5'	12.5-15'	2.5-5'	7.5-10'	5-7'	10-12'	8-10'	8-10'	8-10'	8-10'	8-10'	8-10'	8-10'	8-10'	8-10'	**Soil to Groundwater Pathway**	**Direct Contact Pathway**		
Sample Date	1/20/17		1/20/17		1/20/17		5/6/22		8/17/21	8/19/22	8/17/21	8/17/21	8/19/22	8/17/21	8/17/21	8/19/22	8/17/21		**Non-Industrial Land Use**	**Industrial Land Use**	
Saturated/Unsaturated (S or U)	U	U	U	S	U	S	S	S	S	U	S	S	U	S	S	U	S				
Fill/Native (F or N)	F	F	F	F	F	F	F	F	N	N	F/N	F/N	V	F	N	N	N				
PID (instrument units)	0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.2	2.2		3.8	4.4		3.6	6.2		4.0				
Detected VOCs (µg/kg)																					
1,1,2-Trichloroethane	<33	<33	<33	<33	<33	<33	--	--	--	<33.3	--	--	<31.0	--	--	<30.9	--	3.2	1,590	7,010	Not Applicable
1,2,4-Trimethylbenzene	<78	<78	<78	<78	<78	<78	--	--	--	35.6 J	--	--	<25.3	--	--	<25.3	--	1,379	219,000	219,000	
1,3,5-Trimethylbenzene	<89	<89	<89	<89	<89	<89	--	--	--	<29.4	--	--	<27.4	--	--	<27.4	--	1,379	182,000	182,000	
Carbon tetrachloride	<21	<21	<21	<21	<21	<21	--	--	--	<20.1	--	--	<18.7	--	--	<18.7	--	3.9	916	4,030	
cis-1,2-Dichloroethene	<21	<21	<21	<21	<21	<21	--	--	--	<19.6	--	--	<18.2	--	--	<18.2	--	41	156,000	2,340,000	
Ethylbenzene	<27	<27	<27	<27	<27	<27	--	--	--	<21.8	--	--	<20.2	--	--	<20.2	--	1,570	8,020	35,400	
Methylene Chloride	<220	<220	<220	<220	<220	<220	--	--	--	<25.4	--	--	<23.6	--	--	<23.6	--	2.6	61,800	1,150,000	
Naphthalene	<87	<87	<87	<87	<87	680	--	--	--	<28.5	--	--	54.7 J	--	--	<26.5	--	658	5,520	24,100	
Toluene	<31	<31	<31	<31	<31	<31	--	--	--	<23.0	--	--	<21.4	--	--	<21.4	--	1,107	818,000	818,000	
trans-1,2-Dichloroethene	<24	<24	<24	<24	<24	<24	--	--	--	<19.7	--	--	<18.4	--	--	<18.4	--	63	1,560,000	1,850,000	
Trichloroethene (TCE)	<42	<42	<42	<42	<42	50 J	--	--	--	<34.2	--	--	<31.8	--	--	<31.8	--	3.6	1,260	8,410	
Xylenes, Total	<99	<99	<99	<99	<99	<99	--	--	--	<66.0	--	--	<61.4	--	--	<61.4	--	3,960	260,000	260,000	
Detected PAHs (µg/kg)																					
1-Methylnaphthalene	15.7 J	--	14.6 J	--	126	--	--	--	--		--	--		--	--		--	NS	17,600	72,700	Not Applicable
2-Methylnaphthalene	14.2 J	--	<11.9	--	116	--	--	--	--		--	--		--	--		--	NS	239,000	3,010,000	
Acenaphthene	60	--	18.6 J	--	450	--	--	--	--		--	--		--	--		--	NS	3,590,000	45,200,000	
Acenaphthylene	56	--	15.7 J	--	90	--	--	--	--		--	--		--	--		--	NS	NS	NS	
Anthracene	340	--	90	--	1,220	--	--	--	--		--	--		--	--		--	196,949	17,900,000	100,000,000	
Benzo(a)anthracene	1,000	--	109	--	(2,940)	--	--	--	--		--	--		--	--		--	NS	1,140	20,800	
Benzo(a)pyrene	(1,010)	--	(1,070)	--	[2,820]	--	--	--	--		--	--		--	--		--	470	115	2,110	
Benzo(b)fluoranthene	(1,350)	--	149	--	(4,000)	--	--	--	--		--	--		--	--		--	478	1,150	21,100	
Benzo(g,h,i)perylene	730	--	82	--	2,020	--	--	--	--		--	--		--	--		--	NS	NS	NS	
Benzo(k)fluoranthene	420	--	57	--	1,290	--	--	--	--		--	--		--	--		--	NS	11,500	211,000	
Chrysene	1,050	--	133	--	3,200	--	--	--	--		--	--		--	--		--	144	115,000	2,110,000	
Dibenz(a,h)anthracene	(133)	--	14.9 J	--	(470)	--	--	--	--		--	--		--	--		--	NS	115	2,110	
Fluoranthene	1,900	--	294	--	6,000	--	--	--	--		--	--		--	--		--	88,878	2,390,000	30,100,000	
Fluorene	56	--	19.7 J	--	370	--	--	--	--		--	--		--	--		--	14,830	2,390,000	30,100,000	
Indeno(1,2,3-cd)pyrene	560	--	64	--	(1,740)	--	--	--	--		--	--		--	--		--	NS	1,150	21,100	
Naphthalene	27 J	--	12.2	--	104	--	--	--	--		--	--		--	--		--	658	5,520	24,100	
Phenanthrene	870	--	292	--	4,200	--	--	--	--		--	--		--	--		--	NS	NS	NS	
Pyrene	1,970	--	292	--	5,200	--	--	--	--		--	--		--	--		--	54,546	1,790,000	22,600,000	
Detected RCRA Metals (mg/kg)																					
Arsenic	--	**1.29**	--	<0.66	--	**5.8**	--	--	--		--	--		--	--		--	0.584	0.677	3.00	8.00
Barium	--	14.2	--	28.6	--	4,230	--	--	--		--	--		--	--		--	165	15,300	100,000	364
Cadmium	--	<0.02	--	<0.16	--	5.42	--	--	--		--	--		--	--		--	0.752	71.1	985	1.00
Chromium (Total)	--	5.76	--	7.48	--	29.6	--	--	--		--	--		--	--		--	360,000	NS	NS	44
Lead	--	85.6	--	6.01	--	[14,700]	343	159	78		240	74		16	200		100	27	400	800	52
Mercury	--	0.029 J	--	0.086	--	1.4	--	--	--		--	--		--	--		--	0.208	3.13	3.13	NS
Selenium	--	<0.52	--	<0.52	--	<0.52	--	--	--		--	--		--	--		--	0.520	391	5,840	NS
Silver	--	<0.57	--	<0.57	--	<0.57	--	--	--		--	--		--	--		--	0.849	391	5,840	NS

Notes:

[1]Wisconsin Administrative Code Natural Resources Chapter (NR) 720 Residual Contaminant Levels **(RCLs)** obtained from the Wisconsin Department of Natural Resources (WDNR) "RCL spreadsheet", last updated December 2018.

[2]Background Threshold Value (BTV) only applies to metals. Concentrations below the BTV are considered naturally occuring, however the Soil to Groundwater Pathway value still applies.

^Samples collected by The Sigma Group

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xx.x: Black bolded metals results are above a direct contact RCL but below its BTV. Note that the BTV for arsenic superceeds the Direct Contact RCL.

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J: Result is an estimate value (detected between the laboratory method detection limit and reporting limit)
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NS: No Standard Established
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Table 2 (Continued)
Soil Analytical Results
333 Water Street
Milwaukee, WI
Project Number 1E-2108005

Sample Location	**B-1**		**B-3**		**B-4**		**B-6***		**B-7**		**B-8**		**NR 720 RCLs[1]**			**Background Threshold Value[2]**
Sample Depth (feet bgs)	0-4'	6-8'	0-2'	6-8'	0-2'	8-10'	0-2'	6-8'	0-4'	8-10'	0-4'	8-10'	**Soil to Groundwater Pathway**	**Direct Contact Pathway**		
Sample Date	7/28/21		8/9/21		8/17/21		7/29/21		9/10/21		8/1/21			**Non-Industrial Land Use**	**Industrial Land Use**	
Saturated/Unsaturated (S or U)	U	U	U	S	U	U	U	U	U	U	U	S				
Fill/Native (F or N)	F	F	F	F/N	F	N	F	F	F	F	F	F				
PID (instrument units)	5.9	4.5	9.0	10.7	12.4	10.0	9.1	6.8	0.0	0.0	0.0	0.0				
Detected VOCs (µg/kg)																
1,1,2-Trichloroethane	<22	<20	<21	>28	<21	<38	<20	<22	<22	<32	<20	<21	**3.2**	**1,590**	**7,010**	**Not Applicable**
1,2,4-Trimethylbenzene	<23	<21	<21	<29	<21	<39	<21	43 J	<22	<32	<20	<21	**1,379**	**219,000**	**219,000**	
1,3,5-Trimethylbenzene	<24	<22	<22	<31	<22	<41	<22	<23	<23	<34	<22	<22	**1,379**	**182,000**	**182,000**	
Carbon tetrachloride	<24	<22	<23	<31	<23	<42	<22	<24	<24	<35	<22	<23	**3.9**	**916**	**4,030**	
cis-1,2-Dichloroethene	<26	<24	<24	<33	<24	<44	<23	<25	<25	<37	<23	<24	**41**	**156,000**	**2,340,000**	
Ethylbenzene	<12	<11	<11	<15	<11	<20	<11	12 J	<11	<16	<10	<11	**1,570**	**8,020**	**35,400**	
Methylene Chloride	<100	<95	<93	<130	<96	<180	<94	<100	<100	<150	<93	<96	**2.6**	**61,800**	**1,150,000**	
Naphthalene	<21	<19	25 J	<27	<20	13 J	<19	210	360	<30	21 J	<20	**658**	**5,520**	**24,100**	
Toluene	<9.3	<8.6	12 J	13 J	<8.6	<16	<8.4	74	<9.0	<13	<8.4	<8.4	**1,107**	**818,000**	**818,000**	
trans-1,2-Dichloroethene	<22	<20	<21	<28	<21	<38	<20	<21	<21	<31	<20	<20	**63**	**1,560,000**	**1,850,000**	
Trichloroethene (TCE)	<10	<9.6	<9.7	<13	<9.6	<18	<9.4	<10	<10	<15	<9.4	<9.4	**3.6**	**1,260**	**8,410**	
Xylenes, Total	<14	<13	<13	<18	<13	<24	<13	90	23 J	<20	<13	<13	**3,960**	**260,000**	**260,000**	
Detected PAHs (µg/kg)																
1-Methylnaphthalene	<9.0	<8.5	17 J	<11	<8.6	<12	140	<8.9	1,600	<11	22 J	<8.8	**NS**	**17,600**	**72,700**	**Not Applicable**
2-Methylnaphthalene	<6.8	<6.4	16 J	<8.0	<6.5	<9.0	120 J	<6.7	1,400	<8.0	18 J	<6.7	**NS**	**239,000**	**3,010,000**	
Acenaphthene	<6.7	<6.2	110	<7.8	<6.4	31 J	<13	<6.5	3,800	13 J	57	<6.5	**NS**	**3,590,000**	**45,200,000**	
Acenaphthylene	<4.9	10 J	33 J	<5.8	<4.7	17 J	<9.3	<4.8	480 J	<5.8	27J	<4.8	**NS**	**NS**	**NS**	
Anthracene	12 J	19 J	570	<7.3	6.3 J	77	13 J	<6.1	6,400	22 J	180	<6.0	**196,949**	**17,900,000**	**100,000,000**	
Benzo(a)anthracene	57	80	**(1,600)**	10 J	26 J	220	37 J	24 J	**(1,300)**	41 J	450	<4.9	**NS**	**1,140**	**20,800**	
Benzo(a)pyrene	77	110	**(1,500)**	14 J	41	**(250)**	52 J	53	**(1,300)**	40 J	**(500)**	<7.0	**470**	**115**	**2,110**	
Benzo(b)fluoranthene	110	150	**(2,200)**	11 J	51	280	71	82	**(17,000)**	46	**690**	<7.8	**478**	**1,150**	**21,100**	
Benzo(g,h,i)perylene	35 J	39	470	<14	25 J	93	<23	53	2,600	24 J	190	<12	**NS**	**NS**	**NS**	
Benzo(k)fluoranthene	35 J	62	800	<13	16 J	110	22 J	26 J	7,900	21 J	190	<11	**NS**	**11,500**	**211,000**	
Chrysene	74	79	**1,500**	<12	30 J	**220**	56 J	35 J	**13,000**	42 J	**480**	<9.9	**144**	**115,000**	**2,110,000**	
Dibenz(a,h)anthracene	<7.2	20 J	**(190)**	<8.4	<6.8	38 J	<14	<7.0	**(910)**	<8.4	63	<7.0	**NS**	**115**	**2,110**	
Fluoranthene	120	150	2,200	34 J	52	430	74	39	35,000	110	980	<6.7	**88,878**	**2,390,000**	**30,100,000**	
Fluorene	<5.2	5.0 J	100	<6.1	<5.0	33 J	<10	<5.1	3,600	11 J	50	<5.1	**14,830**	**2,390,000**	**30,100,000**	
Indeno(1,2,3-cd)pyrene	35 J	41	530	<11	25 J	82	<18	56	**(3,000)**	15 J	170	<9.4	**NS**	**1,150**	**21,100**	
Naphthalene	<5.7	<5.3	25 J	<6.7	<5.4	13 J	<11	<5.6	**2,700**	8.7 J	35 J	<5.6	**658**	**5,520**	**24,100**	
Phenanthrene	67	77	1,100	18 J	30 J	280	89	21 J	3,300	100	730	8.2 J	**NS**	**NS**	**NS**	
Pyrene	110	140	2,100	15 J	52	380	76	110	26,000	77	850	7.5 J	**54,546**	**1,790,000**	**22,600,000**	
Detected RCRA Metals (mg/kg)																
Arsenic	**4.4**	**3.1**	**3.7**	**2.6**	**2.1**	**1.5**	**2.6**	**3.1**	**7.3**	**0.86 J**	**2.6**	**0.51 J**	**0.584**	**0.677**	**3.00**	**8.00**
Barium	58	18	56	39	15	**1,500**	9.5	**190**	150	13	35	5.8	**165**	**15,300**	**100,000**	**364**
Cadmium	0.11 J B	0.097 J B	0.22	0.19 J	0.15 J B	0.084 J B	0.089 J B	0.26 B	0.61 B	0.11 J B	0.10 J B	0.053 J B	**0.752**	**71.1**	**985**	**1.00**
Chromium (Total)	15	5.9	11	7.6	7.3	11	4.4	10	10	3.3	5.2	4.0	**360,000**	**NS**	**NS**	**44**
Lead	**27**	7.4	**110**	14	7.7	**46**	4.3	**140**	**170**	1.4	**34**	4.0	**27**	**400**	**800**	**52**
Mercury	0.064	0.0096 J	**0.36**	**0.26**	0.037 B	0.085 B	0.0066 J	0.086	**0.77**	0.094	0.13	0.033	**0.208**	**3.13**	**3.13**	**NS**
Selenium	<0.62	<0.57	<0.46	<0.65	<0.62	<0.88	<0.60	<0.60	<0.53	<0.74	<0.59	<0.56	**0.520**	**391**	**5,840**	**NS**
Silver	0.35 J	<0.13	0.15 J	<0.14	<0.14	<0.19	0.34 J	1.8	0.20 J	<0.16	<0.13	<0.12	**0.849**	**391**	**5,840**	**NS**

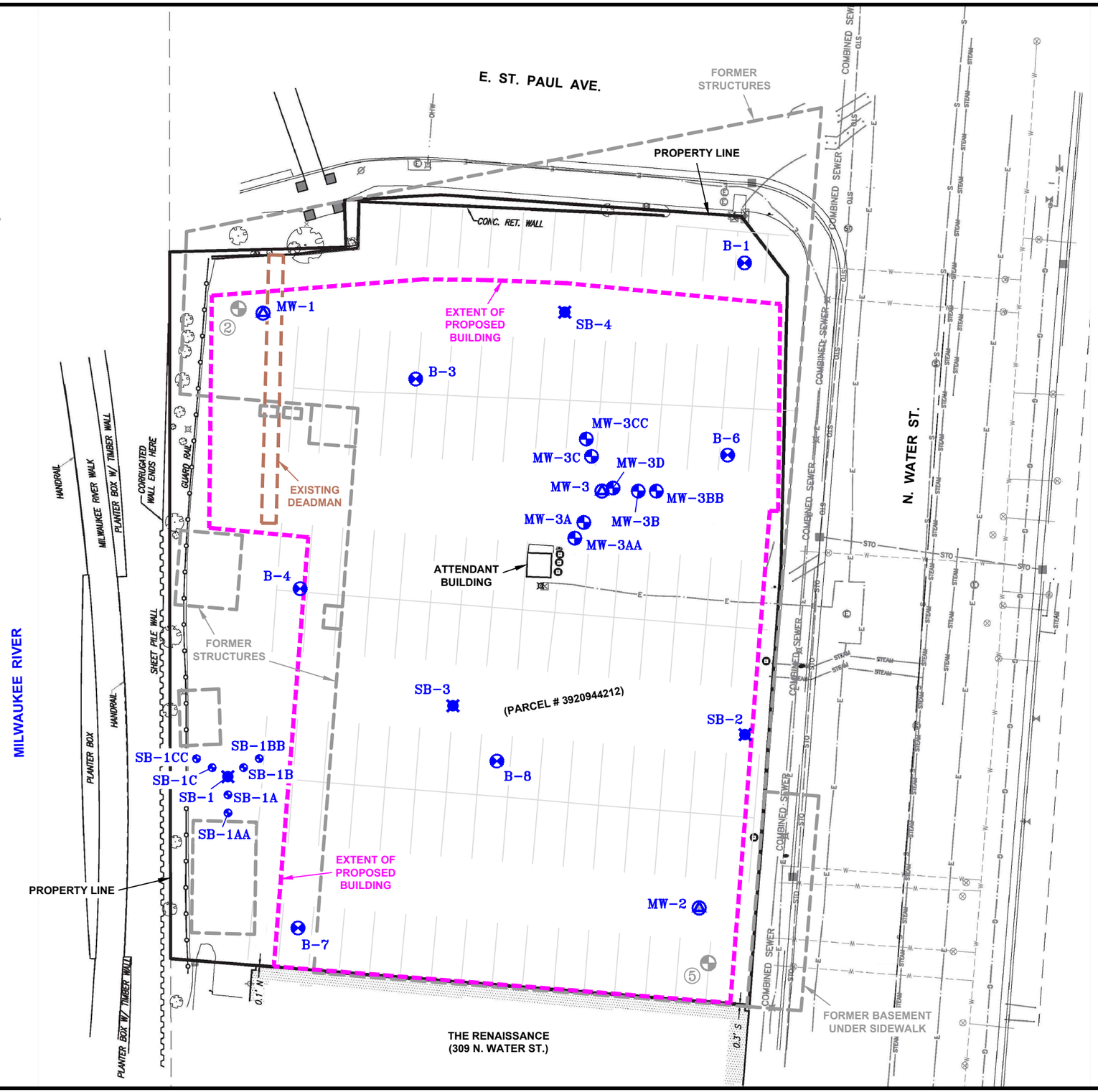
Notes:

[1]Wisconsin Administrative Code Natural Resources Chapter (NR) 720 Residual Contaminant Levels **(RCLs)** obtained from the Wisconsin Department of Natural Resources (WDNR) "RCL spreadsheet", last updated December 2018.

[2]Background Threshold Value (BTV) only applies to metals. Concentrations below the BTV are considered naturally occurring, however the Soil to Groundwater Pathway value still applies.

PID: Photoionization Detector
VOCs: Volatile Organic Compounds
PAHs: Polynuclear Aromatic Hydrocarbons
RCRA: Resource Conservation and Recovery Act
<xx.x: Result detected below the method detection limit of x
xx.x: Underlined results exceed the Soil to Groundwater Pathway RCL
(xx.x): Parenthesized results exceed the Non-Industrial Direct Contact RCL
[xx.x]: Bracketed results exceed the Non-Industrial and Industrial Direct Contact RCL
xx.x: Black bolded metals results are above a direct contact RCL but below its BTV. Note that the BTV for arsenic superceeds the Direct Contact RCL.
* Note that Boring B-6 was originally denoted as B-2 on the laboratory chain of custody.

mg/kg: Milligrams per kilogram; equivalent to parts per million (ppm)
µg/kg: Micrograms per kilogram; equivalent to parts per billion (ppb)
J: Result is an estimate value (detected between the laboratory method detection limit and reporting limit)
B: Analyte detected in the laboratory method blank
NS: No Standard Established
-- : Not Analyzed



NOTES:

1.) BASE MAP DEVELOPED FROM THE "ALTA/NSPS LAND TITLE SURVEY", DATED 7-7-2021, PREPARED BY CHAPUT LAND SURVEYS.

2.) PROPOSED FOUNDATION IS APPROXIMATE BASED ON THE "LEVEL 1 FRAMING PLAN" (SHEET S2.01), REV 4-1-2022, PREPARED BY SOLOMON CORDWELL BUENZ.

3.) FORMER STRUCTURES ARE APPROXIMATE BASED ON HISTORIC MAPS.

4.) BORINGS BY SIGMA ARE APPROXIMATE BASED ON THE "BORING LOCATION MAP", DATED 1-31-2017, PREPARED BY THE SIGMA GROUP.

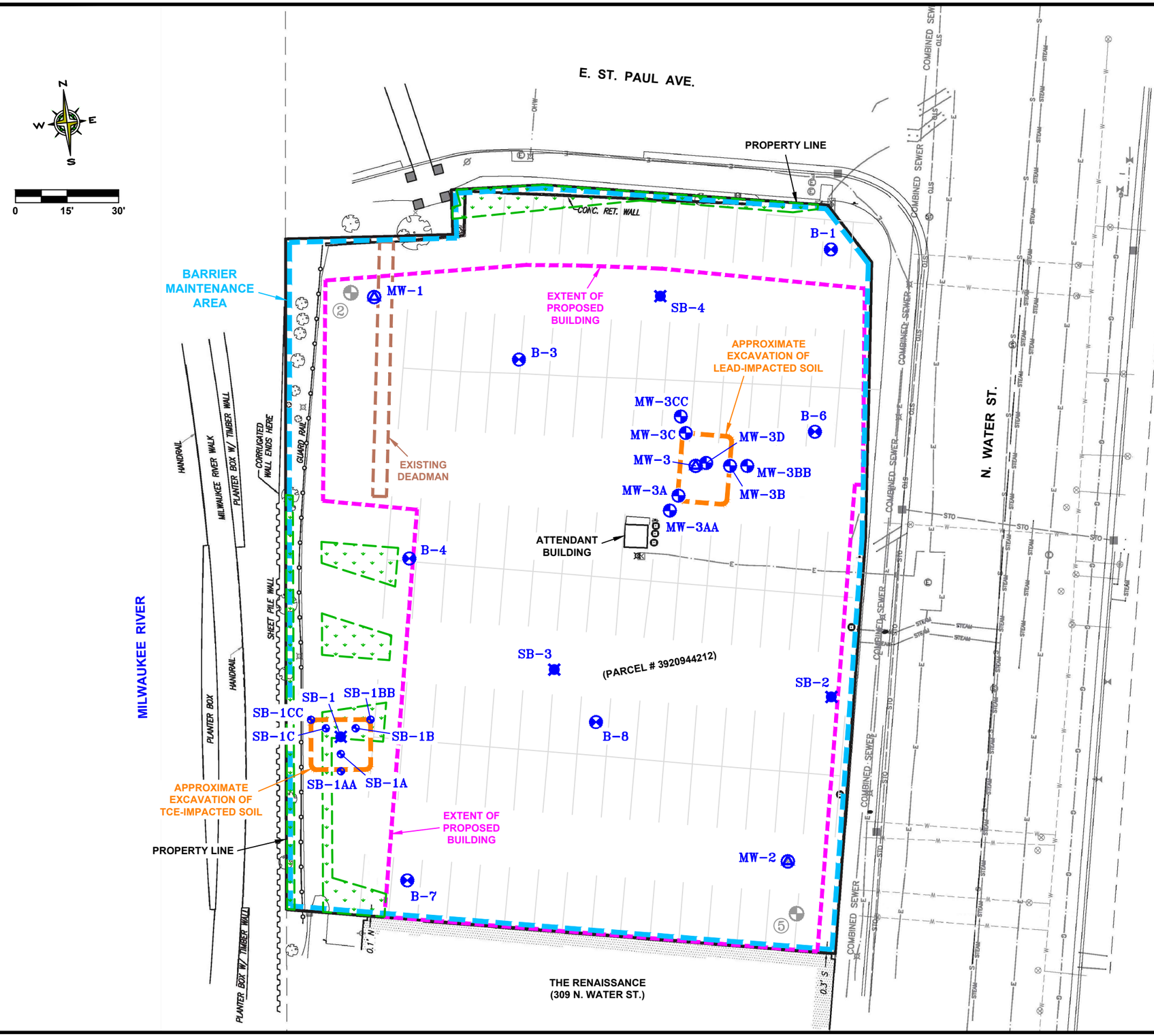
LEGEND:

MW	ENVIRONMENTAL SOIL BORING (BY GILES ENGINEERING)
B	ENVIRONMENTAL SOIL BORING / GEOTECHNICAL TEST BORING (BY GILES ENGINEERING)
②	GEOTECHNICAL TEST BORING (PROJECT NO. 1G-2107009) (BY GILES ENGINEERING)
SB-1	PREVIOUS SOIL BORING (BY SIGMA)
MW-1	PREVIOUS GROUNDWATER MONITORING WELL (BY SIGMA)

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118
www.gilesengr.com

FIGURE 2
DETAILED SITE MAP
333 N. WATER STREET
MILWAUKEE, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB		1"=30'	08-31-22	--
PROJECT NO.: 1E-2108005			CAD No. 1E2108005A5	



NOTES:

1.) BASE MAP DEVELOPED FROM THE "ALTA/NSPS LAND TITLE SURVEY", DATED 7-7-2021, PREPARED BY CHAPUT LAND SURVEYS.

2.) PROPOSED FOUNDATION IS APPROXIMATE BASED ON THE "LEVEL 1 FRAMING PLAN" (SHEET S2.01), REV 4-1-2022, PREPARED BY SOLOMON CORDWELL BUENZ.

3.) LANDSCAPE AREAS ARE APPROXIMATE BASED ON THE "EXISTING GRADE TO BOTTOM PILE CAP CUT FILL MAP", DATED 4-28-2022, PREPARED BY EDGERTON.

4.) BORINGS BY SIGMA ARE APPROXIMATE BASED ON THE "BORING LOCATION MAP", DATED 1-31-2017, PREPARED BY THE SIGMA GROUP.

LEGEND:

- EXTENT OF ENGINEERED BARRIER MAINTENANCE AREA (ENTIRE SITE)
- LANDSCAPE (BARRIER AREA WITH) INDICATOR FABRIC
- MW — ENVIRONMENTAL SOIL BORING (BY GILES ENGINEERING)
- B — ENVIRONMENTAL SOIL BORING / GEOTECHNICAL TEST BORING (BY GILES ENGINEERING)
- 2 — GEOTECHNICAL TEST BORING (PROJECT NO. 1G-2107009) (BY GILES ENGINEERING)
- SB-1 — PREVIOUS SOIL BORING (BY SIGMA)
- MW-1 — PREVIOUS GROUNDWATER MONITORING WELL (BY SIGMA)

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N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118
www.gilesengr.com

FIGURE X1
REMEDIAL EXCAVATION
333 N. WATER STREET
MILWAUKEE, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB/MLP		1"=30'	08-31-22	--
PROJECT NO.: 1E-2108005			CAD No. 1E2108005I	

Table 4
Methane Sampling Results
333 N. Water Street
Milwaukee, Wisconsin
Project No.: 1E-2108005

MW-1										
Well Cap	**Open**									
DTW	**4.87**									
Date	**5/16/22**		**5/17/22**		**5/18/22**		**5/19/22**		**5/20/22**	
Time Interval	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CO_2	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
O_2	22.2%	22.2%	21.5%	21.5%	21.5%	21.5%	21.4%	21.4%	21.5%	21.4%
BAL	77.5%	77.5%	78.2%	78.2%	78.1%	78.2%	78.3%	78.3%	78.1%	78.2%
LEL CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Well Cap	**Closed**									
DTW	**4.77**									
Date	**5/23/22**		**5/24/22**		**5/25/22**		**5/26/22**		**5/27/22**	
Time Interval	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CO_2	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%
O_2	21.7%	21.6%	21.6%	21.6%	21.6%	21.6%	20.8%	20.6%	21.1%	21.2%
BAL	78.0%	78.1%	78.0%	78.0%	78.1%	78.1%	78.9%	79.0%	78.5%	78.5%
LEL CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

MW-2										
Well Cap	**Open**									
DTW	**11.44**									
Date	**5/16/22**		**5/17/22**		**5/18/22**		**5/19/22**		**5/20/22**	
Time Interval	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CO_2	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
O_2	1.8%	1.8%	21.6%	21.7%	21.6%	21.4%	21.4%	21.5%	21.4%	21.6%
BAL	97.9%	98.0%	78.1%	78.0%	78.1%	78.2%	78.3%	78.2%	78.3%	78.0%
LEL CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Well Cap	**Closed**									
DTW	**11.12**									
Date	**5/23/22**		**5/24/22**		**5/25/22**		**5/26/22**		**5/27/22**	
Time Interval	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CO_2	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
O_2	21.5%	21.6%	21.5%	21.6%	21.7%	21.6%	20.4%	20.4%	21.2%	21.2%
BAL	78.2%	78.1%	78.2%	78.1%	78.0%	78.1%	79.3%	79.2%	78.5%	78.5%
LEL CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

MW-3										
Well Cap	**Open**									
DTW	**7.78**									
Date	**5/16/22**		**5/17/22**		**5/18/22**		**5/19/22**		**5/20/22**	
Time Inter	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CO_2	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
O_2	22.0%	22.1%	21.6%	21.6%	21.5%	21.5%	21.5%	21.4%	21.4%	21.4%
BAL	77.7%	77.7%	78.1%	78.3%	78.2%	78.2%	78.2%	78.3%	78.2%	78.2%
LEL CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Well Cap	**Closed**									
DTW	**7.64**									
Date	**5/23/22**		**5/24/22**		**5/25/22**		**5/26/22**		**5/27/22**	
Time Inter	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CO_2	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0.2%
O_2	21.7%	21.7%	21.6%	21.6%	21.6%	21.7%	20.5%	20.5%	21.0%	21.1%
BAL	78.0%	78.0%	78.1%	78.1%	78.1%	78.0%	79.2%	79.3%	78.4%	78.5%
LEL CH_4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

SB-1B										
Cap	**Closed**									
Date	**8/23/22**		**8/24/2022**		**8/25/2022**		**8/26/2022**		**8/29/2022**	
Time Inter	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes	1 mintue	5 minutes
Gas										
CH_4	0.0%	1.4%	1.6%	1.8%	0.7%	0.7%	0.9%	0.9%	1.2%	1.3%
CO_2	0.0%	9.4%	9.5%	10.0%	4.2%	9.4%	4.5%	4.6%	5.9%	6.0%
O_2	20.9%	1.0%	3.9%	0.0%	12.0%	11.3%	11.7%	11.2%	9.0%	8.4%
BAL	79.1%	88.3%	87.3%	88.2%	83.4%	83.6%	83.0%	83.3%	84.1%	84.4%
LEL CH_4	0.0%	28.0%	35.0%	35.0%	13.0%	15.0%	18.0%	18.0%	25.0%	25.0%

Abbreviations:
DTW: Depth to Water, expressed in feet below top of casing
BAL: Balance Gas

Chemical key:
CH_4 Methane
CO_2 Carbon dioxide
O_2 Oxygen
LEL CH_4 Lower Explosive Limit Methane

Notes:
Gas readings expressed as percentage
-- : Not measured/analyzed