



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**SOIL DATA and GROUNDWATER SAMPLING WORK PLAN**

December 2, 2023

Mr. Joseph Martinez  
Wisconsin Department of Natural Resources  
141 NW Barstow Street, Room 180  
Waukesha, WI 53188

VIA WDNR PORTAL

KPRG Project No. 27823

Re: Former Fabricare – 323 W. Sunset Drive, Waukesha, WI  
FID# 268087820, BRRTS # 02-68-305374

Dear Mr. Martinez:

KPRG and Associates, Inc. (KPRG) is submitting this Work Plan, on behalf of Mr. Davis Idrizi who is the current owner of the Former Fabricare property located at 323 W. Sunset Drive in Waukesha, WI. This Work Plan is for groundwater sampling and combining and presenting the extent of the current soil sampling data at the site. This Work Plan provides a project objective, documents the scope of the proposed work to be performed, and specifies the associated reporting. Each item is discussed separately below.

PROJECT OBJECTIVE

The first objective of this Work Plan is groundwater sampling to provide up to date conditions of existing groundwater quality associated with tetrachloroethene (PCE) and its breakdown products. The groundwater sampling will be based on a subset of monitoring wells selected to provide data to further define the PCE impacts area. The results of the sampling will be used to assess whether expanded sampling needs to be considered to further define impacts, determine if additional remediation is necessary, or if natural attenuation is occurring at this site.

The second objective of this Work Plan is to document the extent of the soil investigation and the extent of any soil contamination that may have been identified. The data from the Site Investigation Report and the Remedial Action Documentation Report will be combined and presented as part of this Work Plan.

SCOPE OF WORK

Groundwater Sample Locations

To fulfill the stated groundwater sampling objective, KPRG will conduct one round of groundwater sampling at the site. KPRG has selected the following monitoring wells to sample:

- MW-1, IW-3, MW-2R, MW-5, MW-7, MW-8, MW-10, MW-11, MW-12, and MW-13

The locations of these monitoring wells are highlighted with boxes on Figure 1 and Figure 2 includes a PCE isoconcentration map based on the most recent sampling data associated with each well. The selected monitoring wells allow for the current extent of the groundwater plume to be defined, since the last two rounds of groundwater sampling, which occurred in 2020 and 2023, has only sampled a small subset of the existing monitoring wells. This round will allow KPRG and the WDNR to discuss the future site investigation and remediation steps necessary to allow the site to move towards closure.

Monitoring well MW-3 was found to be located beneath a concrete slab and is not accessible so KPRG is proposing to sample well IW-3 instead of MW-3. IW-3 is located adjacent to MW-3 and IW-3 was constructed in accordance with NR 141 with about a twelve-foot length, two-inch diameter PVC screen (0.010 slot) connected to an appropriate length of PVC riser pipe up to the ground surface. IW-3 is screened from about 6 feet to 18 feet below ground surface (bgs). IW-3 was finished at the surface with a flush mount monitoring well cover. It should be noted that MW-3 was constructed with a ten-foot screen and is screened from approximately 8 feet to 18 feet bgs. IW-3 is an acceptable replacement for Well MW-3 even though the screen intervals are not identical. Both wells screen intervals intersect groundwater, which is about 12-13 feet bgs, and extend to the same depth of approximately 18 feet bgs. This allows groundwater to be extracted for samples from the same groundwater region. Previous groundwater sampling events included the injection wells and the data was used in conjunction with the data from the non-injection monitoring wells.

Monitoring well MW-2 could not be located and appears it may have been destroyed when portions of the parking lot were repaved. MW-2 will need to be replaced in order to obtain a groundwater sample in this area. KPRG is proposing to replace MW-2, with MW-2R, as near its approximate original location with a one-inch diameter monitoring well instead of a two-inch diameter well, as allowed by NR 141. NR 141.31 (2) states, "Exceptions to the requirements of this chapter may be approved by the department prior to installation or abandonment." To replace well MW-2, KPRG is requesting an exception to use a 1 inch diameter schedule 40 PVC screen and casing instead of the standard 1.9 to 4 inch diameter schedule 40 PVC screen and casing as stated in NR 141.07 (1). The other well construction requirements will be complied with, such as for the filter pack and sealing the annular space around the casing, etc. Monitoring well MW-2R will be drilled to an approximate depth of 18 feet and constructed with a 10-foot screen length. The replacement monitoring well, MW-2R, will be sampled using a low flow technique for the collection of representative samples.

The groundwater sampling will be performed based upon the following procedures.

#### Groundwater Sample Collection Procedures

The sample collection will be completed by KPRG. The following groundwater sampling procedures will be used:

- The water elevation will be measured using an electronic water level probe;
- To minimize the volume of purge water extracted, standard low-flow sampling will be conducted using either a stainless steel, submersible, pneumatic bladder pump or a peristaltic pump with dedicated tubing for each monitoring well;

- Groundwater measurements of DO, ORP, temperature, pH and specific conductance will be obtained via a flow-through cell in the field; and
- Samples will be collected directly into laboratory prepared containers from the pump using disposable tubing. All samples will be analyzed for CVOCs.

One duplicate will be collected for quality assurance/quality control purposes. All samples will be properly preserved and placed on ice for subsequent transport to the laboratory under a completed chain-of-custody for analysis.

### Groundwater Reporting

Groundwater sampling results will be provided to WDNR within 10-days of the receipt of the analytical data packages. The results will be provided as a data summary report. The report will include, but not be limited to:

- Objective of sampling;
- Data summary (tabular and descriptive form); and
- Conclusions/Recommendations.

The report will be submitted electronically through the established WDNR electronic reporting portal. A full copy of the analytical data package will be provided as an Attachment to the report.

### Existing Soil Data Analysis

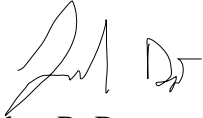
The existing soil data that was collected during the previous site investigations has been compiled into the included Table 1. The data included is from the initial site investigation conducted by Drake Environmental in 2003 and from additional site investigation and remedial activities conducted by Sigma Environmental Services in 2004 and 2005. Table 1 shows that tetrachloroethene (PCE) was the only compound detected in the soil samples except for SB-2, which also had detections of tetrachloroethene and cis-1,2-dichloroethene in the 1-3 feet deep soil sample. Reviewing the data in Table 1 shows that concentrations of PCE range from below detection limits at B-6/MW-9, B-5/MW-8, P-5, and SB-3 to a peak concentration of 16,500 micrograms/kilogram ( $\mu\text{g}/\text{kg}$ ) at MW-1/P-1. The concentrations for PCE are all below the non-industrial direct contact residual contaminant level (RCL) but above the soil-to-groundwater RCL. The soil locations and the extent of PCE contamination is shown on Figure 3. The data represented is the results from the sampling events in 2004 and 2005 and since the contaminant of concern is PCE, it is likely that some degradation would have occurred over the years.

Reviewing Figure 3 shows that the extent of the majority of the PCE soil contamination is below the existing building and the associated parking lot. The horizontal extent of the PCE soil contamination has been defined by soil samples SB-3 to the north, P-5 to the east, B-5/MW-8 to the south, and B-6/MW-9 to the west. The vertical extent of the PCE soil contamination is defined by soil samples P-7 at 18-20 feet bgs and B-1/PZ-1R at 24-26 feet bgs. It should be noted that these soil samples are below the onsite groundwater, which is about 12-13 feet bgs. The soils samples collected at or near the soil/groundwater interface have PCE concentrations above the soil-to-groundwater RCL. Therefore, the PCE soil contamination extends from ground surface to groundwater.

The former Fabricare dry cleaner is located in an urbanized area in the City of Waukesha. The property is currently covered with the existing building, the parking lot, and a small portion of grass along the north and south property edges. Specifically, the areas of highest PCE soil concentrations are covered by either the building or the parking lot, which will minimize the potential for precipitation infiltration. In addition, the property is serviced by water from the City of Waukesha. Based on the above facts and the likely degradation that has occurred, KPRG thinks it is not necessary to conduct additional soil sampling and the focus moving forward should be on groundwater monitoring.

KPRG and Mr. Idrizi look forward to cooperatively working with the WDNR in completing the necessary work to move the site towards closure. If there are any questions, please contact me at 262-781-0475.

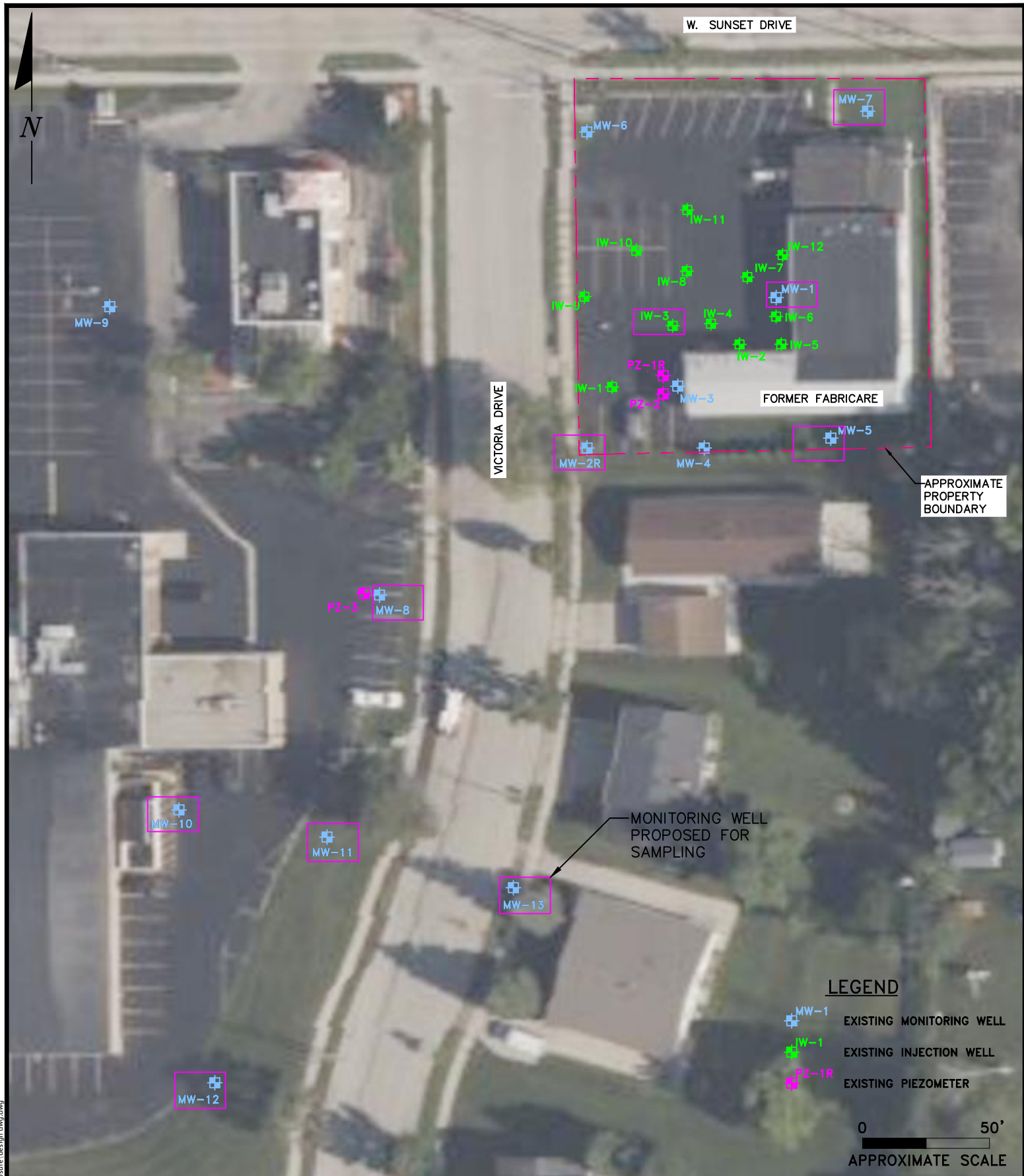
Sincerely,  
KPRG and Associates, Inc.



Joshua D. Davenport, P.E.  
Senior Engineer

cc: Davis Idrizi, Former Fabricare

**ATTACHMENT 1**  
**Figures**



ENVIRONMENTAL CONSULTATION & REMEDIATION

**K P R G**

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

**PROPOSED MONITORING WELLS TO BE SAMPLED**

**323 W. SUNSET DR/FORMER FABRICARE  
WAUKESHA, WISCONSIN**

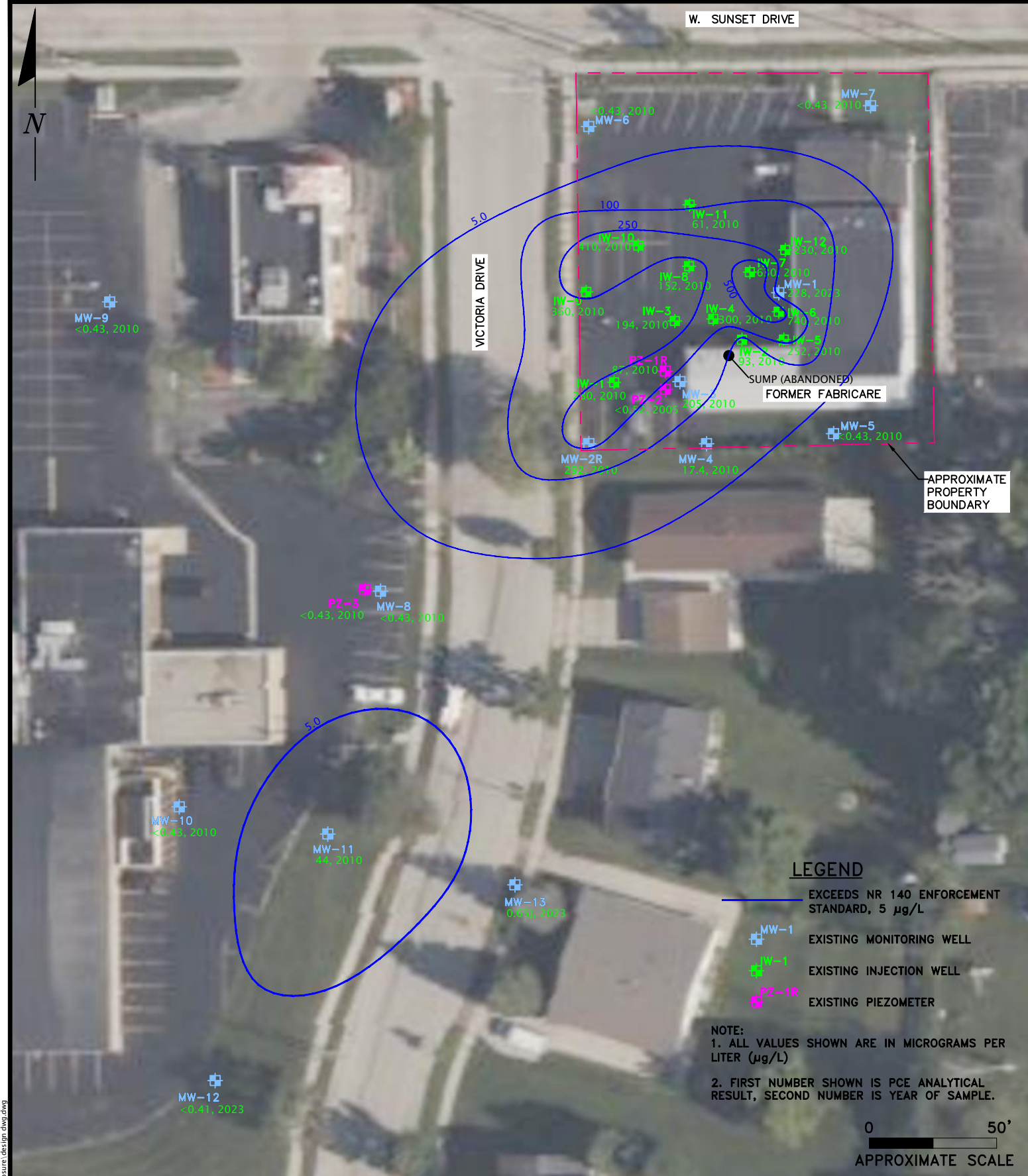
Scale: 1" = 50'

Date: December 2, 2023

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FIGURE 1





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**GROUNDWATER ISOCONCENTRATION MAP**

**323 W. SUNSET DR/FORMER FABRICARE  
WAUKESHA, WISCONSIN**

**Scale: 1" = 50'**

**Date: December 2, 2023**

**KPRG Project No. 27823**

**FIGURE 2**



B-6/MW-9  
12-14': <25.0  
18-20': <25.0

B-5/MW-8  
12-14': <25.0  
18-20': <25.0

VICTORIA DRIVE

14-16': 10,400

SB-3  
1-3': <31  
9-11': <29

SB-1  
1-3': 55  
9-11': 145  
18-20': <25.0

P-7

IW-10  
10-15': 1,900

P-10  
0-2': 1,640

SB-2  
1-3': 1,520  
9-11': 872

MW-1/P-1  
10-12': 16,500  
18-20': 266

IW-4  
12-14': 3,600

P-9  
6-8': 394

P-8  
2-4': 317

IW-2  
12-13': 15,000

PZ-1R/B-1  
22-24': 347  
24-26': <25.0  
33-35': <25.0

MW-3/P-4  
12-14': 4,750  
18-20': 354

SUMP (ABANDONED)  
FORMER FABRICARE

MW-4/P-6  
16-18': 112  
18-20': 76.3

P-5  
16-18': <25.0

APPROXIMATE  
PROPERTY  
BOUNDARY

**LEGEND**

EXCEEDS THE NR 720  
SOIL-TO-GROUNDWATER RCL

P-1 SOIL SAMPLE LOCATION

NOTE:  
1. ALL VALUES SHOWN ARE IN MICROGRAMS PER  
KILOGRAM ( $\mu\text{g}/\text{kg}$ )  
2. FIRST NUMBER SHOWN IS DEPTH OF SOIL SAMPLE,  
SECOND NUMBER IS PCE ANALYTICAL RESULT.

0 30'  
APPROXIMATE SCALE

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SOIL SAMPLES LOCATIONS MAP

323 W. SUNSET DR/FORMER FABRICARE  
WAUKESHA, WISCONSIN

Scale: 1" = 30' Date: December 2, 2023

KPRG Project No. 27823

FIGURE 3



**ATTACHMENT 2**  
**Soil Data Table**

**Table 1 Soil Quality Results**

Former Fabricare 323 W. Sunset Drive Waukesha, Wisconsin

Boring ID	Depth (feet bgs)	Non-Industrial Direct Contact RCL	Soil-To-Groundwater RCL	SB-1		SB-2		SB-3		SB-4		IW-2	IW-4	IW-10	P-1:S-6	P-1:S-10	P-2:S-8	P-3:S-10	P-4:S-7	P-4:S-10	P-5:S-9	P-6:S-9	P-6:S-10	P-7:S-10	P-8:S-2	P-9:S-4	P-10:S-1	B-1 (PZ-1)			B-5 (MW-8)		B-6 (MW-9)				
				1-3	9-11	1-3	9-11	1-3	9-11	1-3	7-9	12-13	12-14	10-15	10-12	18-20	14-16	18-20	12-14	18-20	16-18	16-18	18-20	18-20	2-4	6-8	0-2	22-24	24-26	33-35	12-14	18-20	12-14	18-20			
Date	Units	Contact RCL	RCL	10/26/04	10/26/04	10/26/04	10/26/04	10/26/04	10/26/04	10/26/04	10/26/04	05/23/05	05/24/05	05/24/05	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	4/18/2003	8/19/2003	8/19/2003	8/19/2003	7/24/2003	7/24/2003	7/24/2003	7/25/2003	7/25/2003	7/25/2003	7/25/2003		
<b>Volatile Organic Compounds</b>																																					
Benzene	µg/kg	1,600	5.1	<31	<26	<32	<27	<31	<29	<31	<27	<27	<28	<28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ethylbenzene	µg/kg	8,020	1,570	<31	<26	<32	<27	<31	<29	<31	<27	<27	<28	<28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Toluene	µg/kg	818,000	1,107.2	<31	<26	<32	<27	<31	<41	<31	<37	<27	<28	<28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Total Xylenes	µg/kg	260,000	3,960	<43	<36	<44	<27	<43	<29	<44	<27	<93	<95	<96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1,2,4-Trimethylbenze	µg/kg	219,000	1378.7*	<31	<26	<32	<27	<31	<29	<31	<27	<27	<28	<28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
1,3,5-Trimethylbenze	µg/kg	182,000		<31	<26	<32	<37	<31	<29	<31	<27	<27	<28	<28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
cis-1,2-Dichloroethen	µg/kg	156,000	41.2	<31	<26	<i>254</i>	<27	<31	<29	<31	<27	<27	<28	<28	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0		
trans-1,2-Dichloroethene		1,560,000	62.6	<31	<26	<32	<27	<31	<29	<31	<27	<27	<28	<28	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0		
Tetrachloroethene	µg/kg	33,000	4.5	55	<i>145</i>	<i>1,520</i>	<i>872</i>	<31	<29	<i>239</i>	<i>191</i>	<i>15,000</i>	<i>3,600</i>	<i>1,900</i>	<i>16,500</i>	<i>266</i>	<i>10,400</i>	<i>1,190</i>	<i>4,750</i>	<i>354</i>	<25.0	<i>112</i>	<i>76.3</i>	<25.0	<i>317</i>	<i>394</i>	<i>1,640</i>	<i>347</i>	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0			
Trichloroethene	µg/kg	1,300	3.6	<31	<26	<i>165</i>	<27	<31	<29	<31	<27	<27	<28	<28	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	86.5	<25.0	<25.0	<25.0	<25.0	<i>92.0</i>	<25.0	<25.0			
Vinyl Chloride	µg/kg	67	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0			

KEY:  
mg/kg = milligrams per kilogram  
µg/kg = micrograms per kilogram  
NA = not analyzed  
RCL = Residual Contaminant Level  
*Italics* = Result exceeds the Soil-to-Groundwater RCL  
**Bold** = Result exceeds the Non-Industrial Direct Contact RCL