

GENERAL INSTRUCTIONS, PURPOSE AND APPLICABILITY OF THIS FORM: Completion of this form is required under s. NR 724.13(3), Wis. Adm. Code. A narrative report or letter containing the equivalent information required in this form may be submitted in lieu of the actual form. Failure to submit this form as required is a violation of s. NR 724.13(3), Wis. Adm. Code, and is subject to the penalties in s. 292.99, Wis. Stats. This form must be submitted every six months for soil or groundwater remediation projects that report operation and maintenance progress in accordance with s. NR 724.13(3), Wis. Adm. Code.

Note: Long-term monitoring results submitted in accordance with s. NR 724.17(3), Wis. Adm. Code are required to be submitted within 10 business days of receiving sampling results and are not required to be submitted using this form. However, portions of this form require monitoring data summary information that may be based on information previously submitted in accordance with s. NR 724.17(3), Wis. Adm. Code.

Note: Responsible parties should check with the State Project Manager assigned to the site to determine if this form is required to be submitted at sites responded to under the Federal Comprehensive Environmental Response and Compensation Act (commonly known as Superfund) or an equivalent State lead Superfund response.

Note: Responsible parties should check with the State Project Manager assigned to the site to determine if any of the information required in this form may be omitted or changed and obtain prior written approval for any omissions or changes.

Submittal of this form is not a substitute for reporting required by Department programs such as Waste Water or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31-19.39, Wis. Stats.). Unless otherwise noted, all citations refer to Wisconsin Administrative Code.

Note: There is a separate semi-annual report required under s. NR 700.11(1), Wis. Adm. Code. Reporting under that provision is through an internet-based form:

<http://dnr.wi.gov/topic/Brownfields/documents/regs/NR700progreport.pdf>

Section GI - General Site Information

A. General Information

1. Site name

Milwaukee Fabricare

2. Reporting period from:	01/01/2018	To:	12/31/2018	Days in period:	365
3. Regulatory agency (enter DNR, DATCP and/or other)	4. BRRTS ID No. (2 digit program-2 digit county-6 digit site specific)				
DNR	02-41-548258				

5. Site location

Region	County	Address					
Southeast Region	Milwaukee	4419 W. Fond du Lac Ave					
Municipality name	<input checked="" type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village	Township	Range	<input checked="" type="radio"/> E <input type="radio"/> W	Section	¼	¼
Milwaukee		07 N	21		11	NE	SE

6. Responsible party

Name
Gregg Margulis

Mailing address
3637 W. Sherbrooke Drive Mequon, WI 53092

Phone number
(262) 242-1215

7. Consultant

Select if the following information has changed since the last submittal

Company name
KPRG and Associates, Inc

Mailing address
14665 W. Lisbon Rd, Suite 1A
Brookfield, WI 53005

Phone number
(262) 781-0475

8. Contaminants

Tetrachloroethene (PCE)

9. Soil types (USCS or USDA)

Clay and sand, followed by silty clay, with clay beneath that

10. Hydraulic conductivity(cm/sec):

1.094 x 10⁻⁷ to 4.233 x 10⁻⁷

11. Average linear velocity of groundwater (ft/yr)

0.00646 to 0.0427

12. If soil is treated ex situ, is the treatment location off site? Yes No

If yes, give location: Region

County

Municipality name	<input type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village	Township	Range	<input type="radio"/> E <input type="radio"/> W	Section	¼	¼
		N					

Site name: Milwaukee Fabricare
Reporting period from: 01/01/2018 To: 12/31/2018
Days in period: 365

Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

Page 2 of 29

B. Remediation Method

Only submit sections that apply to an individual site. Check all that apply:

- Groundwater extraction (submit a completed Section GW-1).
- Free product recovery (submit a completed Section GW-1).
- In situ air sparging (submit a completed Section GW-2).
- Groundwater natural attenuation (submit a completed Section GW-3).
- Other groundwater remediation method (submit a completed Section GW-4).
- Soil venting (including soil vapor extraction building venting and bioventing submit a completed Section IS-1).
- Soil natural attenuation (submit a completed Section IS-2).
- Other in situ soil remediation method (submit a completed Section IS-3).
- Biopiles (submit a completed Section ES-1).
- Landspreading/thinspreading of petroleum contaminated soil (submit a completed Section ES-2).
- Other ex situ remediation method (submit a completed Section ES-3).
- Site is a landfill (submit a completed Section LF-1).

C. General Effectiveness Evaluation for All Active Systems

If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications? Yes No

If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.

2. Are modifications to the system warranted to improve effectiveness Yes No

If yes, explain:

3. Is natural attenuation an effective low cost option at this time? Yes No

4. Is closure sampling warranted at this time? Yes No

5. Are there any modifications that can be made to the remediation to improve cost effectiveness? Yes No

If yes, explain:

D. Economic and Cost Data to Date

1. Total investigation cost: \$64,806.00

2. Implementation costs (design, capital and installation costs, excluding investigation costs): \$295,665.18

3. Total costs during the previous reporting period: \$199,845.44

4. Total costs during this reporting period: \$9,072.15

5. Total anticipated costs for the next reporting period: \$10,260.00

6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? Yes No

If yes, explain:

7. If closure is anticipated within 12 months, estimated costs for project closeout: _____

Site name: Milwaukee Fabricare
Reporting period from: 01/01/2018 To: 12/31/2018
Days in period: 365

Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

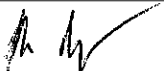
Page 3 of 29

E. Name(s), Signature(s) and Date of Person(s) Submitting Form

Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form for sites with any ongoing active remediation, monitoring or an investigation. Other persons may sign this form for sites with no response activities during the six month reporting period.

Registered Professional Engineers:

I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Josh Davenport	Senior Engineer
Signature 	Date
	12/20/19

Hydrogeologists:

I hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

Scientists:

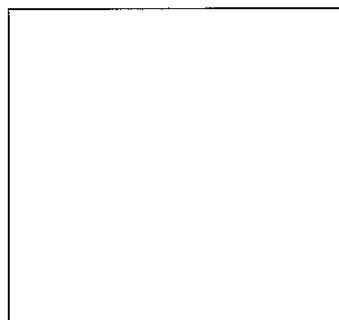
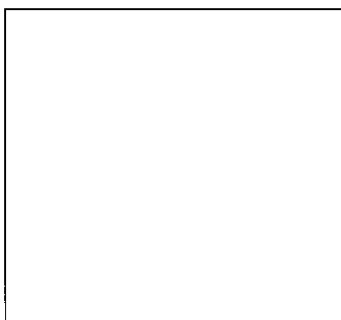
I hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

Other Persons:

Print name	Title
Signature	Date

Professional Seal(s), if applicable:



Site name: Milwaukee Fabricare
Reporting period from: 01/01/2018 To: 12/31/2018
Days in period: 365

Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Form 4400-194 (R 11/14)

Page 7 of 29

Section GW-3, Natural Attenuation (Passive Bioremediation) in Groundwater

A. Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a

a. Contaminant: tetrachloroethene (PCE)

b. Percent reduction necessary to reach ch. NR 140 ES and PAL: 99.84 %

c. Maximum contaminant concentration level in any monitoring well of that contaminant: 3,170 $\mu\text{g/L}$

2. Aquifer parameters:

a. Hydraulic conductivity: 2.6635×10^{-7} cm/sec

b. Groundwater average linear velocity: 0.025 ft/yr

3. Is there a downgradient monitoring well that meets ch. NR 140 standards? Yes No

4. Based on water chemistry results, is the plume: Expanding Stabalized Contracting ?

5. If the answer in 4. (above) is "expanding," is natural attenuation still the best option? Yes No

If yes, explain:

6. Biodegradation parameters:

a. Upgradient (or other site specific background) DO level: 5,340 $\mu\text{g/L}$

b. DO levels in the part of the plume that is most heavily contaminated 1,080 $\mu\text{g/L}$

7. Is site closure a viable option within 12 months from the date of this form? Yes No

8. Are there any modifications that can improve cost effectiveness? Yes No

If yes, explain:

9. Have groundwater table fluctuations changed the contaminant level trends over time? Yes No

If yes, explain:

10. Has the direction of groundwater flow changed during the reporting period? Yes No

If yes, approximate change in degrees: _____

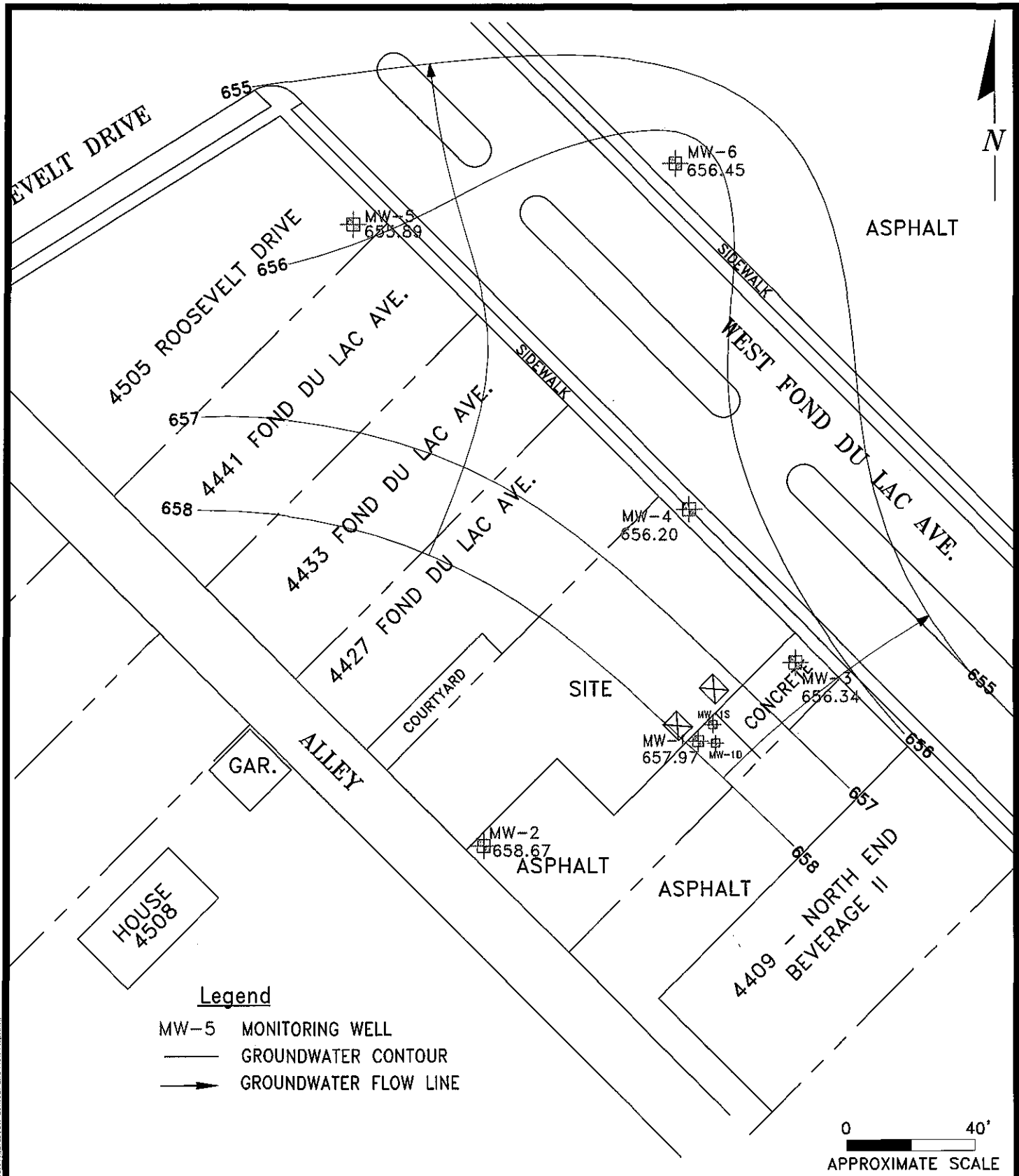
B. Additional Attachments

Attach the following:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.

Note: This is the minimum required graph; however, it is recommended that multiple time versus contamination concentration graphs as described in the instructions on page 24 for Natural Attenuation of Groundwater be submitted.

- Graph of contaminant concentrations versus distance.
- Groundwater contaminant chemistry table.
- Groundwater biological parameters.
- Groundwater elevations table.



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

**GROUNDWATER FLOW MAP
DECEMBER 2019**

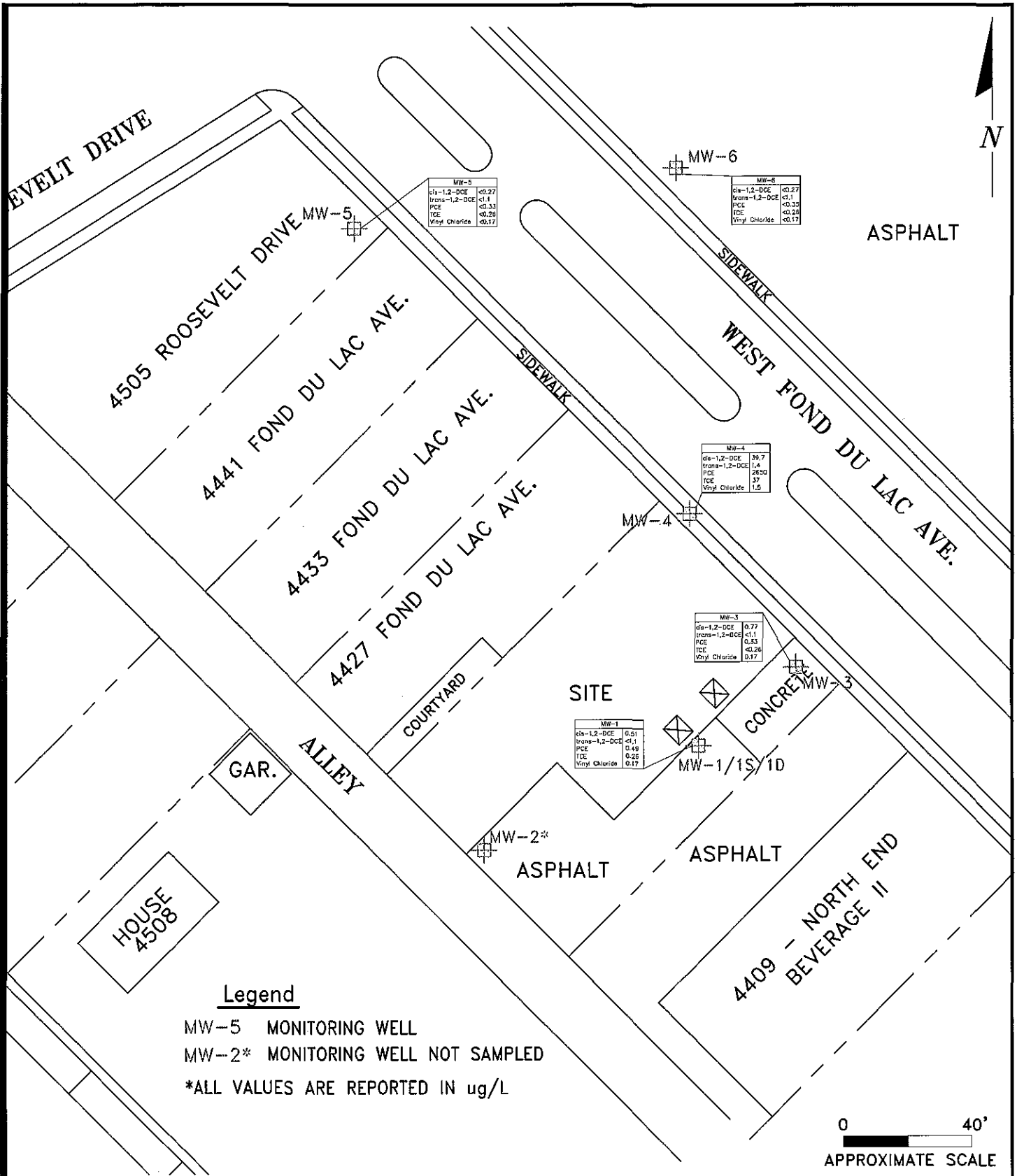
MILWAUKEE FABRICARE, INC.
4419 WEST FOND DU LAC AVENUE

Scale: 1" = 40'

Date: December 20, 2019

KPRG Project No. 24413

FIGURE 1



\protects\milwaukee fabricare\2018 Annual Reports and Figures\GW Contaminant Map.dwg

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 28 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

**GW CONTAMINANT DISTRIBUTION MAP
MARCH 2019**

MILWAUKEE FABRICARE, INC.
4419 WEST FOND DU LAC AVENUE

Scale: 1" = 40'

November 15, 2019

KPRG Project No. 24413

Figure 2

Figure 3: Graph of Tetrachloroethene (PCE) Concentrations for Monitoring Wells exceeding ES or PAL

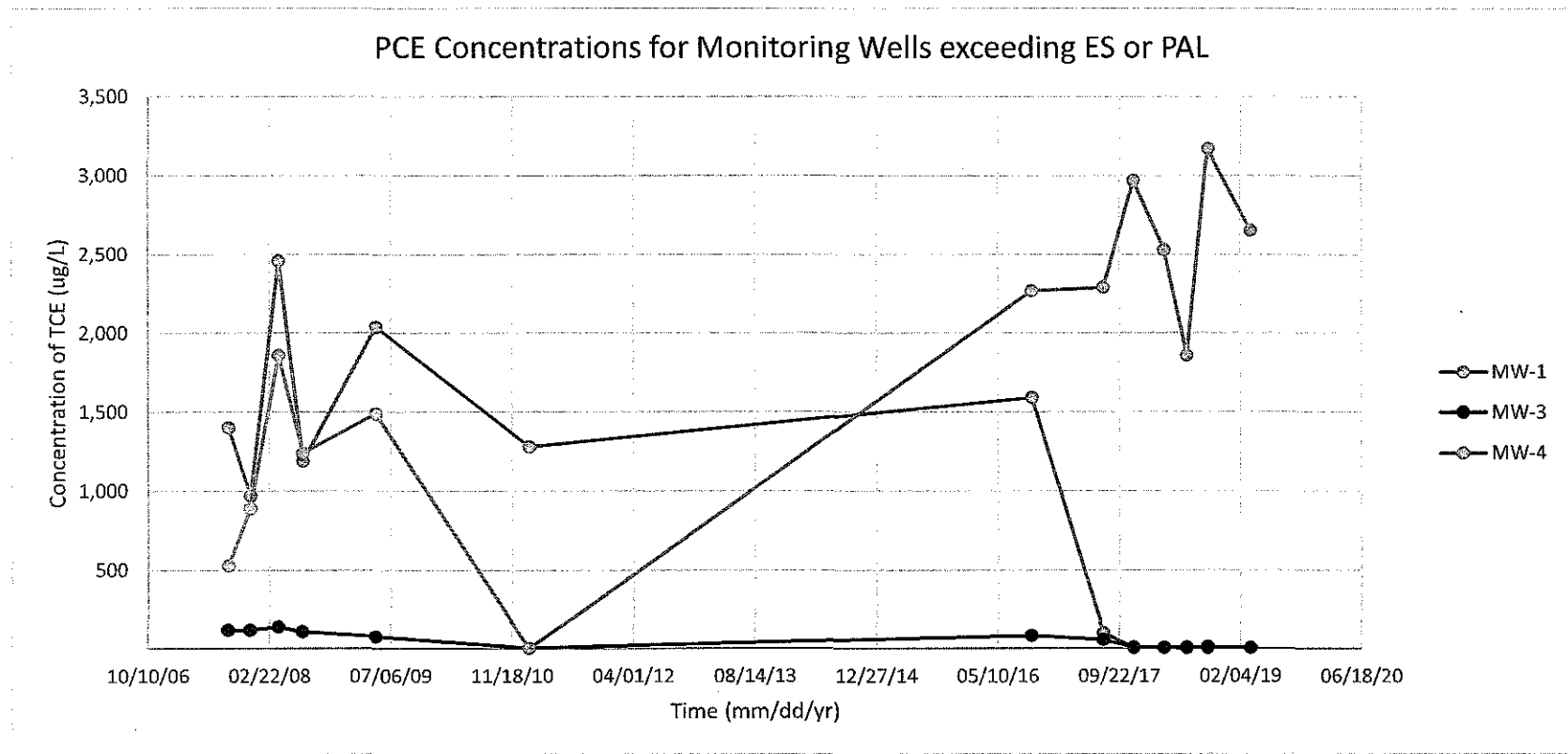


Table 1. Summary of Groundwater Analytical Results for Detected CVOC's - Milwaukee Fabricare, Milwaukee, WI

Parameter Name	ES	PAL	B-4 / W	B-7 / W	MW-1														MW-1S		MW-1D					
					09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	01/27/11	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019	01/27/11	09/27/15	09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	01/27/11	09/27/15
					09/05/07	09/16/07	09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	01/27/11	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019	01/27/11	09/27/15	09/05/07	12/05/07	03/01/08	07/09/08	05/07/09
Chloromethane	3.0	0.3	0.44 J	<0.24	<1.2	<2.4	<4.8	<2.4	<2.4	12.2 J	NA	<1.0	<1.0	<0.5	<0.5	<2.2	<2.2	3.0	NA	<1.2	<2.4	<0.24	0.28 J	<0.24	<0.24	NA
cis-1,2-Dichloroethene	70	7.0	<0.50	12	<4.1	<8.3	28.4	11.6	10.7	<16.6	55.0	24990	254.8	9.3	1.9	0.72 J	0.51 J	<0.83	<0.26	<0.83	<0.83	<0.83	<0.83	<0.83	<0.83	<0.26
trans-1,2-Dichloroethene	100	20	<0.50	1.7	<4.4	<8.9	<17.8	<8.9	<8.9	<17.8	7.0 J	454	224	188	38.4	<1.1	<1.1	<0.89	<0.26	<0.89	<0.89	<0.89	<0.89	<0.89	<0.26	
Tetrachloroethene	5.0	0.5	36	1.9	1.400	970	2,460	1,190	2,040	1,280	1,890	<100	2.3	1.7	<0.50	9.4	0.49 J	0.84 J	0.86 J	3.2	5.6	2.5	2.0	3.3	2.1	1.1
Trichloroethene	5.0	0.5	<0.20	2.1	18	12	85	33	60	55	82	<66.1	<0.66	<0.33	<0.33	<0.26	<0.26	<0.48	<0.33	<0.48	<0.48	<0.48	<0.48	<0.48	<0.33	
Vinyl chloride	0.2	0.02	<0.20	<0.18	<0.90	<1.8	<3.6	<1.8	<1.8	<3.6	<3.5	<35.1	43.2	3.5	2.0	<0.17	<0.17	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	

Parameter Name	ES	PAL	MW-2										MW-3									
			09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	09/26/16	09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019		
			09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	09/26/16	09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019		
Chloromethane	3.0	0.3	<0.24	NS	<0.24	<0.24	<0.24	NA	<0.24	<0.24	<0.24	<0.24	<0.24	NA	<2.5	<5.0	<0.5	<0.50	<2.2	<2.2		
cis-1,2-Dichloroethene	70	7.0	<0.83	NS	<0.83	<0.83	<0.83	<0.26	0.88	<0.83	0.84 J	1.0	<0.83	25.7	33.5	791	20.9	1.8	1.8	0.77 J		
trans-1,2-Dichloroethene	100	20	<0.89	NS	<0.89	<0.89	<0.89	<0.26	<0.89	<0.89	<0.89	<0.89	<0.89	0.57 J	<1.3	12.1	8.2	4.4	<1.1	<1.1		
Tetrachloroethene	5.0	0.5	0.75	NS	1.5	1.2	1.0	2.7	120	120	139	199	77.8	88.4	54.1	<5.0	0.55 J	3.8	0.55 J	<0.33		
Trichloroethene	5.0	0.5	<0.48	NS	<0.48	<0.48	<0.48	0.66 J	5.1	5.1	5.5	6.3	2.5	17.2	29.3	<3.3	<0.33	<0.33	<0.26	<0.26		
Vinyl chloride	0.2	0.02	<0.18	NS	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.89	12.1	5.6	1.3	1.8	<0.17		

Parameter Name	ES	PAL	MW-4											
			09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019
			09/05/07	12/05/07	03/01/08	07/09/08	05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019
Chloromethane	3.0	0.3	<0.24	<2.4	<2.4	<2.4	<2.4	NA	<20.0	<20.0	<20.0	<20.0	<43.8	<2.2
cis-1,2-Dichloroethene	70	7.0	8.4	9.0	<8.3	10.1	10.1	<10.2	<10.2	<10.2	<10.2	<10.2	<5.4	39.7
trans-1,2-Dichloroethene	100	20	<4.4	<8.9	<8.9	<8.9	<4.4	<10.3	<10.3	<10.3	<10.3	<10.3	<21.8	1.4 J
Tetrachloroethene	5.0	0.5	530	890	1,850	1,240	1,490	2,270	2,290	2,970	2,530	1,850	3,170	2,650
Trichloroethene	5.0	0.5	79	32	138	112	97	75	70	48	51.8	48	37	
Vinyl chloride	0.2	0.02	<0.18	<1.8	<1.8	<1.8	<0.90	<7.0	<7.0	<7.0	<7.0	<7.0	<3.5	1.5

Parameter Name	ES	PAL	MW-5								MW-6							
			05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	4/20/2018	05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019
			05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	4/20/2018	05/07/09	09/26/16	07/19/17	11/20/17	3/27/2018	02/29/2018	9/21/2018	3/19/2019
Chloromethane	3.0	0.3	2.0	NS	<0.50	2.1	<0.5	1.1	<2.2	<2.2	<0.24	NS	<0.50	<0.50	<0.50	<2.2	<2.2	
cis-1,2-Dichloroethene	70	7.0	<0.83	NS	<0.26	<0.26	<0.26	<0.26	<0.27	<0.27	<0.83	NS	<0.26	<0.26	<0.26	<0.27	<0.27	
trans-1,2-Dichloroethene	100	20	<0.89	NS	<0.26	<0.26	<0.26	<0.26	<1.1	<1.1	<0.89	NS	<0.26	<0.26	<0.26	<1.1	<1.1	
Tetrachloroethene	5.0	0.5	<0.45	NS	<0.50	<0.50	<0.50	<0.50	<0.33	<0.33	<0.45	NS	<0.50	<0.50	<0.50	<0.33	<0.33	
Trichloroethene	5.0	0.5	<0.48	NS	<0.33	<0.33	<0.33	<0.33	<0.26	<0.26	<0.48	NS	<0.33	<0.33	<0.33	<0.26	<0.26	
Vinyl chloride	0.2	0.02	<0.18	NS	<0.18	<0.18	<0.18	<0.18	<0.17	<0.17	<0.18	<0.18	<0.18	<0.18	<0.18	<0.17	<0.17	

Note: All values are in ug/L.
 ES - Exceeds WI NR 140 ES (Enforcement Standard)
 B-4 - Exceeds WI NR 140 PAL (Preventive Action Limit)
 NA - Not Analyzed
 NS - Not Sampled, well not accessible at time of sampling