

**From:** [Brian Kappen](#)  
**To:** [Koepeke, Cynthia L - DNR](#)  
**Subject:** FW: 02-13-551965 Klinke - Sherman Groundwater Monitoring Update  
**Date:** Thursday, September 10, 2020 7:42:04 AM  
**Attachments:** [02-13-551965 Groundwater Monitoring Update July 2020.pdf](#)

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Cindy,

As I described earlier this week, a remedial excavation was completed at the subject site during July 2019, and post-remediation groundwater monitoring is ongoing as described in the approved *Groundwater Monitoring Work Plan*, dated November 12, 2019. We are preparing brief email updates following each monitoring event, and a single Groundwater Monitoring Report will be submitted following completion of the four (4) monitoring events proposed.

The second groundwater monitoring event following excavation activities was completed in late July 2020. Documentation of results, including an analytical summary table, maps, and a chart for the source area monitoring well are attached. In summary:

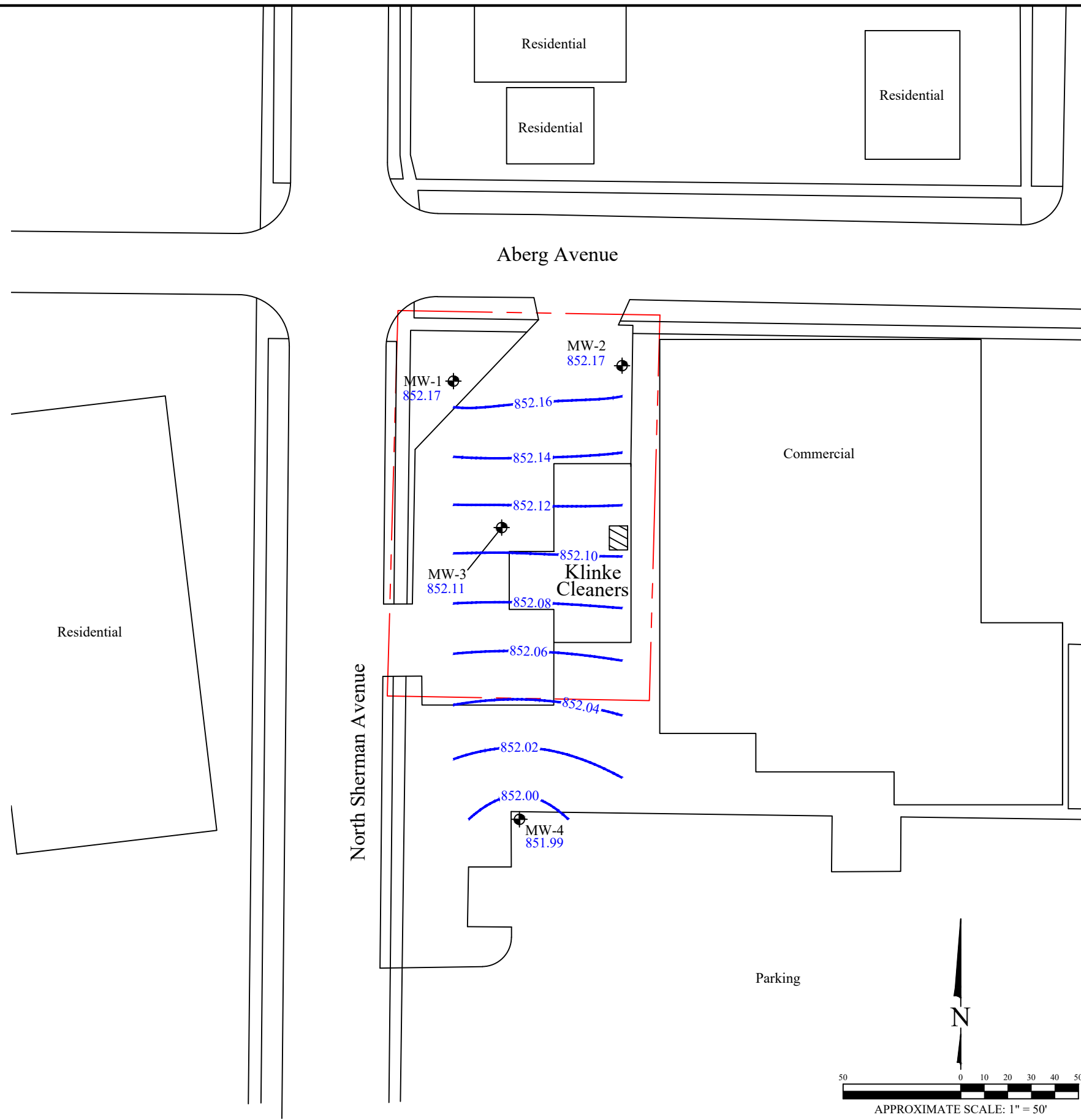
- PCE concentrations are stable relative to the first post-remediation monitoring event completed in February, which demonstrated substantial decreases in all monitoring wells and piezometers compared to pre-remedial concentrations.
- The indicated groundwater flow direction is consistent with previous monitoring events (historically variable from south to east).

The next monitoring event is tentatively scheduled for November 2020. Feel free to contact me with any questions.

Regards,

**Brian Kappen**, Senior Geologist/ Project Manager  
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Direct 414.326.4412 | Mobile 262.745.5054 | [enviroforensics.com](http://enviroforensics.com)

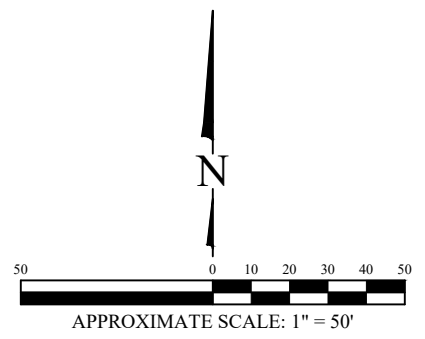
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**Legend**

- - - Property boundary
- Former dry cleaning machine location (approximate)
- MW-1 Water table monitoring well
- 852.10 Water table elevation contour
- 852.17 Groundwater elevation in feet AMSL

Note:  
AMSLS = Above Mean Sea Level



WATER TABLE CONTOUR MAP  
JULY 29, 2020

Klinke Cleaners  
1295 North Sherman Avenue  
Madison, Wisconsin

Date:	8/17/20
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6274-0603



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Figure	1
Project	6274

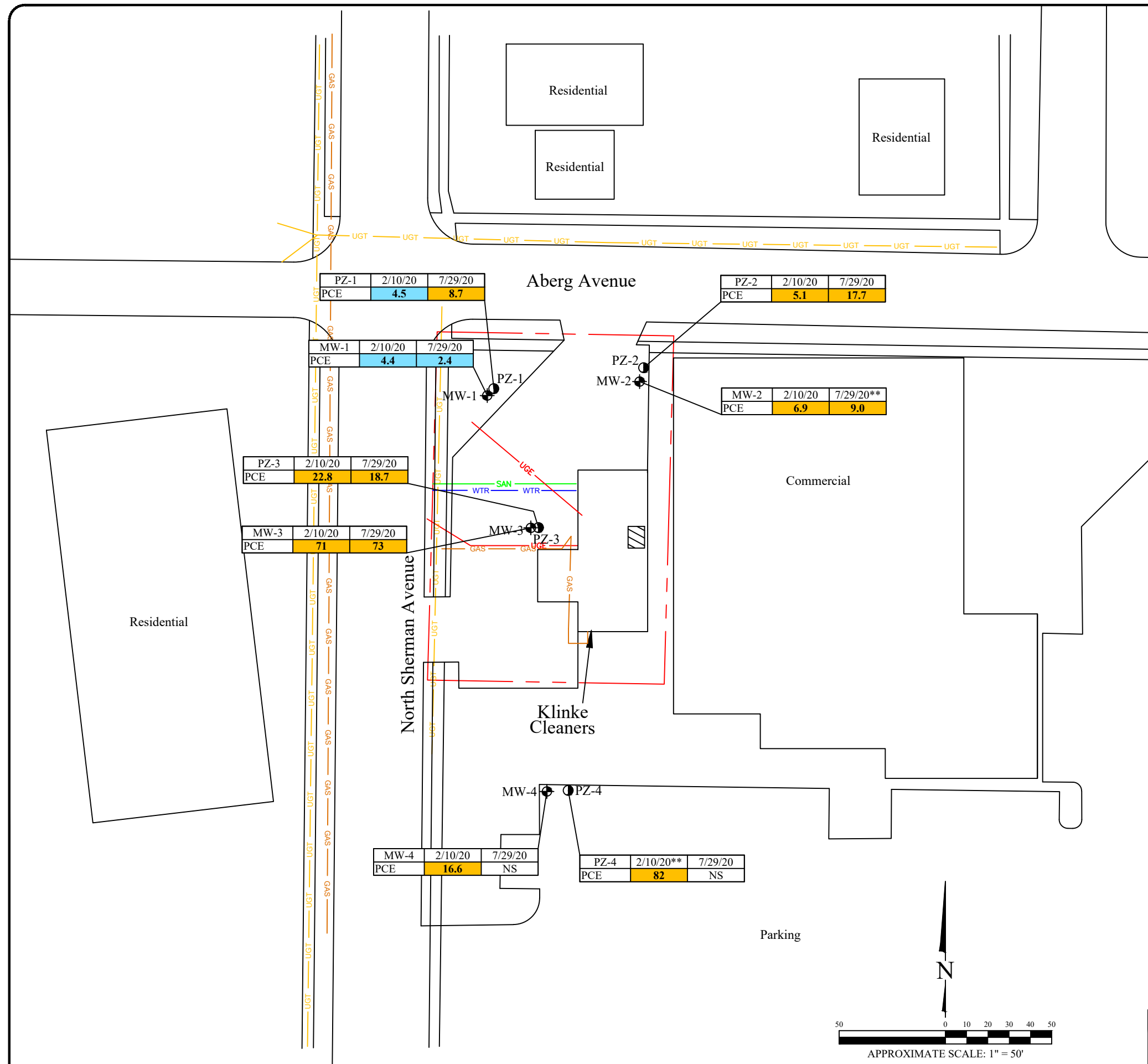
**Legend**

- GAS — Underground gas utility line
- WTR — Underground water utility line
- SAN — Underground sanitary utility line
- UGE — Underground electrical utility line
- UGT — Underground fiber optic line
- - - Property boundary
- Former dry cleaning machine location (approximate)
- PZ-1 Soil boring/groundwater piezometer
- MW-1 Water table monitoring well

Analyte (ug/L)	Public Health Preventive Action Limit	Public Health Enforcement Standard
PCE	0.5	5

**Note:**

1. Bolded and orange shaded values exceed the Public Health Enforcement Standard
2. Bolded and blue shaded values exceed the Public Health Preventive Action Limit
3. Bolded values are above detection limits
4. All results reported in units of micrograms per liter (ug/L)
5. PCE = Tetrachloroethene
6. TCE = Trichloroethene
7. NS = Not sampled
8. \*\* = Reported concentrations are highest detected in duplicate samples



PZ-1	2/10/20	7/29/20
PCE	4.5	8.7

PZ-2	2/10/20	7/29/20
PCE	5.1	17.7

MW-1	2/10/20	7/29/20
PCE	4.4	2.4

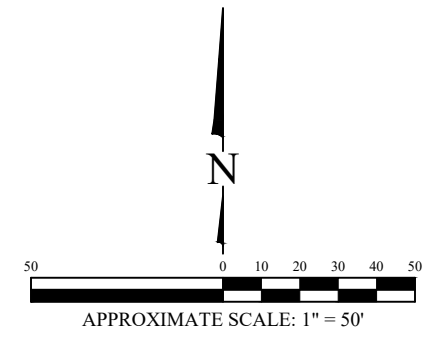
MW-2	2/10/20	7/29/20**
PCE	6.9	9.0

PZ-3	2/10/20	7/29/20
PCE	22.8	18.7

MW-3	2/10/20	7/29/20
PCE	71	73

MW-4	2/10/20	7/29/20
PCE	16.6	NS

PZ-4	2/10/20**	7/29/20
PCE	82	NS



**GROUNDWATER ANALYTICAL RESULTS SUMMARY**

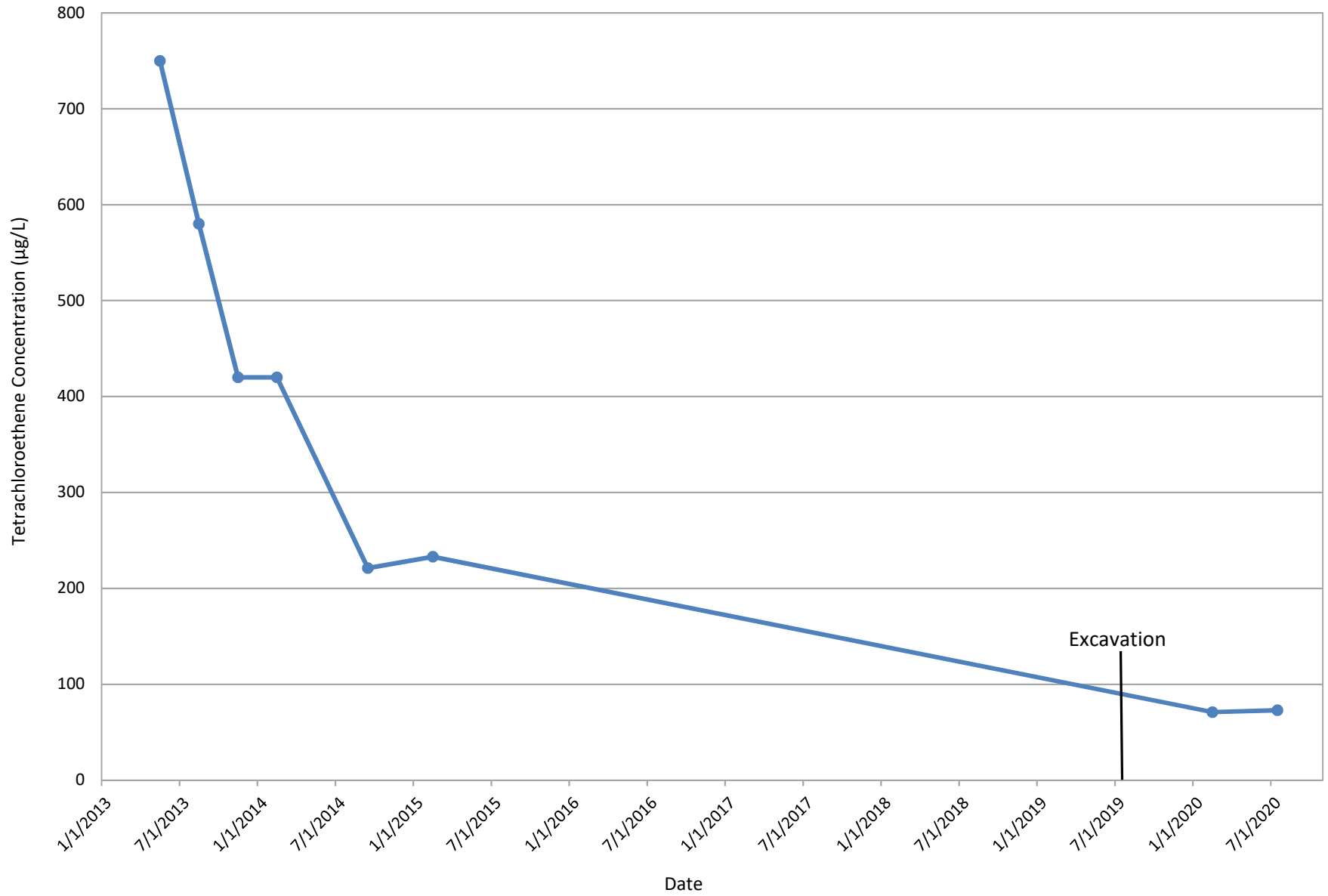
Klinke Cleaners  
1295 North Sherman Avenue  
Madison, Wisconsin

Date:	8/17/20
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6274-0602

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Figure	2
Project	6274

MW-3 PCE Concentration Trend



**TABLE 1**  
**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Klinke Cleaners - Sherman Ave.  
 Madison, Wisconsin

Well Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Trichlorofluoromethane
<b>Enforcement Standard</b>		<b>5</b>	<b>5</b>	<b>70</b>	<b>3,490</b>
<b>Preventive Action Limit</b>		<b>0.5</b>	<b>0.5</b>	<b>7</b>	<b>698</b>
MW-1	5/21/2013	11	<0.19	<0.12	0.95 J
	8/21/2013	7.9	<0.19	<0.12	<0.19
	11/20/2013	11.6	<0.33	<0.38	0.83 J
	2/21/2014	9.8	0.42 J	<0.38	<0.35
	9/23/2014	8.9	<0.33	<0.38	<0.71
	2/4/2015	11.5	0.53 J	<0.45	<0.87
	2/10/2020	4.4	<0.3	<0.37	<0.35
	7/29/2020	2.4	<0.47	<0.39	0.49 J
MW-2	5/21/2013	3.6	<0.19	<0.12	<0.19
	8/21/2013 **	13	1.2	<0.12	<0.19
	11/20/2013	12.9	1.19	<0.38	<0.71
	2/27/2014	10.8	1.26	<0.38	<0.35
	9/23/2014	13.2	0.85 J	<0.38	<0.71
	2/3/2015	12.4	1.38 J	<0.45	<0.87
	2/10/2020	6.9	<0.3	<0.37	<0.35
	7/29/2020 **	9.0	<0.47	<0.39	<0.42
MW-3	5/23/2013 **	750	2.0	2.1	4.9
	8/21/2013	580	2.2	5.7	5.6
	11/20/2013	420	<16.5	<19	<35.5
	2/21/2014 **	420	1.33	0.69 J	2.55
	9/24/2014	221	0.76 J	<0.38	<0.71
	2/4/2015	233	<4.7	<4.5	<8.7
	2/10/2020	71	<0.3	<0.37	2.38
	7/29/2020	73	<0.47	<0.39	2.96
MW-4	5/21/2013	38	0.26 J	<0.12	<0.19
	8/22/2013	81	<0.19	<0.12	<0.19
	11/20/2013	99	<0.33	<0.38	<0.71
	2/21/2014	103	0.76 J	<0.38	<0.35
	9/23/2014	183	<0.33	<0.38	<0.71
	2/4/2015	101	<0.47	<0.45	<0.87
	2/10/2020	16.6	<0.3	<0.37	<0.35

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Klinke Cleaners - Sherman Ave.  
 Madison, Wisconsin

Well Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Trichlorofluoromethane
<b>Enforcement Standard</b>		<b>5</b>	<b>5</b>	<b>70</b>	<b>3,490</b>
<b>Preventive Action Limit</b>		<b>0.5</b>	<b>0.5</b>	<b>7</b>	<b>698</b>
PZ-1	5/21/2013	20	0.40 J	<0.12	<0.19
	8/21/2013	15	0.27 J	<0.12	<0.19
	11/20/2013	13.6	<0.33	<0.38	<0.71
	2/21/2014	15.2	0.37 J	<0.38	<0.35
	9/23/2014	12.8	<0.33	<0.38	<0.71
	2/4/2015	11.8	<0.47	<0.45	<0.87
	2/10/2020	4.5	<0.3	<0.37	<0.35
	7/29/2020	8.7	<0.47	<0.39	<0.42
PZ-2	5/21/2013	38	4.7	<0.12	<0.19
	8/21/2013	35	4.1	<0.12	<0.19
	11/20/2013	28.8	3.07	<0.38	<0.71
	2/27/2014	32	3.02	<0.38	<0.35
	9/24/2014	36	3.20	<0.38	<0.71
	2/3/2015	26.4	2.63	<0.45	<0.87
	2/10/2020	5.1	<0.3	<0.37	<0.35
	7/29/2020	17.7	<0.47	<0.39	<0.42
PZ-3	5/23/2013	98	1.5	<0.12	2.5
	8/21/2013	82	1.1	<0.12	<0.19
	11/20/2013 **	64	1.03	<3.8	<7.1
	2/21/2014	21.3	0.37 J	<0.38	<0.35
	9/24/2014	65	0.70 J	<0.38	<0.71
	2/4/2015	62	0.75 J	<0.45	<0.87
	2/10/2020	22.8	<0.3	<0.37	<0.35
	7/29/2020	18.7	<0.47	<0.39	<0.42

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Well Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Trichlorofluoromethane
<b>Enforcement Standard</b>		<b>5</b>	<b>5</b>	<b>70</b>	<b>3,490</b>
<b>Preventive Action Limit</b>		<b>0.5</b>	<b>0.5</b>	<b>7</b>	<b>698</b>
PZ-4	5/21/2013	<b>180</b>	<b>1.9</b>	<0.12	<0.19
	8/21/2013	<b>210</b>	<b>1.9</b>	<0.12	<0.19
	11/20/2013	<b>173</b>	<b>3.8 J</b>	<3.8	<7.1
	2/21/2014	<b>200</b>	<b>2.84</b>	<0.38	<0.35
	9/23/2014	<b>184</b>	<b>2.15 J</b>	<1.9	<3.55
	2/3/2015	<b>280</b>	<b>1.67</b>	<0.45	<0.87
	2/10/2020 **	<b>82</b>	<0.3	<0.37	<b>0.70 J</b>

**Notes:**

All concentrations reported in micrograms per liter (µg/l)

Samples analyzed using EPA SW-846 Method 8260

**Bolded** values are above the laboratory detection limit

**Bolded** and blue shaded values exceed the Public Health Preventive Action Limit

**Bolded** and orange shaded values exceed the Public Health Enforcement Standard

Public Health standards are listed in Wisconsin Administrative Code (WAC) Chapter NR 140

\*\* = Reported concentrations are the highest detected in duplicate samples

J = Analyte concentration between the laboratory Method Detection Limit and Reporting Limit

NE = Not Established