

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

One Hour Martinizing - Elm Grove

2. Reporting period from: 07/01/2018 To: 12/31/2018 Days in period: 184

3. Regulatory agency (enter DNR, DATCP and/or other) 4. BRRTS ID No. (2 digit program-2 digit county-6 digit site specific)
 DNR 02-68-552102

5. Site location

Region	County	Address				
Southeast Region	Waukesha	13405 Watertown Plank Road				
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	$\frac{1}{4}$ NW $\frac{1}{4}$ NE
Elm Grove		07 N	20		25	

6. Responsible party

Name
 Brian Cass
 Mailing address
 W229 N2494 County Road F, Waukesha, WI 53186
 Phone number
 (262) 521-9710

7. Consultant

Select if the following information has changed since the last submittal

Company name
 EnviroForensics, LLC
 Mailing address
 N16 W23390 Stone Ridge Dr. Suite G
 Phone number
 (262) 290-4001

8. Contaminants

PCE, TCE, 1,2-cis DCE, and Vinyl Chloride

9. Soil types (USCS or USDA)

Interbedded lenses of clay, silt, sand, and gravel in upper 15 feet (unsaturated); predominantly medium-grained sand and gravel below that (saturated).

10. Hydraulic conductivity(cm/sec):

0.002

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

1.01

Site name: One Hour Martinizing - Elm Grove

Remediation Site Operation, Maintenance, Monitoring & Optimization Report

Reporting period from: 07/01/2018 To: 12/31/2018

Form 4400-194 (R 11/14)

Days in period: 184

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

If yes, give location: Region _____ County _____

Municipality name City Town Village _____ Township _____ Range E W Section _____ 1/4 _____ 1/4 1/4

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: \$416,960.00
2. Implementation costs (design, capital and installation costs, excluding investigation costs): \$282,900.00
3. Total costs during the previous reporting period: \$0.00
4. Total costs during this reporting period: \$282,900.00
5. Total anticipated costs for the next reporting period: \$48,000.00
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

Site name: One Hour Martinizing - Elm Grove
Reporting period from: 07/01/2018 To: 12/31/2018
Days in period: 184

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If yes, explain:

The costs presented in D.2. and D.4. include installation of an SVE system and a one-time injection of groundwater treatment solutions.

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

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
Andrew Horwath	Senior Engineer
Signature	Date

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
Wayne Fassbender	Senior Project Manager
Signature	Date

Scientists:

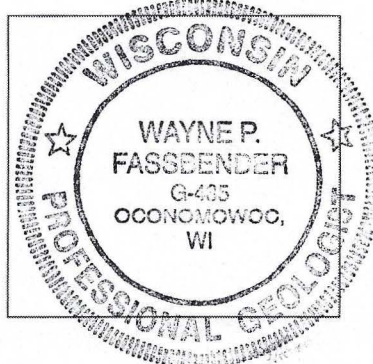
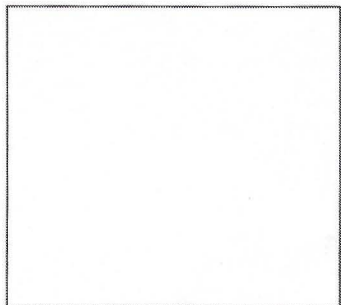
I hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm.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

Print name	Title
Signature	Date

Other Persons:

Print name	Title
Signature	Date

Professional Seal(s), if applicable:



Site name: One Hour Martinizing - Elm Grove

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Section GW-4, Other Groundwater Remediation Methods

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: PCE

b. Percent reduction necessary: 99.5 %

c. Maximum contaminant concentration level in any monitoring well: 930 $\mu\text{g/L}$

2. Is the size of the plume: Increasing Stabalized Decreasing ?

3. Describe the method used to remediate groundwater at the site:

A groundwater reducing agent along with an electron donor and specific microbes capable of degrading chlorinated solvents were injected into the groundwater on a grid system over the area of groundwater impacts in June of 2018 (see Figure 1). The high concentration and percent reduction reported above is from well MW-7 in the northern source area. Groundwater sampling since that time has shown significant reductions in PCE and production of reducing conditions within the aquifer as seen in Table 3. This has resulted in the production of daughter products of de-halogenation such as trichloroethene, cis-1,2-dichloroethene, and vinyl chloride. Further post-remedial groundwater sampling is needed to assess the continuation of the de-halogenation process.

4. List any additional information required by the DNR for this method for this site:

An injection permit request was submitted to the DNR in April of 2018 and approved on May 24, 2018. In addition, a Remedial Action Implementation Report, dated January 8, 2019 was submitted to the DNR to satisfy reporting requirements in Wisconsin Administrative Code, Chapter NR 724.

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.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- Any other attachments required by the DNR for this remediation method.

Site name: One Hour Martinizing - Elm Grove

Reporting period from: 07/01/2018 To: 12/31/2018

Days in period: 184

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Section IS-1, Soil Venting (Including Soil Vapor Extraction, Building Venting and Bioventing)

A. Soil Venting Operation

Note: This form is not required for building vapor mitigation systems that are installed proactively to protect building occupants/users and are not considered part of ongoing active soil remediation.

1. Number of air extraction wells available and number of wells actually in use during the period: 3

2. Number of days of operation (only list the number of days the system actually operated, if unknown explain):

3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:
10.4%. SVE operation did not occur until November 7, 2018. Currently still in startup mode and adjusting system for optimal performance.

4. Average depth to groundwater: 15.89 gpm

B. Building Basement/Subslab Venting System Operation

1. Number of venting points available and number of points actually in use during the period: _____

2. Number of days of operation (only list the number of days the system actually operated, if unknown explain):

3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:

C. Effectiveness Evaluation

1. Average contaminant removal rate for the entire system: 0.26 pounds per day

2. Average contaminant removal rate per well or venting point: 0.08 pounds per day

3. If the average contaminant removal rate is less than one pound per day for the entire system, or if the average contaminant removal rate per well is less than one tenth of a pound per day, evaluate the following:

a. If contaminants are aerobically biodegradable and confirmation borings have not been drilled in the past year:

i. Oxygen levels in extracted air: _____ percent

ii. Methane levels in extracted air (ppm_v) If over 10 ppm_v, explain:

iii. If methane is not present above 10 ppm_v and if oxygen is greater than 20 percent in extracted air, you should either:

- o Drill confirmation borings during the next reporting period, if the entire site should be considered for closure.
- o Or, perform an in situ respirometry test in a zone of high contamination. Do not perform the test in an air extraction well, use a gas probe or water table well. If a zero order rate of decay based on oxygen depletion is less than 2 mg/kg per day, then you should drill confirmation borings, if the entire site should be considered for closure. If the rate of decay is between 2 and 10 mg/kg, operate for one more reporting period before evaluating further. If the zero order rate of decay is greater than 10 mg/kg total hydrocarbons, continue operating the system in a manner than maximizes aerobic biodegradation.

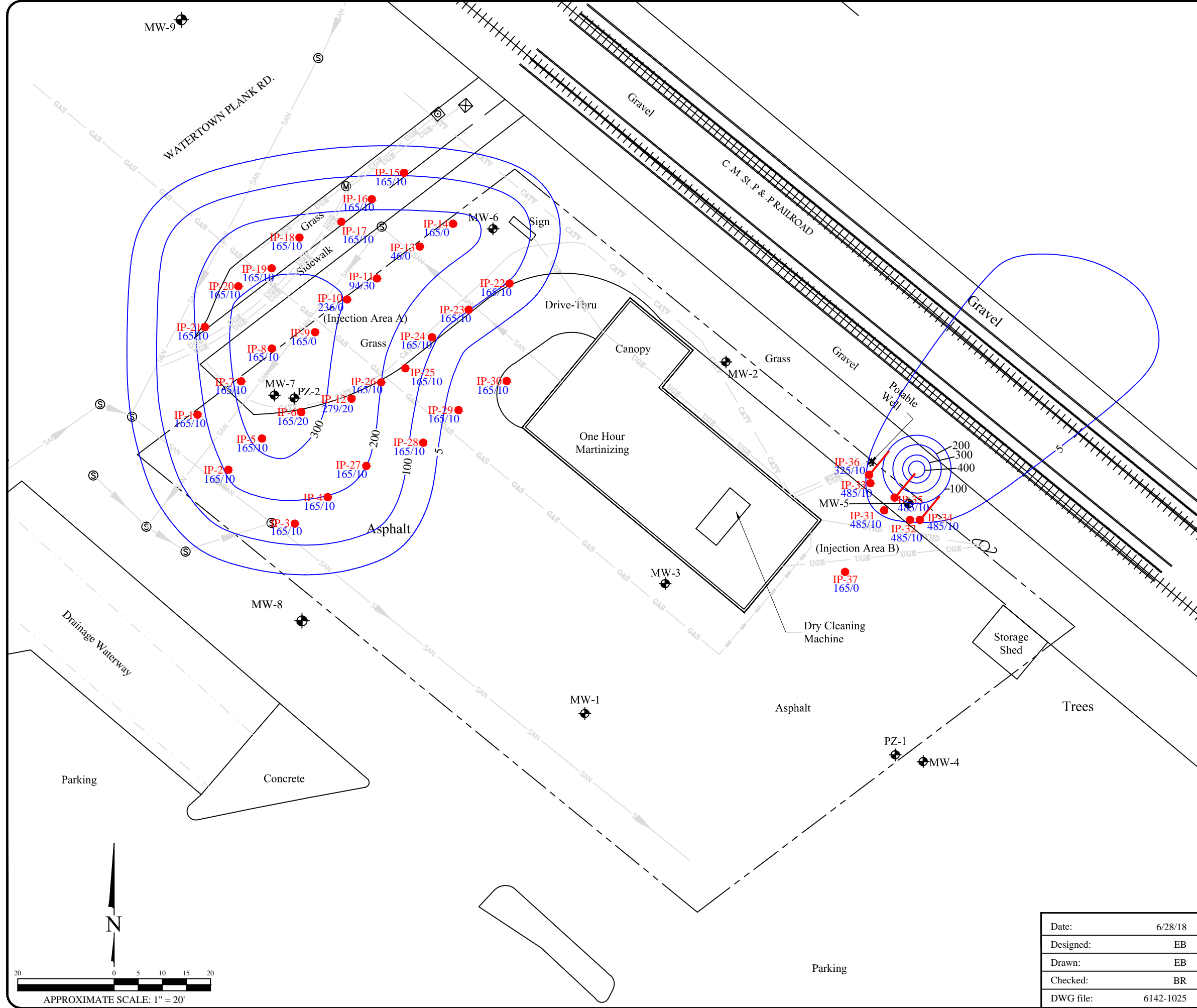
b. If contaminants are not aerobically biodegradable and confirmation borings have not been recently drilled during the past year, you should drill confirmation borings during the next reporting period if the entire site should be considered for closure.

c. If soil borings were drilled during the past year and soil contamination remains above acceptable levels, explain if the system effectiveness can be increased and/or if other options need to be considered to achieve cleanup criteria.

D. Additional Attachments

Attach the following to this form:

- Well and soil sample location map indicating all air extraction wells. If forced air injection wells are also in use, identify those wells.
- If water table monitoring wells are present at the site, a map of well locations.
- Time versus vapor phase contaminant concentration graph.
- Time versus cumulative contaminant removal graph.
- Groundwater elevations table, if water table wells are present at the site; also list screen lengths and elevations.
- Table of soil contaminant chemistry data.
- Soil gas data, if gas probes are used to monitor subsurface conditions in locations other than where air is extracted.
- System operational data table.



Legend

- MW-2 Monitoring well location
- Property boundary
- GAS GAS — Underground gas utility line
- WTR WTR — Underground water utility line
- SAN SAN — Underground sanitary utility line (Arrow shows direction of flow)
- CATV CATV — Underground cable television utility line
- OVHD OVHD — Over head electrical utility line
- UGE UGE — Underground electrical utility line
- Sanitary Sewer Manhole
- Manhole
- IP-1 Injection point location Gallons of 3DME
- IP-34 Directional injection point location
- 164/10 Gallons of 3DME + CRS/BDI injected
- PCE iso-concentration lines in ug/L

- Notes:**
1. 3DME = 3D Microemulsion
 2. CRS = Chemical Reducing Solution
 3. BDI = Bio-Dechlor Inoculum Plus
 4. ug/L = Micrograms per Liter

**FULL-SCALE INJECTION POINT LAYOUT
SHOWING AMOUNT OF 3DME/CRS and BDI
INJECTED**

One Hour Martinizing
13405 Watertown Plank Road
Elm Grove, WI

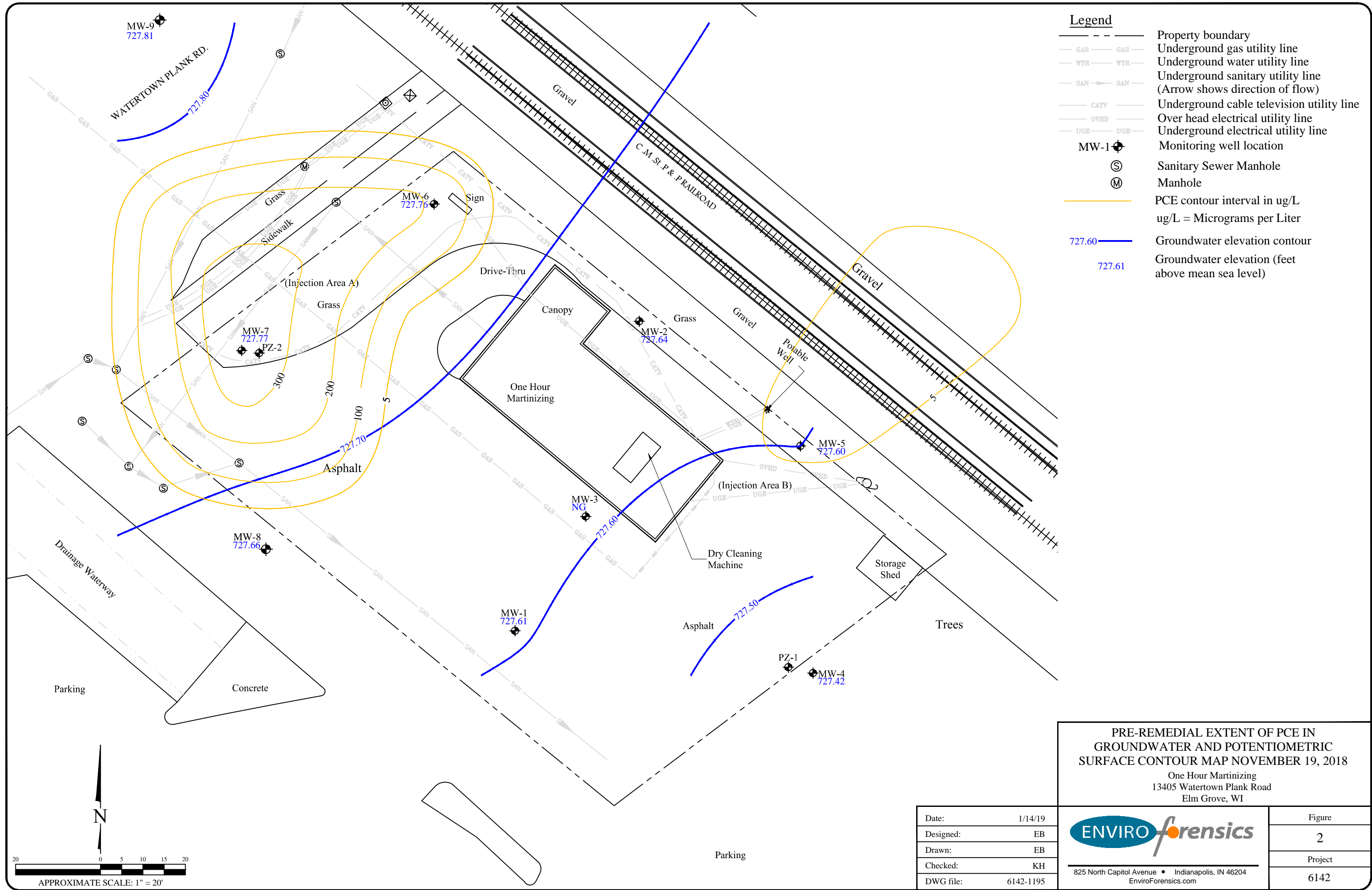
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Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6142-1025

Figure
1
Project
6142

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N

APPROXIMATE SCALE: 1" = 20'













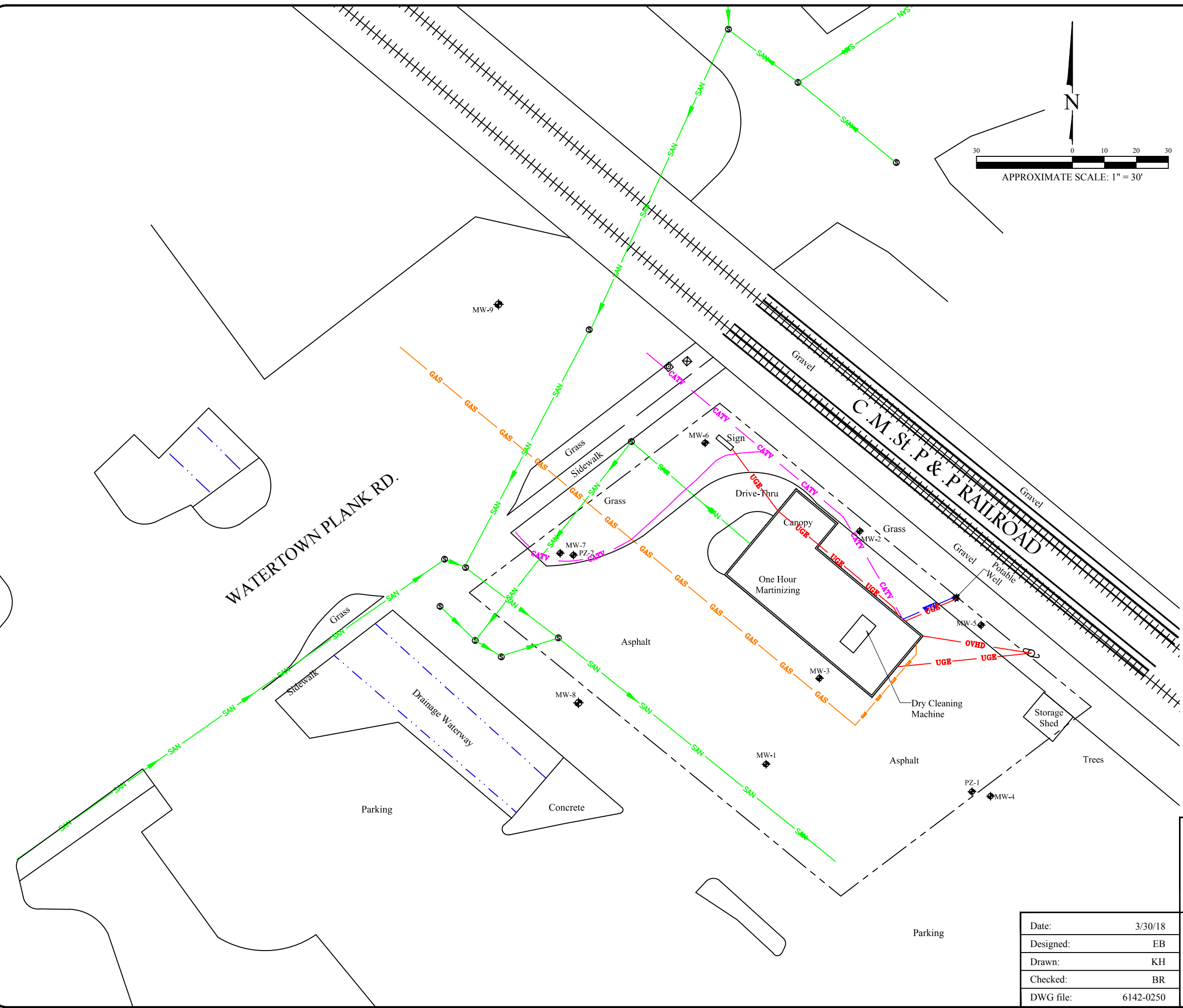
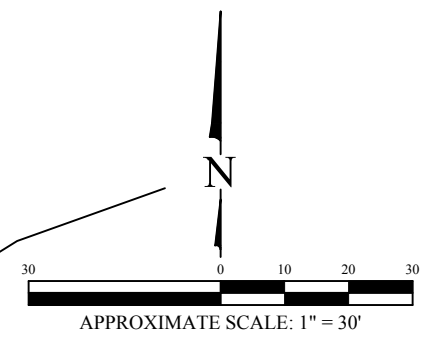
**PRE-REMEDIAL EXTENT OF PCE IN
GROUNDWATER AND POTENTIOMETRIC
SURFACE CONTOUR MAP NOVEMBER 19, 2018**

One Hour Martinizing
13405 Watertown Plank Road
Elm Grove, WI

	Figure
	2
	Project
	6142

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- Legend**
- MW-2  Monitoring well location
 -  Property boundary
 -  GAS — Under ground gas utility line
 -  WTR — Under ground water utility line
 -  SAN — Under ground sanitary utility line (Arrow shows direction of flow)
 -  CATV — Under ground cable television utility line
 -  OVHD — Over head electrical utility line
 -  UGE — Under ground electrical utility line
 -  Sanitary Sewer Manhole
 -  Potable Well



MONITORING WELL LOCATION MAP

One Hour Martinizing
13405 Watertown Plank Road
Elm Grove, WI

Date:	3/30/18
Designed:	EB
Drawn:	KH
Checked:	BR
DWG file:	6142-0250


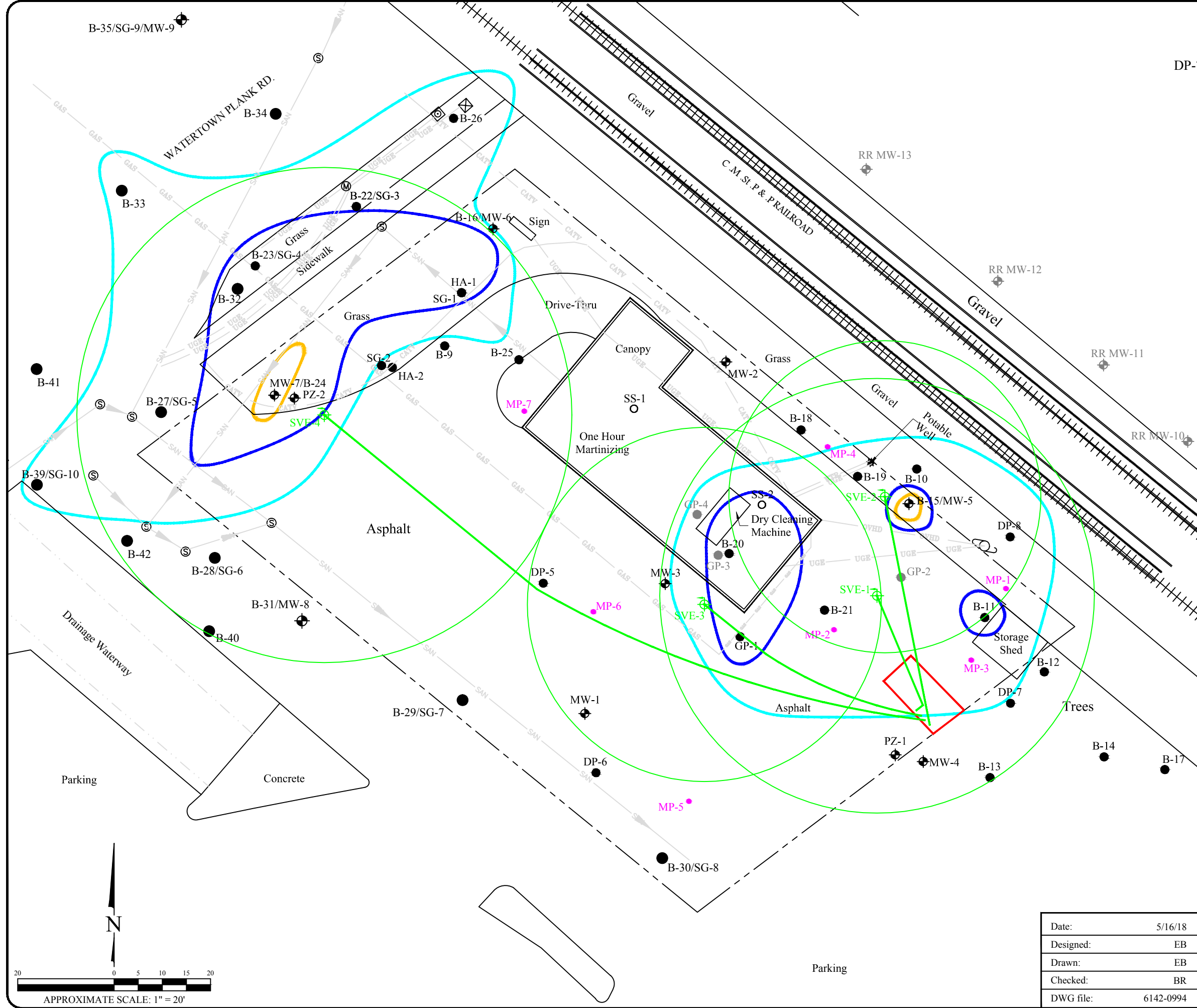


Figure	3
Project	6142

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- Legend**
- GP-1 ● Direct-push boring sample location (by others)
 - DP-7,HA-1,B-9 ● Direct-push boring sample location
 - MW-2 ⊕ Monitoring well location
 - SG-1 ● Soil gas boring location
 - SS-1 ○ Sub-slab vapor sample location
 - RR MW-10 ⊕ Railroad Right-of-Way monitoring wells (Installed by Sigma Group for BP Amoco site)
 - Property boundary
 - GAS — Underground gas utility line
 - WTR — Underground water utility line
 - SAN — Underground sanitary utility line (Arrow shows direction of flow)
 - CATV — Underground cable television utility line
 - OVHD — Over head electrical utility line
 - UGE — Underground electrical utility line
 - Ⓢ Sanitary Sewer Manhole
 - SVE-1 ⊕ SVE well
 - MP-1 ● Monitoring point
 - SVE system equipment enclosure
 - Remediation system directional piping
 - Radius of influence ≥ -0.1 inH₂O
 - PCE >50,000ug/kg
 - PCE >10,000 ug/kg
 - PCE >1,000 ug/kg

Note:
 1. inH₂O = inches of water
 2. ug/kg = Micrograms per kilogram

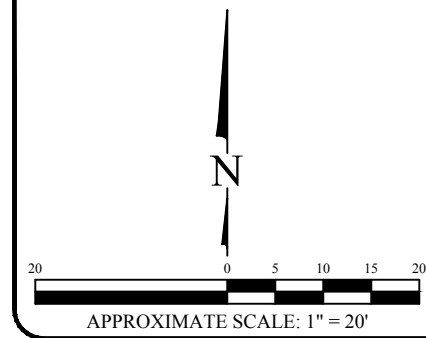
REMEDIATION SYSTEM LAYOUT AND PCE IN SOIL ISOCONTOURS

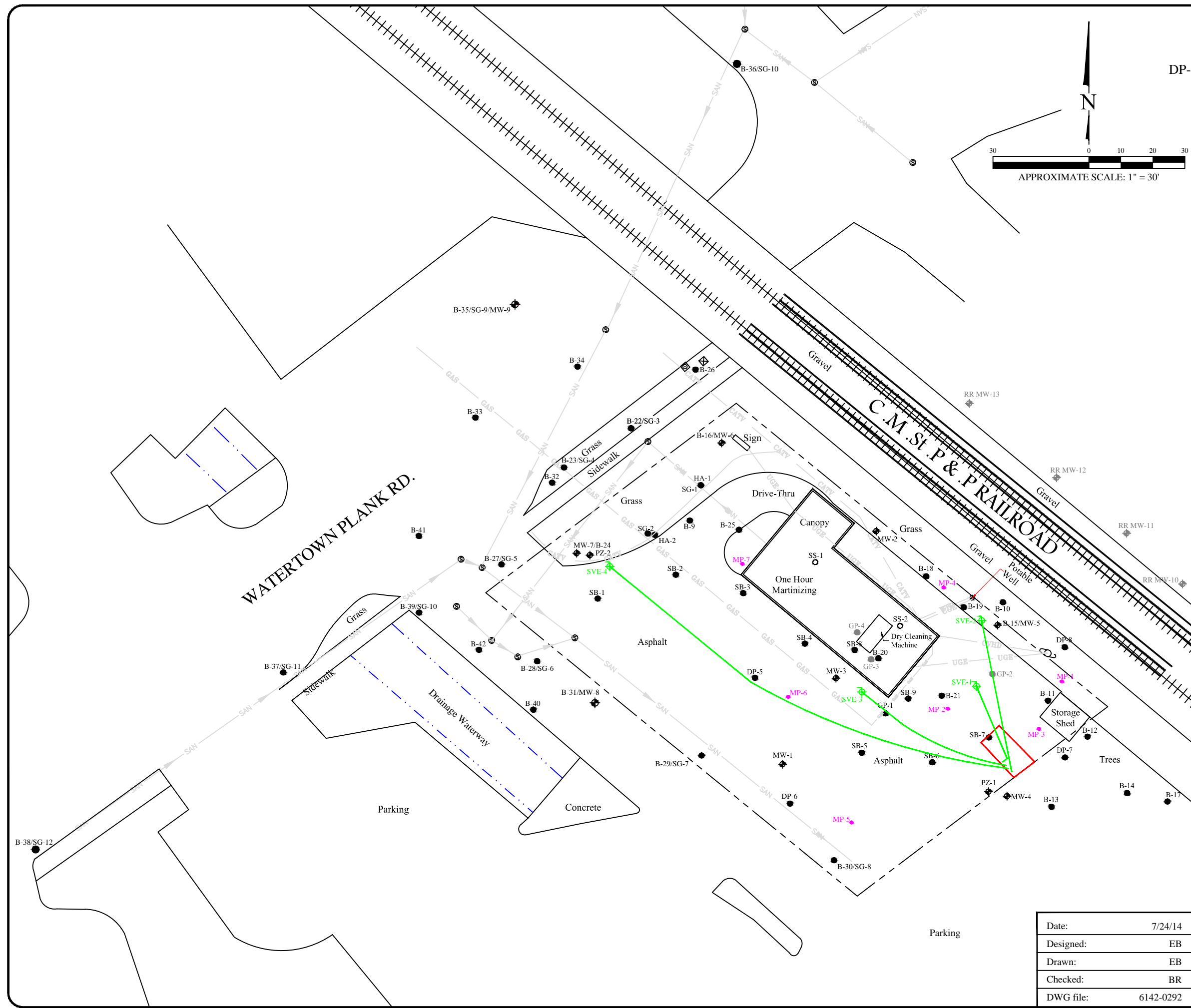
One Hour Martinizing
 13405 Watertown Plank Road
 Elm Grove, WI

Date:	5/16/18
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6142-0994

Figure	4
Project	6142

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- Legend**
- GP-1 ● Direct-push boring sample location (by others)
 - DP-7, HA-1, B-9 ● Direct-push boring sample location
 - MW-2 ⊕ Monitoring well location
 - SG-1 ● Soil gas boring location
 - SS-1 ○ Sub-slab vapor sample location
 - RR MW-10 ⊕ Railroad Right-of-Way monitoring wells (Installed by Sigma Group for BP Amoco site)
 - Property boundary
 - GAS — GAS — Underground gas utility line
 - WTR — WTR — Underground water utility line
 - SAN — SAN — Underground sanitary utility line (Arrow shows direction of flow)
 - CATV — CATV — Underground cable television utility line
 - OVHD — OVHD — Over head electrical utility line
 - UGE — UGE — Underground electrical utility line
 - ⊙ Sanitary Sewer Manhole
 - SVE-1 ⊕ SVE well
 - MP-1 ● Monitoring point
 - SVE system equipment enclosure
 - Remediation system directional piping

SITE MAP SHOWING ALL DATA COLLECTION POINTS AND SVE EXTRACTION WELLS

One Hour Martinizing
13405 Watertown Plank Road
Elm Grove, WI

Date:	7/24/14
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6142-0292

	Figure
	5
	Project
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TABLE 3
GROUNDWATER ELEVATION DATA

One Hour Martinizing
Elm Grove, Wisconsin

Well	Date	TOC Elevation (feet AMSL)	DTW (feet)	Groundwater Elevation (feet amsl)	
MW-1	11/19/2009	741.88	15.50	726.38	
	9/16/2010	741.88	14.24	727.64	
	4/25/2011	741.88	14.40	727.48	
	9/7/2011	741.88	15.38	726.50	
	12/21/2011	741.88	15.79	726.09	
	2/12/2012	741.88	16.26	725.62	
	10/24/2012	741.88	17.04	724.84	
	4/24/2013	741.88	13.24	728.64	
	7/2/2013	741.88	13.19	728.69	
	10/16/2013	741.88	15.48	726.40	
	12/6/2013	741.88	16.05	725.83	
	2/27/2014	741.88	16.55	725.33	
	5/8/2014	741.88	15.36	726.52	
	8/5/2014	741.88	NM	NM	
	10/30/2014	741.88	15.42	726.46	
	6/17/2015	741.88	15.49	726.39	
	9/4/2015	741.88	16.23	725.65	
	5/23/2016	741.88	14.22	727.66	
	11/16/2016	741.88	13.61	728.27	
	7/31/2017	741.88	14.64	727.24	
	4/3/2018	741.88	15.53	726.35	
	8/30/2018	741.88	15.53	726.35	
	11/19/2018	741.88	14.27	727.61	
	Max		17.04	728.69	
	Min		13.19	724.84	
	Avg		15.16	726.72	
MW-2	11/19/2009	743.40	16.94	726.46	
	9/16/2010	743.40	15.60	727.80	
	4/25/2011	743.40	16.03	727.37	
	9/7/2011	743.40	16.82	726.58	
	12/21/2011	743.40	17.27	726.13	
	2/12/2012	743.40	17.74	725.66	
	10/24/2012	743.40	18.52	724.88	
	4/24/2013	743.40	14.68	728.72	
	7/2/2013	743.40	14.60	728.80	
	10/16/2013	743.40	16.96	726.44	
	12/6/2013	743.40	17.55	725.85	
	2/27/2014	743.40	NM	NM	
	5/8/2014	743.40	16.84	726.56	
	8/5/2014	743.40	NM	NM	
	10/30/2014	743.40	16.89	726.51	
	6/17/2015	743.40	17.00	726.40	
	9/4/2015	743.40	17.72	725.68	
	5/23/2016	743.40	15.63	727.77	
	4/3/2018	743.40	17.09	726.31	
	8/30/2018	743.40	16.29	727.11	
	11/19/2018	743.40	15.76	727.64	
		Max		18.52	728.80
		Min		14.60	724.88
	Avg		16.63	726.77	
MW-3	11/19/2009	742.94	16.53	726.41	
	9/16/2010	742.94	15.25	727.69	
	4/25/2011	742.94	15.66	727.28	
	9/7/2011	742.94	16.44	726.50	
	12/21/2011	742.94	16.50	726.44	
	2/12/2012	742.94	17.32	725.62	
	10/24/2012	742.94	18.10	724.84	
	4/24/2013	742.94	14.28	728.66	
	7/2/2013	742.94	14.21	728.73	
	10/16/2013	742.94	16.55	726.39	
	12/6/2013	742.94	17.12	725.82	
	2/27/2014	742.94	17.61	725.33	
	5/8/2014	742.94	15.42	727.52	
	8/5/2014	742.94	NM	NM	
	10/30/2014	742.94	16.46	726.48	
	6/17/2015	742.94	15.58	727.36	
	9/4/2015	742.94	17.30	725.64	
	5/23/2016	742.94	15.25	727.69	
	11/16/2016	742.94	14.67	728.27	
	7/31/2017	742.94	13.58	729.36	
	4/3/2018	742.94	16.64	726.30	
	8/30/2018	742.94	15.88	727.06	
	11/19/2018	742.94	15.23	727.71	
	Max		18.10	729.36	
	Min		13.58	724.84	
	Avg		15.98	726.96	

TABLE 3
GROUNDWATER ELEVATION DATA

One Hour Martinizing
Elm Grove, Wisconsin

Well	Date	TOC Elevation (feet AMSL)	DTW (feet)	Groundwater Elevation (feet amsl)
MW-4	11/19/2009	741.88	15.51	726.37
	9/16/2010	741.88	14.28	727.60
	4/25/2011	741.88	14.63	727.25
	9/7/2011	741.88	15.46	726.42
	12/21/2011	741.88	15.89	725.99
	2/12/2012	741.88	16.36	725.52
	10/24/2012	741.88	17.11	724.77
	4/24/2013	741.88	13.31	728.57
	7/2/2013	741.88	13.23	728.65
	10/16/2013	741.88	15.56	726.32
	12/6/2013	741.88	16.14	725.74
	2/27/2014	741.88	NM	NM
	5/8/2014	741.88	15.47	726.41
	8/5/2014	741.88	NM	NM
	10/30/2014	741.88	15.51	726.37
	6/17/2015	741.88	16.62	725.26
	9/4/2015	741.88	16.34	725.54
	5/23/2016	741.88	14.36	727.52
	4/3/2018	741.88	15.66	726.22
	8/30/2018	741.88	14.95	726.93
	11/19/2018	741.88	14.46	727.42
	Max		17.11	728.65
	Min		13.23	724.77
	Avg		15.31	726.57
MW-5	10/24/2012	742.96	18.12	724.84
	4/24/2013	742.96	14.31	728.65
	7/2/2013	742.96	14.23	728.73
	10/16/2013	742.96	16.59	726.37
	12/6/2013	742.96	17.16	725.80
	2/27/2014	742.96	NM	NM
	5/8/2014	742.96	16.46	726.50
	8/5/2014	742.96	15.68	727.28
	10/30/2014	742.96	16.51	726.45
	3/31/2015	742.96	16.92	726.04
	6/17/2015	742.96	NM	NM
	9/4/2015	742.96	17.32	725.64
	5/23/2016	742.96	15.29	727.67
	4/3/2018	742.96	16.65	726.31
	8/30/2018	742.75	15.68	727.07
	11/19/2018	742.75	15.15	727.60
	Max		18.12	728.73
	Min		14.23	724.84
	Avg		16.15	726.78
MW-6	10/24/2012	744.05	19.14	724.91
	4/24/2013	744.05	15.27	728.78
	7/2/2013	744.05	15.20	728.85
	10/16/2013	744.05	17.52	726.53
	12/6/2013	744.05	18.11	725.94
	2/27/2014	744.05	NM	NM
	5/8/2014	744.05	17.42	726.63
	8/5/2014	744.05	16.60	727.45
	10/30/2014	744.05	17.49	726.56
	10/31/2014	744.05	17.89	726.16
	6/17/2015	744.05	17.59	726.46
	9/4/2015	744.05	18.32	725.73
	5/23/2016	744.05	16.19	727.86
	4/3/2018	744.05	17.62	726.43
	8/30/2018	744.05	16.84	727.21
	11/19/2018	744.05	16.29	727.76
	Max		19.14	728.85
	Min		15.20	724.91
	Avg		17.17	726.88
MW-7	4/24/2013	742.95	14.21	728.74
	7/2/2013	742.95	14.11	728.84
	10/16/2013	742.95	16.44	726.51
	12/6/2013	742.95	17.02	725.93
	2/27/2014	742.95	NM	NM
	5/8/2014	742.95	16.34	726.61
	8/5/2014	742.95	15.56	727.39
	10/30/2014	742.95	16.36	726.59
	3/31/2015	742.95	16.81	726.14
	6/17/2015	742.95	16.49	726.46
	9/4/2015	742.95	17.24	725.71
	5/23/2016	742.95	15.12	727.83
	11/14/2016	742.95	14.53	728.42
	7/31/2017	742.95	14.49	728.46
	4/3/2018	742.95	16.55	726.40
	8/30/2018	742.95	15.73	727.22
11/19/2018	742.95	15.18	727.77	
	Max		17.24	728.84
	Min		14.11	725.71
	Avg		15.76	727.19

TABLE 3
GROUNDWATER ELEVATION DATA

One Hour Martinizing
Elm Grove, Wisconsin

Well	Date	TOC Elevation (feet AMSL)	DTW (feet)	Groundwater Elevation (feet amsl)	
MW-8	12/6/2013	741.81	15.94	725.87	
	2/27/2014	741.81	16.42	725.39	
	5/8/2014	741.81	15.23	726.58	
	8/5/2014	741.81	14.46	727.35	
	10/30/2014	741.81	15.29	726.52	
	3/31/2015	741.81	15.70	726.11	
	6/17/2015	741.81	15.39	726.42	
	9/4/2015	741.81	16.11	725.70	
	5/23/2016	741.81	14.05	727.76	
	11/14/2016	741.81	13.47	728.34	
	7/31/2017	741.81	13.43	728.38	
	4/3/2018	741.81	15.48	726.33	
	8/30/2018	741.81	14.65	727.16	
	11/19/2018	741.81	14.15	727.66	
	Max		16.42	728.38	
	Min		13.43	725.39	
	Avg		14.98	726.83	
MW-9	12/6/2013	744.62	18.70	725.92	
	2/27/2014	744.62	19.19	725.43	
	5/8/2014	744.62	18.02	726.60	
	8/5/2014	744.62	NM	NM	
	10/30/2014	744.62	18.04	726.58	
	6/17/2015	744.62	18.16	726.46	
	9/4/2015	744.62	19.90	724.72	
	5/21/2016	744.62	16.78	727.84	
	4/3/2018	744.62	NM	NM	
	8/30/2018	744.62	17.37	727.25	
	11/19/2018	744.62	16.81	727.81	
		Max		19.90	727.84
		Min		16.78	724.72
		Avg		18.11	726.51
PZ-1	4/24/2013	741.81	13.11	728.70	
	7/2/2013	741.81	13.00	728.81	
	10/16/2013	741.81	15.33	726.48	
	12/6/2013	741.81	15.95	725.86	
	2/27/2014	741.81	16.41	725.40	
	5/8/2014	741.81	15.26	726.55	
	8/5/2014	741.81	14.47	727.34	
	10/30/2014	741.81	15.28	726.53	
	3/31/2015	741.81	15.74	726.07	
	6/17/2015	741.81	15.42	726.39	
	9/4/2015	741.81	16.16	725.65	
	5/23/2016	741.81	14.00	727.81	
	11/15/2016	741.81	13.47	728.34	
	7/31/2017	741.81	13.42	728.39	
	4/3/2018	741.81	15.45	726.36	
	8/30/2018	741.81	14.72	727.09	
	11/19/2018	741.81	14.16	727.65	
		Max		16.41	728.81
		Min		13.00	725.40
		Avg		14.79	727.02
PZ-2	7/1/2014	742.83	14.70	728.13	
	8/5/2014	742.83	15.39	727.44	
	10/30/2014	742.83	16.24	726.59	
	3/31/2015	742.83	16.66	726.17	
	6/17/2015	742.83	16.49	726.34	
	9/4/2015	742.83	17.08	725.75	
	5/23/2016	742.83	14.96	727.87	
	11/15/2016	742.83	14.33	728.50	
	7/31/2017	742.83	14.33	728.5	
	4/3/2018	742.83	16.34	726.49	
	8/30/2018	742.83	15.62	727.21	
	11/19/2018	742.83	15.04	727.79	
		Max		17.08	728.50
		Min		14.33	725.75
	Avg		15.60	727.23	

Notes:

AMSL = above mean sea level
DTW = depth to water, below top of casing (TOC)
TOC = Top of Casing in feet above mean sea level (amsl)

TABLE 4
MONITORING WELL SAMPLE ANALYTICAL RESULTS

One Hour Martinizing
Elm Grove, Wisconsin

Sample Location	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Benzene	Naphthalene	1,2,4-Trimethylbenzene	
Enforcement Standard		5	5	70	100	0.2	5	100	480	
Preventive Action Limit		0.5	0.5	7	20	0.02	0.5	10	96	
MW-1	11/19/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/16/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	4/28/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/7/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.89	< 0.97	
	12/21/2011	< 0.50	< 0.20	1.1	< 0.50	< 0.20	< 0.20	0.45	0.48 J	
	2/24/2012	< 0.50	< 0.20	0.95 J	< 0.50	< 0.20	< 0.20	< 0.25	< 0.25	
	10/24/2012	1.1	< 0.19	1.4	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	4/24/2013	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	7/2/2013	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	10/16/2013	< 0.33	< 0.33	1.3	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	12/6/2013	< 0.33	< 0.33	1.42	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	2/28/2014	< 0.33	< 0.33	1.08 J	< 0.35	0.18	< 0.24	< 1.7	< 2.2	
	5/8/2014	< 0.33	< 0.33	0.95 J	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	10/30/2014	Not Sampled								
	6/18/2015	< 0.74	< 0.54	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	5/25/2016	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	11/15/2016	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	3/20/2017	< 0.48	< 0.45	< 0.41	< 0.35	< 0.19	< 0.17	< 2.17	< 1.14	
	8/1/2017	< 0.48	< 0.45	< 0.41	< 0.35	< 0.19	< 0.17	< 2.17	< 1.14	
	4/3/2018	< 0.38	< 0.3	0.41 J	< 0.34	< 0.2	< 0.22	< 0.21	< 0.8	
11/19/2018	Not Sampled									
MW-2	11/19/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/16/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	4/28/2011	1.2	< 0.48	< 0.83	< 0.89	< 0.18	1.2	< 0.25	< 0.20	
	9/7/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	2.1	< 0.89	< 0.97	
	12/21/2011	< 0.50	< 0.20	< 0.50	< 0.50	< 0.20	0.58 J	< 0.25	0.29 J	
	2/24/2012	< 0.50	< 0.20	< 0.50	< 0.50	< 0.20	< 0.20	< 0.25	< 0.25	
	10/24/2012	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	4/24/2013	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	7/2/2013	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	10/16/2013	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	12/6/2013	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	2/28/2014	Not Sampled								
	5/8/2014	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	10/30/2014	Not Sampled								
	6/17/2015	< 0.74	< 0.54	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	4/3/2018	Not Sampled								
11/19/2018	Not Sampled									
MW-3	11/19/2009	< 0.45	< 0.48	1.3	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/16/2010	< 0.45	< 0.48	2.5	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	4/28/2011	< 0.45	< 0.48	0.96 J	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/7/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.89	< 0.97	
	12/21/2011	< 0.50	< 0.20	0.73 J	< 0.50	< 0.20	< 0.20	< 0.25	0.26 J	
	2/24/2012	< 0.50	< 0.20	0.58 J	< 0.50	< 0.20	< 0.20	< 0.25	< 0.25	
	10/24/2012	0.83	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	4/24/2013	< 0.17	0.31 J	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	7/2/2013	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	10/16/2013	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	12/6/2013	< 0.33	< 0.33	0.46 J	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	2/28/2014	< 0.33	< 0.33	0.40 J	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	5/8/2014	< 0.33	< 0.33	0.40 J	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	10/30/2014	Not Sampled								
	6/18/2015	< 0.74	< 0.54	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	5/25/2016	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	11/15/2016	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	3/20/2017*	< 0.48	< 0.45	< 0.41	< 0.35	< 0.19	< 0.17	< 2.17	< 1.14	
	8/1/2017	< 0.48	< 0.45	< 0.41	< 0.35	< 0.19	< 0.17	< 2.17	< 1.14	
	4/3/2018	< 0.38	< 0.3	< 0.37	< 0.34	< 0.2	< 0.22	< 0.21	< 0.8	
11/19/2018	Not Sampled									

TABLE 4
MONITORING WELL SAMPLE ANALYTICAL RESULTS

One Hour Martinizing
Elm Grove, Wisconsin

Sample Location	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Benzene	Naphthalene	1,2,4-Trimethylbenzene	
Enforcement Standard		5	5	70	100	0.2	5	100	480	
Preventive Action Limit		0.5	0.5	7	20	0.02	0.5	10	96	
MW-4	11/19/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/16/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	4/28/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.24	< 0.25	< 0.20	
	9/7/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.89	< 0.97	
	12/21/2011	< 0.50	< 0.20	< 0.50	< 0.50	< 0.20	< 0.20	< 0.25	0.37 J	
	2/24/2012	< 0.50	< 0.20	< 0.50	< 0.50	< 0.20	< 0.20	< 0.25	0.28 J	
	10/24/2012	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	4/24/2013	< 0.17	0.26 J	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	7/3/2013	< 0.17	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	10/16/2013	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	12/6/2013	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	2/28/2014	Not Sampled								
	5/9/2014	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	10/30/2014	Not Sampled								
6/17/2015	< 0.74	< 0.54	< 0.45	< 0.54	< 0.17	NA	NA	NA		
4/3/2018	Not Sampled									
11/19/2018	Not Sampled									
MW-5	10/24/2012	0.95 J	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	4/24/2013	31	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	7/2/2013	53	< 0.19	< 0.12	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	10/16/2013	3.6	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	12/6/2013	4.1	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	2/28/2014	Not Sampled								
	5/9/2014	12.6	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	8/5/2014	3.03	< 0.33	0.48 J	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	10/30/2014	1.3	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	3/31/2015	6.6	< 0.47	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	6/17/2015	6.3	< 0.54	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	9/4/2015	3.7	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 136	< 1.6	
	12/3/2015	37	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	4/3/2018	Not Sampled								
8/30/2018	108	1.68	1.08 J	< 0.34	< 0.2	< 0.22	< 2.1	< 0.8		
11/19/2018	0.49 J	< 0.3	205	1.23	1.77	0.48 J	< 2.1	< 0.8		
MW-6	10/24/2012	540	11	5.1	0.73 J	0.8	< 0.074	< 0.16	< 0.14	
	4/25/2013	510	9.0	3.6	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	7/2/2013	510	6.8	2.3	< 0.25	< 0.10	< 0.074	< 0.16	< 0.14	
	10/16/2013	360	9.6 J	22.9	< 3.5	< 1.8	< 2.4	< 17	< 22	
	12/6/2013	480	8.1 J	7.8 J	< 3.5	< 1.8	< 2.4	< 17	< 22	
	2/28/2014	Not Sampled								
	5/8/2014	196	51	51	< 3.5	< 1.8	< 2.4	< 17	< 22	
	8/5/2014	276	25.2	10.8	< 1.75	< 0.9	< 1.2	< 8.5	< 11	
	10/30/2014	340	24.4	4.8 J	< 1.75	< 0.9	< 1.2	< 8.5	< 11	
	3/31/2015	206	94	54	< 5.4	< 1.7	NA	NA	NA	
	6/17/2015	218	41	34	< 2.7	< 0.85	NA	NA	NA	
	9/4/2015	229	67	55	1.15 J	0.54	< 0.44	< 1.6	< 1.6	
	12/4/2015	195	40	18.8	< 2.7	< 0.85	< 2.2	< 8	< 8	
	4/3/2018	Not Sampled								
8/30/2018	150	17.2	61	0.50 J	< 0.2	< 0.22	< 2.1	< 0.8		
11/19/2018	89	31.5	88	0.57 J	< 0.2	< 0.22	< 2.1	< 0.8		
MW-7	4/25/2013	110	16	50	2.9	4.1	< 0.074	< 0.16	< 0.14	
	7/2/2013	160	31	72	3.5	2.1	< 0.074	< 0.16	< 0.14	
	10/16/2013	520	98	176	9.8 J	< 1.8	< 2.4	< 17	< 22	
	12/6/2013	420	118	211	12.6	< 1.8	< 2.4	< 17	< 22	
	2/28/2014	Not Sampled								
	5/8/2014	370	96	170	11.3	< 1.8	< 2.4	< 17	< 22	
	8/5/2014	272	78	144	5.5 J	2.6	< 2.4	< 17	< 22	
	10/30/2014	110	31.5	70	3.9 J	1.25 J	< 1.2	< 8.5	< 11	
	3/31/2015	530	117	177	11.8 J	< 1.7	NA	NA	NA	
	6/17/2015	257	91	166	9.3	0.9	NA	NA	NA	
	9/4/2015	400	125	178	11 J	< 1.7	< 4.4	< 16	< 16	
	12/4/2015	214	68	77	< 5.4	< 1.7	< 4.4	< 16	< 16	
	5/24/2016	620	106	166	11 J	< 1.7	< 4.4	< 16	< 16	
	11/15/2016	850	122	125	8.2 J	< 1.7	< 4.4	< 16	< 16	
3/20/2017	810	105	126	8.1 J	< 1.9	< 1.7	< 21.7	< 11.4		
8/1/2017	930	118	130	7.8 J	< 1.9	< 1.7	< 21.7	< 11.4		
4/3/2018	670	94	100	5.8 J	< 2	< 2.2	< 21	< 8		
8/30/2018	203	590	350	6.9 J	3.5 J	< 2.2	< 21	< 8		
11/19/2018	< 3.8	< 3	1,300	9.7 J	10	< 2.2	< 21	< 8		
MW-8	12/6/2013	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	2/28/2014	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	5/8/2014	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	8/5/2014	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	10/31/2014	< 0.33	< 0.33	< 0.38	< 0.35	< 0.18	< 0.24	< 1.7	< 2.2	
	3/31/2015	< 0.74	< 0.47	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	6/18/2015	< 0.74	< 0.54	< 0.45	< 0.54	< 0.17	NA	NA	NA	
	9/4/2015	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	12/3/2015	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	5/24/2016	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	11/15/2016	< 0.49	< 0.47	< 0.45	< 0.54	< 0.17	< 0.44	< 1.6	< 1.6	
	3/20/2017	< 0.48	< 0.45	< 0.41	< 0.35	< 0.19	< 0.17	< 2.17	< 1.14	
	8/1/2017	< 0.48	< 0.45	< 0.41	< 0.35	< 0.19	< 0.17	< 2.17	< 1.14	
	4/3/2018	< 0.38	< 0.3	< 0.37	< 0.34	< 0.2	< 0.22	< 0.21	< 0.8	
11/19/2018	Not Sampled									

TABLE 4
MONITORING WELL SAMPLE ANALYTICAL RESULTS

One Hour Martinizing
Elm Grove, Wisconsin

Sample Location	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Benzene	Naphthalene	1,2,4-Trimethylbenzene	
Enforcement Standard		5	5	70	100	0.2	5	100	480	
Preventive Action Limit		0.5	0.5	7	20	0.02	0.5	10	96	
MW-9	12/6/2013	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	2/28/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	5/8/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	10/30/2014	Not Sampled								
	6/18/2015	<0.74	<0.54	<0.45	<0.54	<0.17	NA	NA	NA	
	4/3/2018	Not Sampled								
	11/19/2018	Not Sampled								
PZ-1	4/24/2013	<0.17	<0.19	<0.12	<0.25	<0.10	<0.074	<0.16	<0.14	
	7/3/2013	<0.17	<0.19	<0.12	<0.25	<0.10	<0.074	<0.16	<0.14	
	10/16/2013	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	12/6/2013	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	2/28/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	5/9/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	8/5/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	10/30/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	3/31/2015	<0.74	<0.47	<0.45	<0.54	<0.17	NA	NA	NA	
	6/17/2015	<0.74	<0.54	<0.45	<0.54	<0.17	NA	NA	NA	
	9/4/2015	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	12/3/2015	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	5/24/2016	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	11/15/2016	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	3/20/2017	<0.48	<0.45	<0.41	<0.35	<0.19	<0.17	<2.17	<1.14	
8/1/2017	<0.48	<0.45	<0.41	<0.35	<0.19	<0.17	<2.17	<1.14		
4/3/2018	<0.38	<0.3	<0.37	<0.34	<0.2	<0.22	<0.21	<0.8		
11/19/2018	Not Sampled									
PZ-2	7/1/2014	0.99 J	<0.33	0.63 J	<0.35	<0.18	<0.24	<1.7	<2.2	
	8/5/2014	0.91 J	<0.33	0.88 J	<0.35	<0.18	<0.24	<1.7	<2.2	
	10/30/2014	<0.33	<0.33	0.85 J	<0.35	<0.18	<0.24	<1.7	<2.2	
	3/31/2015	<0.74	0.63 J	1.18 J	<0.54	<0.17	NA	NA	NA	
	6/17/2015	<0.74	<0.54	0.78 J	<0.54	<0.17	NA	NA	NA	
	9/4/2015	<0.49	0.67 J	5.3	<0.54	<0.17	<0.44	<1.6	<1.7	
	12/3/2015	<0.49	0.58 J	4.7	<0.54	<0.17	<0.44	<1.6	<1.6	
	5/24/2016	<0.49	<0.47	5.3	<0.54	<0.17	<0.44	<1.6	<1.6	
	11/15/2016	<0.49	<0.47	7.1	<0.54	<0.17	<0.44	<1.6	<1.6	
	3/20/2017	<0.48	<0.45	7.7	<0.35	<0.19	<0.17	<2.17	<1.14	
	8/1/2017	<0.48	<0.45	1.29	<0.35	<0.19	<0.17	<2.17	<1.14	
	4/3/2018	<0.38	<0.3	<0.37	<0.34	<0.2	<0.22	<0.21	<0.8	
8/30/2018	<0.38	<0.3	<0.37	<0.34	<0.2	<0.22	<0.21	<0.8		
11/19/2018	<0.38	<0.3	5.0	<0.34	<0.2	<0.22	<0.21	<0.8		
Potable Well (Bailer)	4/24/2013	0.59 J	0.88	<0.12	<0.25	<0.10	<0.074	<0.16	<0.14	
Potable Well (Spigot)	4/24/2013	0.81 J	1.8	<0.12	<0.25	<0.10	<0.074	<0.16	<0.14	
	7/3/2013	<0.17	<0.19	<0.12	<0.25	<0.10	<0.074	<0.16	<0.14	
	10/16/2013	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	12/6/2013	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	2/28/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	5/9/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	8/5/2014	<0.33	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	10/31/2014	0.81 J	<0.33	<0.38	<0.35	<0.18	<0.24	<1.7	<2.2	
	6/17/2015	<0.74	<0.54	<0.45	<0.54	<0.17	NA	NA	NA	
	9/4/2015	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	12/4/2015	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.7	
	5/24/2016	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	11/15/2016	<0.49	<0.47	<0.45	<0.54	<0.17	<0.44	<1.6	<1.6	
	3/20/2017	<0.48	<0.45	<0.41	<0.35	<0.19	<0.17	<2.17	<1.14	
	8/1/2017	<0.48	<0.45	<0.41	<0.35	<0.19	<0.17	<2.17	<1.14	
4/3/2018	Not Sampled									
11/19/2018	Not Sampled									

Notes:

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

Samples analyzed using EPA SW-846 Method 8260

Only detected compounds are listed

Bolded values indicate a laboratory detection

Bolded and Orange Shaded values exceed the Public Health Enforcement Standard

Bolded and Blue Shaded values exceed the Public Health Preventive Action Limit

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

NA = Not Analyzed

* Indicates duplicate sample was taken

Dissolved PCE in MW-7 Trend

Former OHM - Elm Grove

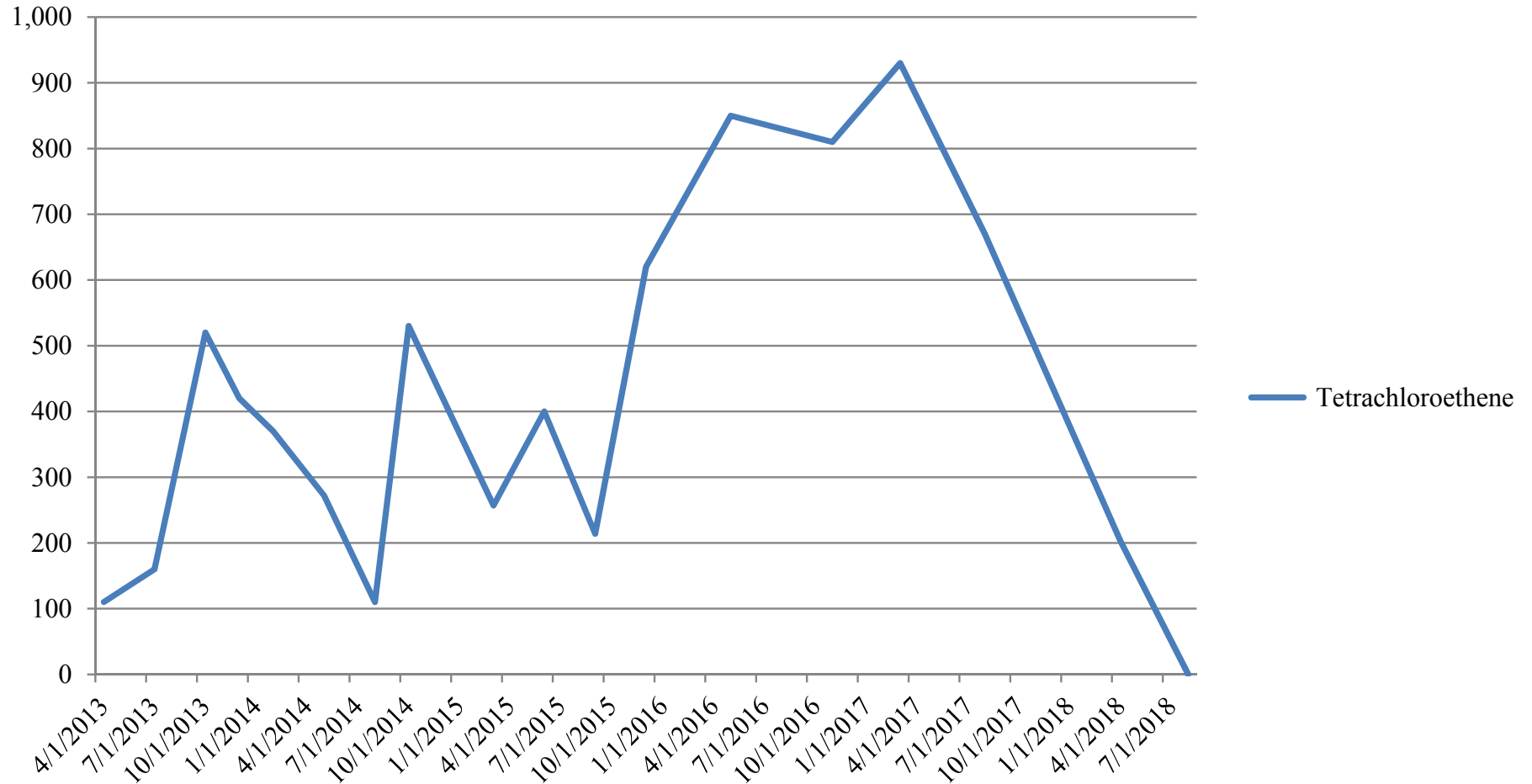


TABLE 3
GROUNDWATER GEOCHEMICAL DATA SUMMARY

Former One Hour Martinizing Cleaners
Elm Grove, Wisconsin

Monitoring Well Identification	Sample Date	Injection Pre/Post	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	Dissolved Gases			Inorganic/ Physical Parameters						Field Parameters						
								Ethane	Ethene	Methane	Dissolved Iron	Total Iron	Nitrite plus Nitrate	Nitrate	Nitrite	Sulfate	Temperature	pH	Specific Conductance	Oxidation Reduction Potential	Turbidity	Dissolved Oxygen	
Units			µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	°C	S.U.	µmSi/cm	mV	NTU	mg/L	
MW-5	12/3/2015	Pre	37	<0.47	<0.45	<0.54	<0.17	--	--	--	--	--	--	--	--	--	12.56	7.02	2.35	126	17.6	0.00	
	8/30/2018	Post	108	1.68	1.08 J	<0.34	<0.2	<0.5	<0.5	1.94	22.7	25.6	<0.36	--	--	123 J	17.30	6.90	1.71	-163	0.1	1.56	
	11/19/2018		0.49 J	<0.3	205	1.23	1.77	0.57 J	<0.5	295	22	22.8	--	<0.15	0.003 J	2.97 J	12.7	7.00	1.58	-122	2.6	0.29	
MW-6	12/4/2015	Pre	195	40	18.8	<2.7	<0.85	--	--	--	--	--	--	--	--	--	13.85	6.99	5.18	-15	22.4	0.00	
	8/30/2018	Post	150	17.2	61	0.50 J	<0.2	<0.5	<0.5	50.4	3.67	3.79	<0.36	--	--	169 J	13.34	7.15	4.12	-87	6.4	0.00	
	11/19/2018		89	31.5	88	0.57 J	<0.2	<0.5	<0.5	11.9	4.23	2.92	--	<0.15	<0.0023	307	11.55	7.53	4.31	-69	0.6	0.00	
MW-7	12/4/2015	Pre	214	68	77	<5.4	<1.7	--	--	--	--	--	--	--	--	--	14.93	6.88	8.92	-37	24.6	0.00	
	5/24/2016		620	106	166	11 J	<1.7	--	--	--	--	--	--	--	--	--	20.98	6.64	5.75	182	105	0.00	
	11/15/2016		850	122	125	8.2 J	<1.7	--	--	--	--	--	--	--	--	--	16.78	6.9	--	54	52.5	0.47	
	3/20/2017		810	105	126	8.1 J	<1.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/1/2017		930	118	130	7.8 J	<1.9	--	--	--	--	--	--	--	--	--	--	24.87	6.83	5.38	63	2.5	0.00
	4/3/2018		670	94	100	5.8 J	<2	--	--	--	--	--	--	--	--	--	--	9.11	6.87	2.72	7	7.9	0.00
	8/30/2018	Post	203	590	350	6.9 J	3.5 J	1.25 J	<0.5	257	47.2	47.6	<0.36	--	--	46.1	14.55	6.76	4.08	-142	30	0.00	
	11/19/2018		<3.8	<3	1,300	9.7 J	10	<2.5	<2.5	4,480	4.96	6.83	--	<0.15	0.005 J	38.2	11.62	7.42	3.60	-281	0.5	25.86	

Notes:

Bolded values are above detection limits

Bolded and orange shaded values are above Public Health Enforcement Standards

Bolded and blue shaded values are above Public Health Preventive Action Limits

* = Dissolved oxygen concentrations above 10 mg/L are not typically observed in groundwater. Malfunction of probe/sensor suspected.

-- = Not Analyzed

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

µg/L = micrograms per liter

mg/L = milligrams per liter

mV = millivolts

µS/cm = microSiemens

NTU = nephelometric turbidity unit

S.U. = standard unit

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - DIRECT CONTACT RESIDUAL CONTAMINANT LEVEL EXCEEDANCES

One Hour Martinizing
 Elm Grove, Wisconsin

Location	Sample Name	Sample Date	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Ethylbenzene	Hexachloro-1,3-butadiene	Methylene Chloride	Napthalene	1,1,1,2-Tetrachloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Toluene	Isopropylbenzene (Cumene)	n-Propylbenzene	Xylenes, Total	
<i>Soil to Groundwater Residual Contaminant Level</i>				4.5	3.6	41.2	62.6	0.1	1,570	NE	2.6	658	53.4	1,390	1,380	1,107	NE	NE	3,960	
Non-Industrial Residual Contaminant Level				30,700	644	156,000	211,000	67	7,470	6,230	61,800	5,520	2,780	219,000	182,000	818,000	268,000	264,000	260,000	
Industrial Residual Contaminant Level				145,000	8,410	2,340,000	1,850,000	2,080	35,400	22,100	1,150,000	24,100	12,300	219,000	182,000	818,000	268,000	264,000	260,000	
GP-1	GP-1	2/20/2006	2-4	25,000	280	370	<28	<39	<28	<39	<55	79	<28	<28	<28	<28	<28	<28	<28	<94
GP-2	GP-2	2/20/2006	8-10	13,000	<27	<27	<27	<38	30	<38	<54	120	<27	92	40	83	<27	<27	120	
GP-3	GP-3	2/20/2006	2-4	97,000	130	<27	<27	<38	<27	<38	<55	100	<27	42	<27	46	<27	<27	<93	
GP-4	GP-4	2/20/2006	4-6	1,600	<30	<42	<30	<30	<30	<42	<60	<60	<30	<30	<30	<30	<30	<30	<100	
MW-1	6142-MW-1	11/10/2009	4-6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	77.6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			8-10	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	84.3	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
MW-2	6142-MW-2	11/10/2009	2-4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	134	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			12-14	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	107	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
MW-3	6142-MW-3	11/10/2009	4-6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	109	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			8-10	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	116	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
MW-4	6142-MW-4	11/10/2009	4-6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	178	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			10-12	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	89.7	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
DUP-2 (MW-3)	6142-DUP-2	11/10/2009	8-10	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	83.6	79.5	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
DP-5	6142-DP-5	11/10/2009	4-6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	32.2 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			8-10	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
DP-6	6142-DP-6	11/10/2009	2-4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	27.9 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			12-14	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	30.5 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
DP-7	6142-DP-7	11/10/2009	4-6	1,000	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	119	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			10-12	148	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	84.2	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
DP-8	6142-DP-8	11/10/2009	6-8	2,020	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	76.2	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			10-12	5,950	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	97.5	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
DUP-1 (MW-3)	6142-DUP-1	11/10/2009	4-6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	123	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
B-9	6142-B-9	6/17/2011	2-4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	43.1 J	<25.0	29.5 J	<25.0	42.8 J	<25.0	<25.0	32.1 J	
			13-15	494	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
B-10	6142-B-10	6/17/2011	4-6	5,420	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			12-14	49,500	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
B-11	6142-B-11	6/17/2011	4-6	21,900	<100	<100	<100	<100	<100	<106	<100	<100	<100	<100	<100	<100	<25.0	<25.0	<200	
			10-12	1,200	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
B-12	6142-B-12	6/17/2011	7-9	364	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			13-15	121	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
B-13	6142-B-13	6/17/2011	2-4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
			11-13	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	47.1 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - DIRECT CONTACT RESIDUAL CONTAMINANT LEVEL EXCEEDANCES

One Hour Martinizing
 Elm Grove, Wisconsin

Location	Sample Name	Sample Date	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Ethylbenzene	Hexachloro-1,3-butadiene	Methylene Chloride	Napthalene	1,1,1,2-Tetrachloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Toluene	Isopropylbenzene (Cumene)	n-Propylbenzene	Xylenes, Total		
<i>Soil to Groundwater Residual Contaminant Level</i>				4.5	3.6	41.2	62.6	0.1	1,570	NE	2.6	658	53.4	1,390	1,380	1,107	NE	NE	3,960		
Non-Industrial Residual Contaminant Level				30,700	644	156,000	211,000	67	7,470	6,230	61,800	5,520	2,780	219,000	182,000	818,000	268,000	264,000	260,000		
Industrial Residual Contaminant Level				145,000	8,410	2,340,000	1,850,000	2,080	35,400	22,100	1,150,000	24,100	12,300	219,000	182,000	818,000	268,000	264,000	260,000		
B-14	6142-B-14	6/17/2011	4-6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	87.9	<25.0	126	44.9 J	<25.0	<25.0	33.8 J	<50.0		
			13-15	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
DUP-1 (B-10)	6142-DUP-1	6/17/2011	4-6	3,690	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	
DUP-2 (B-12)	6142-DUP-2	6/17/2011	7-9	577	<25.0	<25.0	<25.0	<25.0	<25.0	<26.4	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0	
B-15	6142-B-15	10/22/2012	2.5-5	360,000	400	<32	<66	<27	<13	<91	<180	<130	110	<55	<54	<30	<66	<46	<18		
			10-12.5	6,000	<17	<11	<23	<9.6	<12	<32	<63	<46	<32	<20	<19	<11	<23	<16	<6.3		
B-16	6142-B-16	10/22/2012	2.5-5	79	<20	<37	<27	<11	<14	<37	<73	<53	<37	<23	<22	<12	<27	<19	<7.3		
			10-12.5	180	<9.8	<6.5	<13	<5.5	<6.6	<18	<36	<26	<18	<11	<11	<6.1	<13	<9.2	<3.6		
			15-17.5	17,000	39.0 J	<11	<23	<9.4	<11	<31	<62	<45	<31	<19	<19	<10	<23	<16	<6.2		
B-17	6142-B-17	10/22/2012	2.5-5	<20	<22	<15	<30	<12	<15	<41	<82	<59	<41	<25	<25	<14	<30	<21	<8.2		
			12.5-15	<19	<21	<14	<28	<12	<14	<39	<78	<56	<39	<24	<23	<13	<28	<20	<7.8		
B-18	6142-B-18	10/22/2012	5-7.5	540	<20	<13	<27	<11	<14	<37	<74	<53	<37	<23	<22	<12	<27	<19	<7.4		
			12.5-15	1,700	<18	<12	<24	<9.9	<12	<33	<65	<47	<33	<20	<20	<11	<24	<17	<6.5		
HA-1	6142-HA-1	10/22/2012	2.5-5	120	<15	<10	<21	<8.6	<10	<29	<56	<41	<29	<17	<17	<9.5	<21	<14	<5.6		
			12.5-14.5	4,200	<16	<10	<21	<8.8	<11	<29	<58	<42	<29	<18	<17	<9.7	<21	<15	<5.8		
HA-2	6142-HA-2	10/22/2012	2-4.25	<24	<26	<17	<35	<15	<18	<49	<96	79 J	<49	<30	<29	<16	<35	<25	100		
B-19	6142-B-19	4/9/2013	4-6	2,760	<37.3	<37.3	<37.3	<37.3	<37.3	<37.3	86.8 J	<37.3	<37.3	<37.3	<37.3	<37.3	<37.3	<37.3	<37.3	<74.6	
			14-15	1,800	<47.2	<47.2	<47.2	<47.2	<47.2	<47.2	<47.2	106 J	<47.2	<47.2	<47.2	<47.2	<47.2	<47.2	<47.2	<47.2	<94.3
B-20	6142-B-20	4/8/2013	3-4	4,430	879	41.6 J	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<28.4	<56.8	
			8-10	653	297	638	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<52.1
			14-16	43,700	<247	<247	<247	<247	<247	<247	<247	798	<247	<247	<247	<247	<247	<247	<247	<247	<494
B-21	6142-B-21	4/8/2013	4-6	3,570	282	<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	<50.0	
			9-11	477	<36.2	75.4 J	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<72.5
			15-16	203	159	29.0 J	<25.0	<25.0	<25.0	<25.0	<25.0	55.3 J	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<50.0
B-22	6142-B-22	4/10/2013	4-6	311	<46.3	<46.3	<46.3	<46.3	<46.3	<46.3	89.1 J	<46.3	<46.3	<46.3	<46.3	<46.3	<46.3	<46.3	<46.3	<92.6	
			12-14	4,530	<44.6	<44.6	<44.6	<44.6	<44.6	<44.6	<44.6	149	<44.6	<44.6	<44.6	<44.6	<44.6	<44.6	<44.6	<44.6	<89.3
B-23	6142-B-23	4/9/2013	2-3	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	83.7 J	134	<43.9	67.1 J	<43.9	<43.9	<43.9	<43.9	<87.7		
B-24	6142-B-24	4/9/2013	4-6	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	66.1 J	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<52.1	
			14-15	60,000	1,160	435 J	<312	<312	<312	<312	<312	<312	<312	<312	<312	<312	<312	<312	<312	<312	<625
B-25	6142-B-25	4/9/2013	4-6	233	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	91.4 J	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<36.2	<72.5	
			14-15	263	<42.4	<42.4	<42.4	<42.4	<42.4	<42.4	<42.4	97.0 J	<42.4	<42.4	<42.4	<42.4	<42.4	<42.4	<42.4	<42.4	<84.7
B-26	6142-B-26	4/9/2013	6-8	<40.3	<40.3	<40.3	<40.3	<40.3	<40.3	<40.3	92.4 J	<40.3	<40.3	72.2 J	<40.3	<40.3	<40.3	<40.3	<40.3	<80.6	
			14-15	1,520	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	46.3 J	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	<43.9	<87.7
B-27	6142-B-27	11/14/2013	12	8,300	138	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99		

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - DIRECT CONTACT RESIDUAL CONTAMINANT LEVEL EXCEEDANCES

One Hour Martinizing
 Elm Grove, Wisconsin

Location	Sample Name	Sample Date	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Ethylbenzene	Hexachloro-1,3-butadiene	Methylene Chloride	Napthalene	1,1,1,2-Tetrachloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Toluene	Isopropylbenzene (Cumene)	n-Propylbenzene	Xylenes, Total
<i>Soil to Groundwater Residual Contaminant Level</i>				4.5	3.6	41.2	62.6	0.1	1,570	NE	2.6	658	53.4	1,390	1,380	1,107	NE	NE	3,960
Non-Industrial Residual Contaminant Level				30,700	644	156,000	211,000	67	7,470	6,230	61,800	5,520	2,780	219,000	182,000	818,000	268,000	264,000	260,000
Industrial Residual Contaminant Level				145,000	8,410	2,340,000	1,850,000	2,080	35,400	22,100	1,150,000	24,100	12,300	219,000	182,000	818,000	268,000	264,000	260,000
B-28	6142-B-28	11/14/2013	15	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-29	6142-B-29	11/15/2013	14	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-30	6142-B-30	11/15/2013	14	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-32	6142-B-32	11/14/2013	4	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			10	206	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			15	16,000	72 J	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-33	6142-B-33	11/14/2013	4	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			10	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			18	1,150	44 J	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-34	6142-B-34	11/14/2013	4	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			10	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			18	390	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-35	6142-B-35	11/14/2013	4	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			10	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			18	390	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
PZ-1	6142-PZ-1	4/8/2013	4-6	<25.8	<25.8	<25.8	<25.8	<25.8	52.8 J	<25.8	<25.8	210	<25.8	137	41.9 J	131	31.1 J	39.5 J	294
			15-16	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5	<25.5
B-39	6142-B-35	3/7/2014	4	81 J	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			10	3,400	200	43 J	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
			15	<49	<28	<24	<29	<21	<10	<95	<57	<114	<23	<26	<26	<20	<25	<24	<99
B-40	6142-B-40	6/30/2014	4-6	<49	<28	<24	<29	<21	<10	<95	<221	<114	<23	<26	<26	<20	<25	<24	<99
			8-10	<49	<28	<24	<29	<21	<10	<95	<221	<114	<23	<26	<26	<20	25	<24	<99
B-41	6142-B-41	6/30/2014	4-6	<49	<28	<24	<29	<21	<10	<95	<221	<114	<23	<26	<26	<20	<25	<24	<99
			8-10	<49	<28	<24	<29	<21	<10	<95	<221	<114	<23	<26	<26	<20	<25	<24	<99
B-42	6142-B-42	6/30/2014	4-6	<49	<28	<24	<29	<21	<10	<95	<221	<114	<23	<26	<26	<20	<25	<24	<99
			8-10	284	<28	<24	<29	<21	<10	<95	<221	<114	<23	<26	<26	<20	<25	<24	<99
SB-1	6142-SB-1	9/20/2016	2-3	<54	<42	<21	<24	<10	108	<110	<220	158 J	<33	87 J	<89	<31	71 J	82 J	36 J
			6-6.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	46 J	<37	<35	<99
			8-9	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - DIRECT CONTACT RESIDUAL CONTAMINANT LEVEL EXCEEDANCES

One Hour Martinizing
 Elm Grove, Wisconsin

Location	Sample Name	Sample Date	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Ethylbenzene	Hexachloro-1,3-butadiene	Methylene Chloride	Napthalene	1,1,1,2-Tetrachloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Toluene	Isopropylbenzene (Cumene)	n-Propylbenzene	Xylenes, Total
<i>Soil to Groundwater Residual Contaminant Level</i>				4.5	3.6	41.2	62.6	0.1	1,570	NE	2.6	658	53.4	1,390	1,380	1,107	NE	NE	3,960
Non-Industrial Residual Contaminant Level				30,700	644	156,000	211,000	67	7,470	6,230	61,800	5,520	2,780	219,000	182,000	818,000	268,000	264,000	260,000
Industrial Residual Contaminant Level				145,000	8,410	2,340,000	1,850,000	2,080	35,400	22,100	1,150,000	24,100	12,300	219,000	182,000	818,000	268,000	264,000	260,000
SB-2	6142-SB-2	9/29/2016	0-2.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2.5-5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			5-7.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			12.5-15	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
SB-3	6142-SB-3	9/29/2016	0-2.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2.5-5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	36 J	<37	<35	47 J
			5-7.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			12.5-15	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
SB-4	6142-SB-4	9/29/2016	0-2.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2.5-5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	29.4 J
			5-7.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			12.5-15	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
SB-5	6142-SB-5	9/29/2016	0-2.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2.5-5	2,640	<42	<21	<24	<10	<27	<110	<220	142 J	<33	119 J	<89	47 J	<37	<35	154 J
			5-7.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			12.5-15	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
SB-6	6142-SB-6	9/29/2016	0-2.5	730	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2.5-5	68 J	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	47 J	<37	<35	56 J
			5-7.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	63 J	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			12.5-15	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
SB-7	6142-SB-7	9/29/2016	0-2.5	2,420	<42	<21	<24	<10	54 J	<110	<220	116 J	<33	<78	<89	<31	<37	<35	271 J
			2.5-5	64 J	<42	<21	<24	<10	<27	<110	<220	115 J	<33	<78	<89	<31	<37	<35	<99
			5-7.5	420	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	360	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	390	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - DIRECT CONTACT RESIDUAL CONTAMINANT LEVEL EXCEEDANCES

One Hour Martinizing
 Elm Grove, Wisconsin

Location	Sample Name	Sample Date	Sample Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Ethylbenzene	Hexachloro-1,3-butadiene	Methylene Chloride	Napthalene	1,1,1,2-Tetrachloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Toluene	Isopropylbenzene (Cumene)	n-Propylbenzene	Xylenes, Total
<i>Soil to Groundwater Residual Contaminant Level</i>				4.5	3.6	41.2	62.6	0.1	1,570	NE	2.6	658	53.4	1,390	1,380	1,107	NE	NE	3,960
Non-Industrial Residual Contaminant Level				30,700	644	156,000	211,000	67	7,470	6,230	61,800	5,520	2,780	219,000	182,000	818,000	268,000	264,000	260,000
Industrial Residual Contaminant Level				145,000	8,410	2,340,000	1,850,000	2,080	35,400	22,100	1,150,000	24,100	12,300	219,000	182,000	818,000	268,000	264,000	260,000
SB-8	6142-SB-8	9/20/2016	0-2	3,500	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2-3	44,000	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			4-6	95,000	640	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			6-7	291	271	113	24.5 J	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			8-9.5	31,400	580	45 J	25 J	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
SB-9	6142-SB-9	9/29/2016	0-2.5	6,600	84 J	28.5 J	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			2.5-5	4,500	251	580	66 J	<10	<27	<110	<220	<87	<33	<78	<89	49 J	<37	<35	61 J
			5-7.5	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			7.5-10	<54	<42	<21	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
			10-12.5	146 J	49 J	35 J	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99
12.5-15	103 J	131	65 J	<24	<10	<27	<110	<220	<87	<33	<78	<89	<31	<37	<35	<99			

Notes:

Residual contaminant level calculated according to the procedures described in WDNR Publication RR-890 using the EPA Calculator

Samples analyzed using EPA SW-846 Method 8260 with Prep Method 5030B

All concentrations reported in units of micrograms per kilogram (µg/kg)

Bolded and Shaded values exceed the WDNR generic Industrial Residual Contaminant Levels

Bolded values exceed the WDNR generic Non-Industrial Residual Contaminant Levels

Italicized values exceed the WDNR generic Soil to Groundwater Residual Contaminant Levels

NE - Not Established

J = Concentration is less than the reporting limit but greater than the method detection limit.

TABLE 5
SOIL VAPOR EXTRACTION SYSTEM OPERATIONAL DATA
 One Hour Martinizing - Elm Grove
 13405 Watertown Plank Road, Elm Grove

Date	Time	System Runtime	Dilution	System Vacuum	Extraction Points				Calculated Flow Rate	Exhaust Temperature	Effluent VOC Concentration	Notes
		Panel Display		Air-Water Separator	1	2	3	4		Exhaust Pipe	Exhaust Port	
		Hours		%	in Hg	X = Open, -- = Closed				SCFM	°F	
12/12/17	14:45	7.1	0.0	-5.8	X	--	--	--	170	90	3,815	Pilot test mass removal and initial operating hours at start up.
12/13/17	12:00	11.6	0.0	-9.5	X	X	--	--	250	185	10,120	
11/07/18	12:17	3.7	50.0	-6.8	X	X	--	X	310	90	11,071	
11/08/18	13:21	23.8	50.0	-7.1	X	X	X	X	383	115	9,772	
12/05/18	13:25	52.9	0.0	-6.9	X	X	X	X	360	105	512	
12/12/18	11:27	152.6	50.0	-7.2	X	X	--	X	337	110	4,233	
12/19/18	9:39	289.5	50.0	-5.2	X	X	--	X	382	92	14,581	
12/26/18	14:03	461.6	50.0	-5.2	X	X	--	X	382	80	3,643	

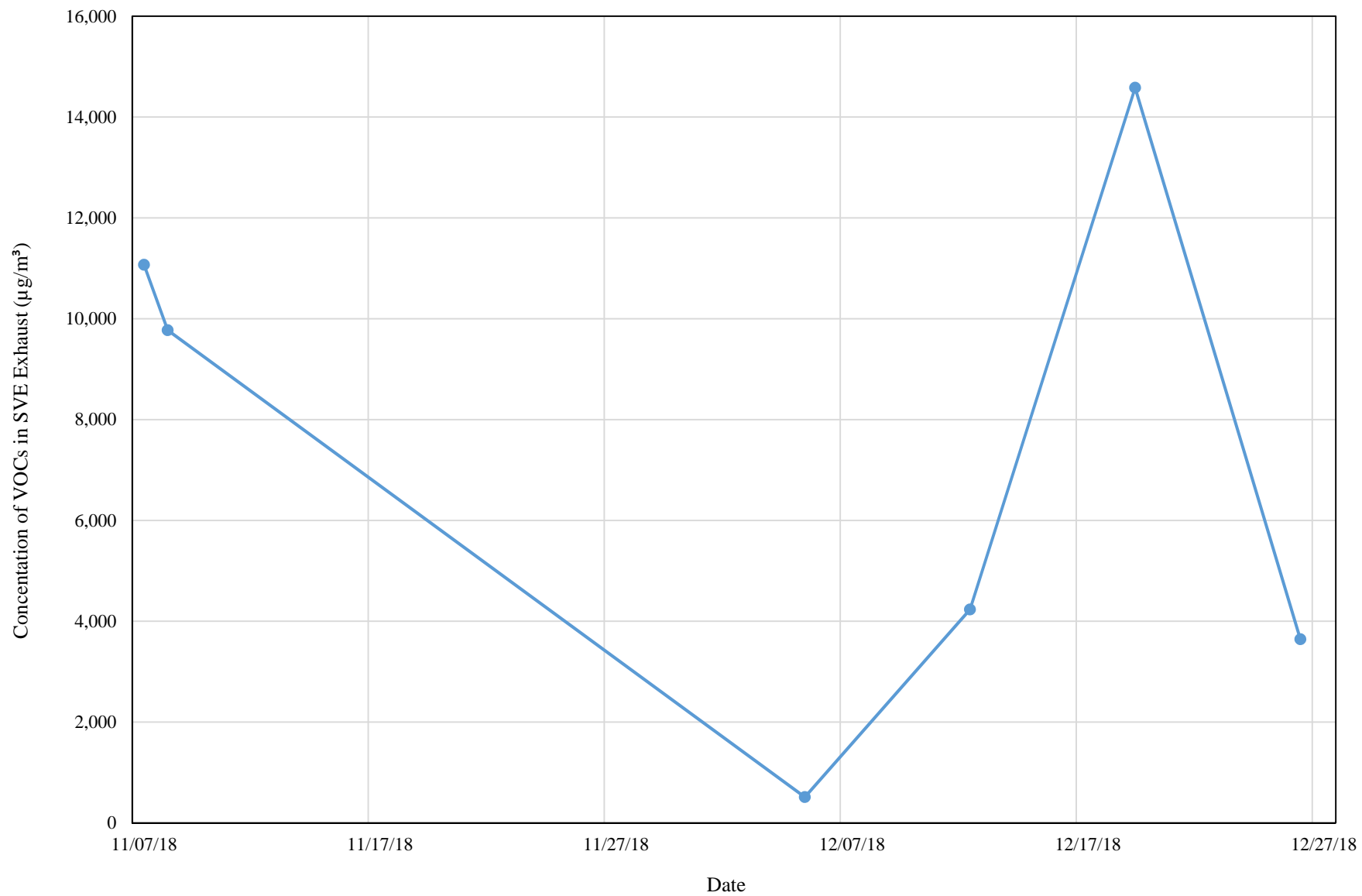
Notes:

in Hg = inches of mercury

in H₂O = inches of water

µg/m³ = micrograms per cubic meter

Vapor Phase VOC Concentration Trend Former OHM-Elm Grove



Cumulative VOC Mass Removed Former OHM-Elm Grove

