

October 1, 2018

OHM Holdings, LLC
Attn: Mr. Brian Cass
W229 N2494 County Road F
Waukesha, WI 53186-1104

Subject: Remediation Progress Report and Groundwater Treatment Plan for One Hour
Martinizing, 285 East Hampton Avenue, Milwaukee, WI

FID: 241176650
BRRTS: 02-41-543260

Dear Mr. Cass:

On July 19, 2018, the Wisconsin Department of Natural Resources ("DNR") received the document, "*Remediation Progress Report and Groundwater Treatment Plan*", for the above-described site. This was submitted on your behalf by Enviroforensics on June 22, 2018. The remediation action option report review fee of \$1050 was received at the DNR for this review. Enviroforensics requested review of the document and a written response to the recommended additional remedial actions and remedial objectives contained in the document. The DNR's technical review encompasses this report and takes in consideration previous work completed for this site. The DNR's comment are listed below:

1. An underground fiber optic line runs north-south between the One Hour Martinizing (OHM) and Confluence Graphics buildings. The fiber optic line may intersect the gas and water lines that are located above the groundwater table (see attached Figure 14 and 4) and has the potential to allow vapor migration westward along the gas and water lines. Soil gas locations SG-5 (PCE = 20,000 ug/m³) and SG-4 (PCE = 30,000 ug/m³) are nearest the fiber optic line. Soil data at boring SB-5 (PCE = 176,000 ug/m³ and TCE = 1,520 ug/m³), SG-4, and SG-5 are in areas that aren't near the source area. Determine the source of elevated soil gas and soil contamination in these areas

Note: Vapor risk screening levels have changed since 2015. See the Miscellaneous section in this letter for the changes.

2. High PCE concentrations were identified in the excavation sidewall confirmation samples collected onsite and offsite on the Shovers property and residual solvent contamination extends onto the Clark Station property (see Figure 9). Prepare a figure delineating residual contamination in the source excavation and include sample depth and contaminant concentrations. Clearly identify where the extent is inferred and determine where additional sampling is needed to delineate the extent and degree of contamination offsite at concentrations above residual contaminant levels.
3. Removal of the PCE source in the southern area was part of the remedial action for the site. Enviroforensics has proposed to treat groundwater through injection of an enhanced reductive dichlorination product to reduce the concentrations in the groundwater plume. Because

groundwater samples have not been collected since the soil source removal, the DNR suggests that you consider reinstalling groundwater monitoring wells MW-7R, MW-8R, and PZ-2R and sample all wells to determine what effect the excavation has on groundwater quality before you proceed with the proposed injection. Quarterly groundwater monitoring as proposed may indicate that natural attenuation alone is sufficiently remediating the groundwater. The DNR also recommends installation of additional groundwater monitoring wells near the former SB-17/GW-1 location and west of the shed near the former SB-27/GW-7 location to bound the degree and extent of the groundwater plume (see Figure 10).

4. The goal of the proposal is reducing groundwater concentration values below the enforcement standard and/or preventative action limits. The DNR recommends evaluating whether groundwater monitoring for the next two to four years would achieve the same results by natural attenuation resulting in either a stable or decreasing concentration values in the groundwater plume leading to closure.
5. Evaluate whether including injection points in the OHM building to reduce concentrations should be considered in the injection proposal.
6. According to the report, groundwater monitoring wells MW-7, MW-8, and PZ-2 were destroyed. Explain if and how these wells were abandoned.
7. Vapor risk screening levels (VRSLs) have changed since sub-slab and soil gas samples were collected. Revise vapor tables and compare soil gas and sub-slab sample results to current VRSLs. New vapor results figures should be prepared using current standards.

Prior to case closure, the vapor intrusion pathway will need to be re-assessed to confirm where any standards are exceeded (based on residential, small commercial/industrial or large industrial property use) and identifying continuing obligations that would need to be applied at the time of closure. Additional sub-slab samples may need to be collected to confirm the vapor intrusion risk, particularly at the Shovers Building, the Dairy Queen building and other locations where PCE/TCE were detected at elevated concentrations. Also provide details on the construction of the Shovers Building, i.e. does it have a basement, sump pump?

Miscellaneous

Proposal Figures

- For Figures 3 (in the report) and 4 (attached), the Residential Residual Contaminant Level heading should be Non-Industrial DC-RCL and the Industrial Residual Contaminant Level changed to Industrial DC-RCL. Correct and resubmit.
- For Figures 8 (in the report) and 9 (attached), change the legend headings as in Figures 3 and 4, and include the soil to groundwater pathway heading. Correct and resubmit.

The Department appreciates the actions you have taken to investigate and remediate the contamination at this site. If you have any questions or comments, please feel free to contact me at the above address or at (414) 263-8644. Please refer to the FID number at the top of this letter in any future correspondence.

OHM
285 E Hampton Ave.
Milwaukee, WI
FID: 241176650
BRRTS: 02-41-543260

Future correspondence should be sent directly to the Remediation and Redevelopment Program Assistant Jennifer Dorman (414-263-8683) at the above address.

Sincerely,



John J. Hnat, P.G., C.P.G.
Project Manager/Hydrogeologist
Southeast Region
Remediation and Redevelopment

Attachments:

- Figure 14, Vapor Sample Analytical Results Map One Hour Martinizing Facility, Enviroforensics, dated 4.13.15
- Figure 4, Geologic Cross Section B-B', One Hour Martinizing Facility, Enviroforensics, dated 10.7.14
- Figure 9, Excavation Area with Sidewall and Floor Sample Results, Enviroforensics, dated 12.28.16
- Figure 10, Proposed Injection Point Layout, Enviroforensics, dated 4.18.18

C: Brian Kappen & Wayne Fassbender - EnviroForensics
WDNR SER Files

EXISTING BUILDING

N. ANTA AVE.

N. SANTA MONICA BLVD.

E. HAMPTON AVE.

Legend

- Property boundary
- City of Milwaukee/Village Whitefish Bay boundary
- Fence line
- GAS - Underground gas utility line
- WTR - Underground water utility line
- SAN - Underground sanitary utility line
- STM - Underground storm utility line
- UGE - Underground electrical utility line
- UCT - Underground fiber optic line
- Utility Pole
- Catch Basin
- Manhole
- Fire Hydrant
- Electrical Box
- SB-1 - Soil Boring
- SG-1 - Soil Gas Sample
- SSV-1 - Sub-Slab Vapor Sample Location
- OA-1 - Outdoor Air Sample
- IA-1 - Indoor Air Sample

Analyte	Sub-slab/Shallow Soil gas vapor Non-Residential Vapor Risk Screening Level	Indoor Air Non-Residential Vapor Action Level
PCE	1,800	180
TCE	88	8.8
Acetone	1,400,000	140,000
Benzene	160	16
Carbon Disulfide	31,000	3,100
Cyclohexane	26,000	2,600
DCDFM	4,400	440
Ethylbenzene	490	49
4-Ethyl Toluene	NE	NE
n-Heptane	NE	NE
n-Hexane	31,000	3,100
Methylene Chloride	26,300	2,630
Propylene	130,000	13,000
Styrene	44,000	4,400
Tetrahydrofuran	NE	NE
Toluene	220,000	22,000
1,2,4-TMB	310	31
1,3,5-TMB	NE	NE
TCFM	31,000	3,100
Xylene	4,400	440

Small Commercial Residential?
6000
290

- Note:
- Bold and shaded values exceed Vapor Risk Screening Levels
 - Bold values equal or exceed laboratory detection limits
 - All results reported in micrograms per cubic meter (ug/m³)
 - NE = Not established
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - DCDFM = Dichlorodifluoromethane
 - 1,2,4-TMB = 1,2,4-Trimethylbenzene
 - 1,3,5-TMB = 1,3,5-Trimethylbenzene
 - TCFM = Trichlorofluoromethane
 - NE = Not established
 - VOCs = Volatile Range Organics
 - ND = Not detected

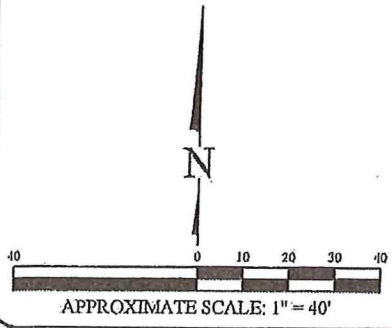
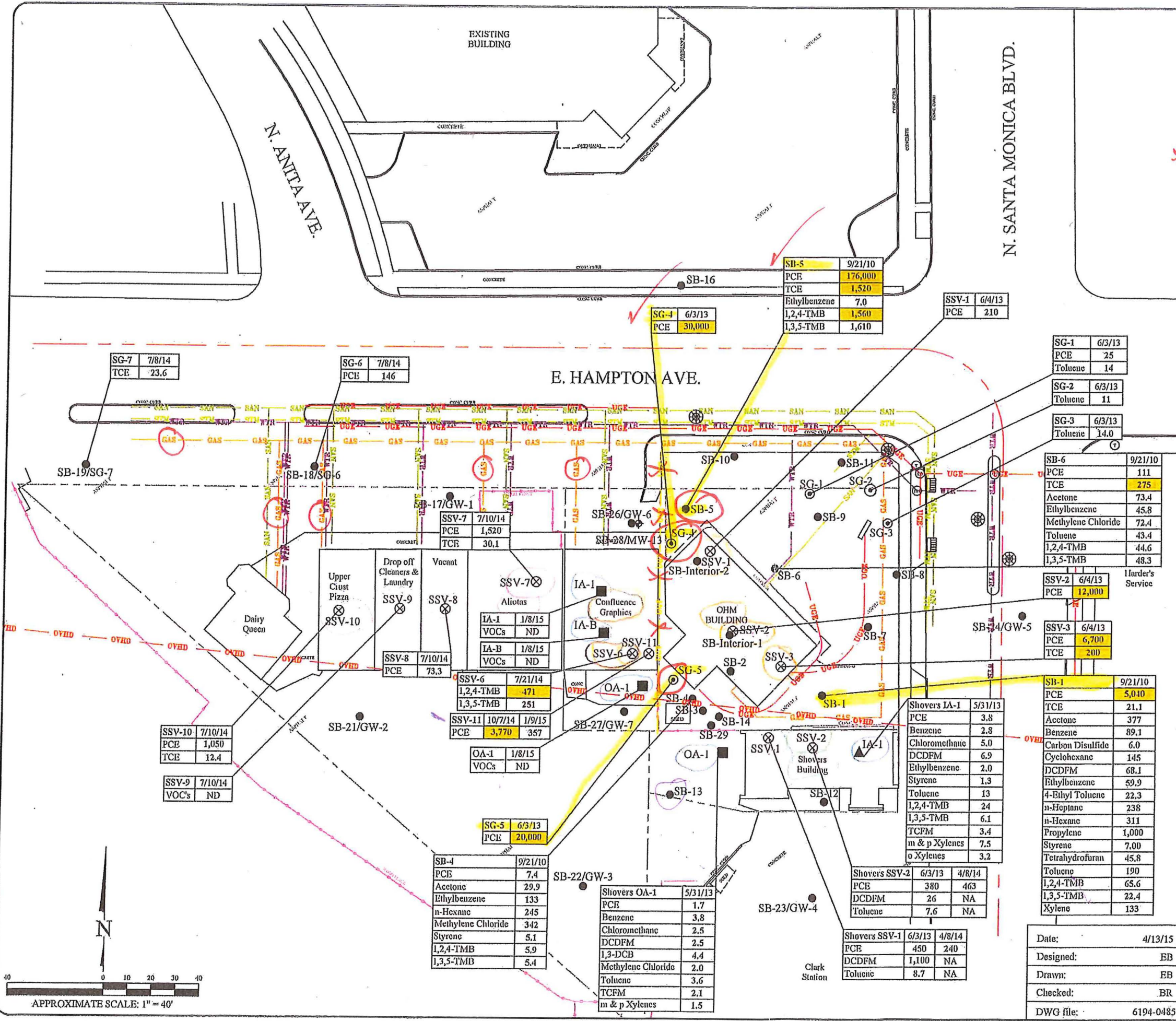
VAPOR SAMPLE ANALYTICAL RESULTS MAP

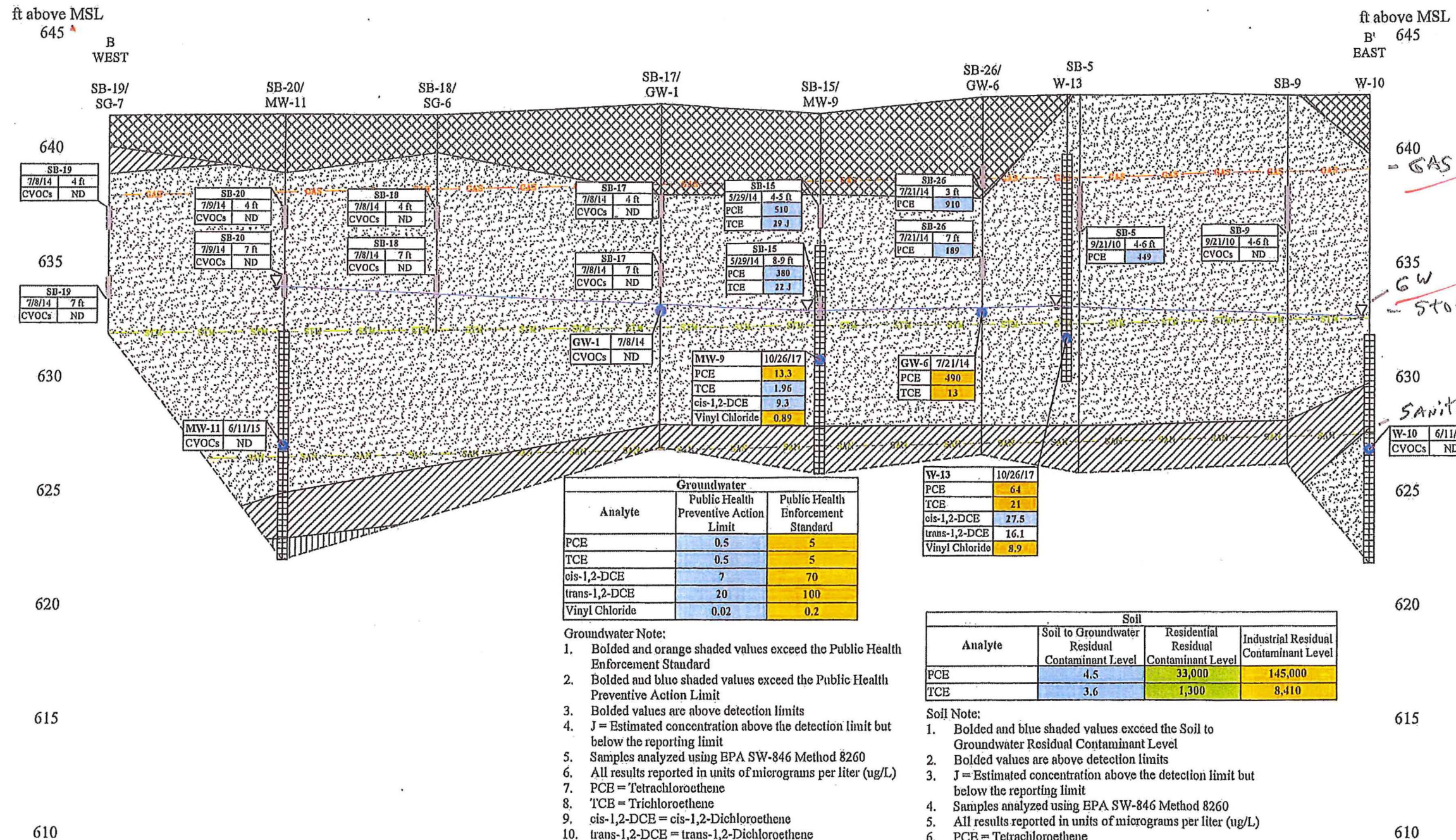
One Hour Martinizing Facility
285 East Hampton Avenue
Milwaukee, Wisconsin

ENVIROforensics
ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.
602 N. Capitol Ave., Ste. 210 • Indianapolis, IN 46204
EnviroForensics.com

Figure	14
Project	6194

Date:	4/13/15
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6194-0485





Groundwater		
Analyte	Public Health Preventive Action Limit	Public Health Enforcement Standard
PCE	0.5	5
TCE	0.5	5
cis-1,2-DCE	7	70
trans-1,2-DCE	20	100
Vinyl Chloride	0.02	0.2

W-13 10/26/17	
PCE	6.4
TCE	21
cis-1,2-DCE	27.5
trans-1,2-DCE	16.1
Vinyl Chloride	8.9

Soil			
Analyte	Soil to Groundwater Residual Contaminant Level	Residential Residual Contaminant Level	Industrial Residual Contaminant Level
PCE	4.5	33,000	145,000
TCE	3.6	1,300	8,410

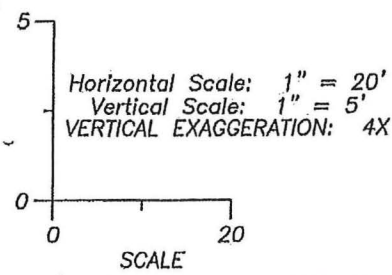
- Groundwater Note:
- Bolded and orange shaded values exceed the Public Health Enforcement Standard
 - Bolded and blue shaded values exceed the Public Health Preventive Action Limit
 - Bolded values are above detection limits
 - J = Estimated concentration above the detection limit but below the reporting limit
 - Samples analyzed using EPA SW-846 Method 8260
 - All results reported in units of micrograms per liter (ug/L)
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - cis-1,2-DCE = cis-1,2-Dichloroethene
 - trans-1,2-DCE = trans-1,2-Dichloroethene
 - ND = Not detected
 - CVOCs = Chlorinated Volatile Organic Compounds
 - Detected compounds shown are from the most recent results from each location

- Soil Note:
- Bolded and blue shaded values exceed the Soil to Groundwater Residual Contaminant Level
 - Bolded values are above detection limits
 - J = Estimated concentration above the detection limit but below the reporting limit
 - Samples analyzed using EPA SW-846 Method 8260
 - All results reported in units of micrograms per liter (ug/L)
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - ND = Not detected
 - CVOCs = Chlorinated Volatile Organic Compounds

Legend

- Fill
- Sand
- Clay
- Silt
- Gravel
- Observed groundwater elevation on June 26, 2014
- Monitoring well screen
- Dashed boundaries are inferred
- ft above MSL = Feet above Mean Sea Level
- Soil sample depth interval
- Groundwater sample depth interval

- GAS — Underground 8" gas utility line
- SAN — Underground 12" sanitary utility line
- STM — Underground 8" storm utility line



GEOLOGIC CROSS SECTION B-B'

One Hour Martinizing Facility
285 East Hampton Avenue
Milwaukee, Wisconsin

Date:	10/7/14
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6194-0508

825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure	4
Project	6194

Confluence Graphics
265 E. Hampton Ave.

OHM BUILDING
285 E. Hampton Ave.

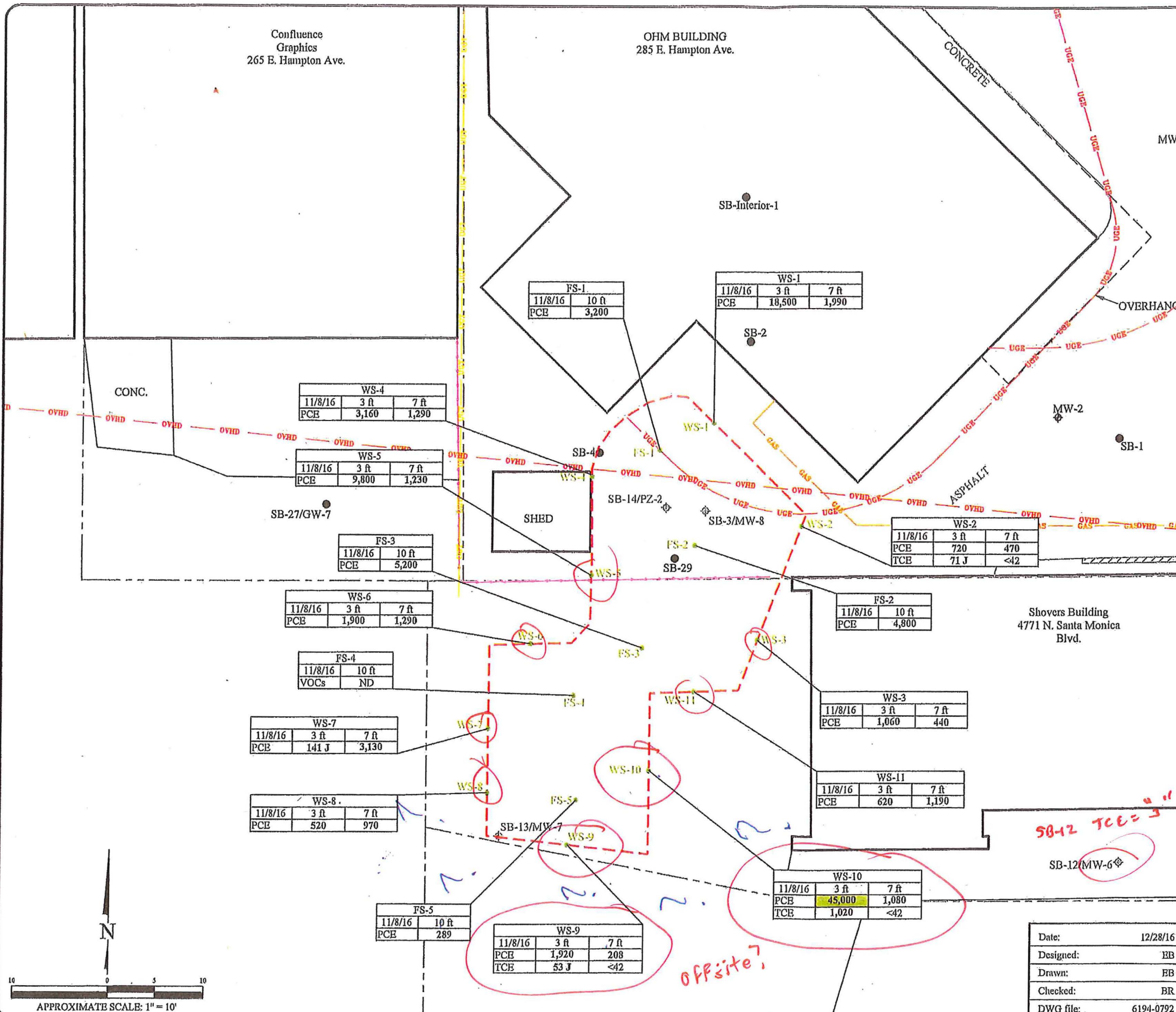
Legend

- Property boundary
- City of Milwaukee/Village Whitefish Bay boundary
- Fence line
- UGS - Underground gas utility line
- UWR - Underground water utility line
- SAN - Underground sanitary utility line
- STM - Underground storm utility line
- UGE - Underground electrical utility line
- UFT - Underground fiber optic line
- Utility Pole
- Catch Basin
- Manhole
- Fire hydrant
- Electrical box
- MW-1 - Monitoring Well
- MW-5 - Abandoned Monitoring Well
- SB-1 - Soil Boring
- WS-1 - Excavation wall sample
- FS-1 - Excavation floor sample
- Soil excavation boundary

Analyte	Non-Industrial Residual Contaminant Level	Industrial Residual Contaminant Level
PCE	33,000	145,000
TCE	1,300	8,410

Note:

1. Bolded values are above detection limits
2. Bolded and green shaded values exceed the Non-Industrial Residual Contaminant Level
3. J = Estimated concentration less than laboratory reporting limits
4. Samples analyzed using EPA SW-846 Method 8260
5. All results reported in units of micrograms per kilogram (µg/kg)
6. PCE = Tetrachloroethene
7. TCE = Trichloroethene
8. VOCs = Volatile Organic Compounds
9. ND = Not detected



WS-1			
11/8/16	3 ft	7 ft	
PCE	18,500	1,990	

WS-4			
11/8/16	3 ft	7 ft	
PCE	3,160	1,290	

WS-5			
11/8/16	3 ft	7 ft	
PCE	9,800	1,230	

FS-3			
11/8/16	10 ft		
PCE	5,200		

WS-6			
11/8/16	3 ft	7 ft	
PCE	1,900	1,290	

FS-4			
11/8/16	10 ft		
VOCs	ND		

WS-7			
11/8/16	3 ft	7 ft	
PCE	141 J	3,130	

WS-8			
11/8/16	3 ft	7 ft	
PCE	520	970	

FS-5			
11/8/16	10 ft		
PCE	289		

WS-9			
11/8/16	3 ft	7 ft	
PCE	1,920	208	
TCE	53 J	<42	

WS-1			
11/8/16	3 ft	7 ft	
PCE	18,500	1,990	

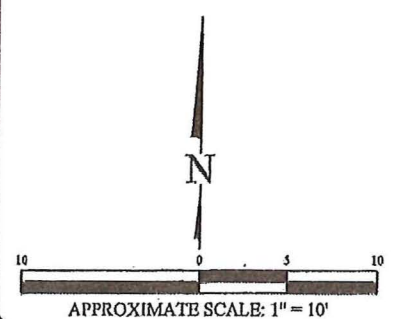
WS-2			
11/8/16	3 ft	7 ft	
PCE	720	470	
TCE	71 J	<42	

FS-2			
11/8/16	10 ft		
PCE	4,800		

WS-3			
11/8/16	3 ft	7 ft	
PCE	1,060	440	

WS-11			
11/8/16	3 ft	7 ft	
PCE	620	1,190	

WS-10			
11/8/16	3 ft	7 ft	
PCE	45,000	1,080	
TCE	1,020	<42	



EXCAVATION AREA WITH SIDEWALL AND FLOOR SAMPLE RESULTS
One Hour Martinizing Facility
285 East Hampton Avenue
Milwaukee, Wisconsin

Date:	12/28/16
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6194-0792

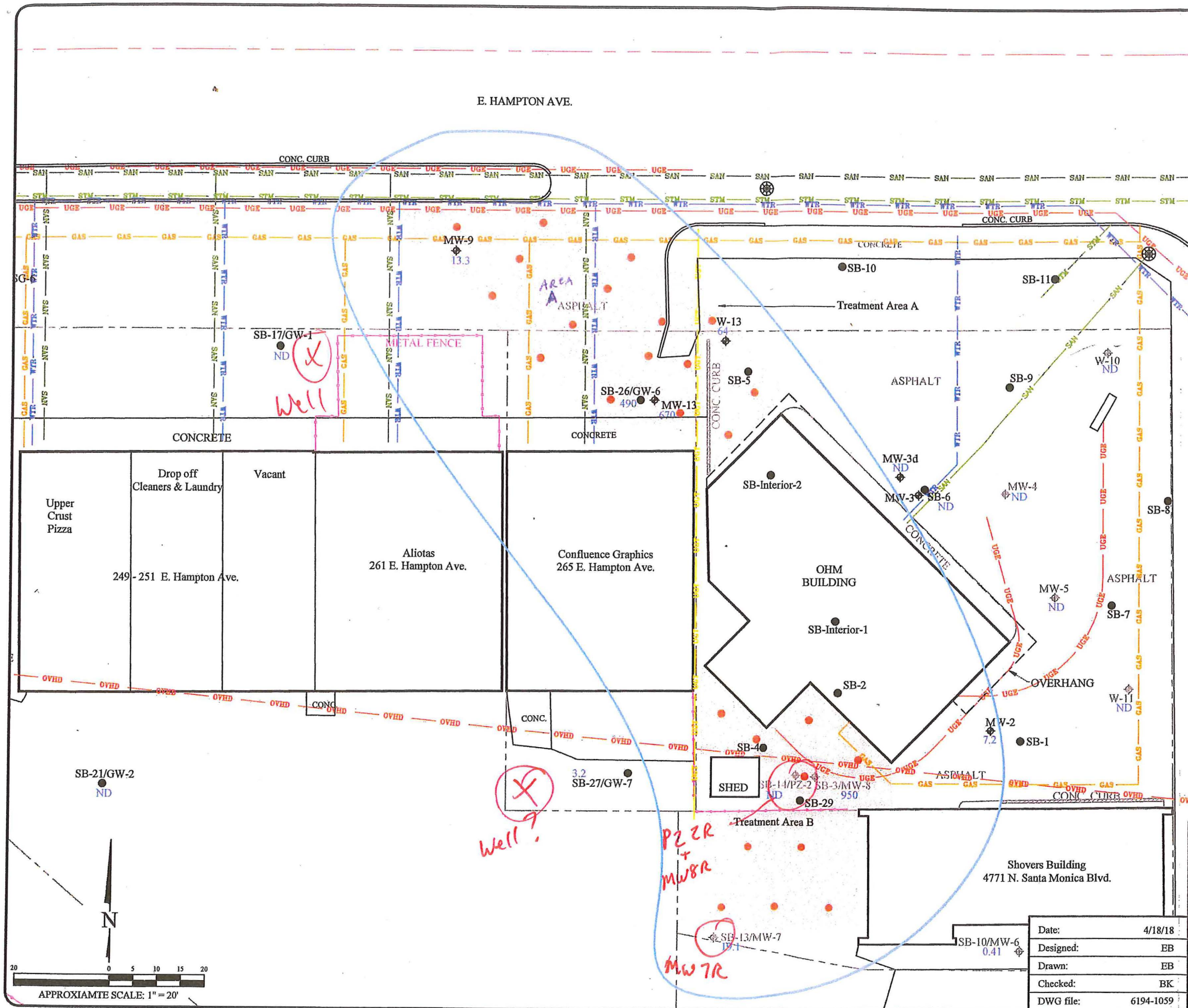
Figure	9
Project	6194

Legend

- Property boundary
- City of Milwaukee/Village Whitefish Bay boundary
- Fence line
- GAS - Underground gas utility line
- WTR - Underground water utility line
- SAN - Underground sanitary utility line
- STM - Underground storm utility line
- UGE - Underground electrical utility line
- UGT - Underground fiber optic line
- Utility Pole
- Catch Basin
- Manhole
- MW-2 - Monitoring Well
- MW-5 - Abandoned Monitoring Well
- SB-1 - Soil Boring
- 6.8 - PCE concentration in groundwater (ug/L)
- Extent of PCE in groundwater above the enforcement standard (5 ug/L)
- Proposed injection point
- Proposed treatment area

Notes:

1. The PCE concentrations shown are the most recent results from each location.
2. PCE = Tetrachloroethene
3. ug/L = micrograms per liter
4. ND = VOCs not detected



PROPOSED INJECTION POINT LAYOUT

One Hour Martinizing
285 East Hampton Avenue
Milwaukee, Wisconsin

Date:	4/18/18
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6194-1059

Figure	10
Project	6194

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