



October 15, 2021

DARCI THOMAS
GLASS VAULT LLC
C/O CLAUDIA GUZZMAN
PO BOX 44046
INDIANAPOLIS IN 46244

Sent via Electronic Mail only to cguzman@ashunion.com

Subject: Response to Technical Assistance Request
Barb & Ron's Cleaners (Former), 1700 S. Lawe St., Appleton, WI
DNR BRRTS # 02-45-297744

Dear Ms. Thomas:

On August 16, 2021, the Wisconsin Department of Natural Resources (DNR) received a Technical Assistance request entitled *Site Investigation Update and Preliminary Evaluation for Case Closure*, dated August 12, 2021 ("SI Update Report") for the above-named site for property located at 1700 South Lawe Street, Appleton, Outagamie County, Wisconsin (the "Property"). EnviroForensics, LLC ("EnviroForensics") submitted the SI Update Report on your behalf. The DNR also received the \$700 review fee in accordance with Wis. Admin. Code ch. NR 749. The Property boundaries and sample locations referenced in this letter are located on the attached Map (Figure 1, Site Plan, 1/9/20).

Brief Background

DNR received report of a release to the environment of chlorinated volatile organic compounds (CVOCs) from historical dry cleaner operations in 2002. The dry cleaner operated from 1968-2001. Between 2002 and 2010, property owner Ron Van Asten worked with environmental consultants to investigate the release and perform numerous phases of remedial action until alternative funding needed to be pursued. In the interim, air (vapor) samples were collected at adjacent residences by DNR and the Department of Health Services (DHS) or the City of Appleton Health Department (AHD) in 2010 and 2011 and DNR inspected and sampled the groundwater monitoring well network in 2012.

Mr. Van Asten later began to pursue an insurance policy and worked with EnviroForensics to resume the investigation and cleanup efforts. The on-site building was demolished in 2016 with the building slab and asphalt parking lot left intact to continue to serve as the impermeable cover. In February 2018, the Property was transferred to Glass Vault, LLC. In 2018, the building slab was removed, the source area beneath the building excavated and an impermeable clay cap installed. The SI Update Report documented investigation and cleanup work performed by EnviroForensics since the site investigation report (SIR) was submitted in 2018, and included a summary of historical soil, groundwater and air data collected since 2002.

Determination

After review of the SI Update Report, the DNR makes the following determinations with respect to Wis. Admin. Code chs. NR 716, 724 and 726:

- Additional investigation is needed to define the degree and extent in groundwater and air; and
- Additional post-remedial action monitoring is necessary to evaluate the effectiveness of the remedial action excavation performed in 2018, verify plume stability and verify natural attenuation is an appropriate remedy for residual contamination

Additional Investigation (Wis. Admin. Code ch. NR 716)

Groundwater

The vertical extent of groundwater contamination is not yet defined as required in Wis. Admin. Code § NR 716.11(3)(a). A piezometer, PZ-1, was installed adjacent to monitoring well MW4100R. PZ-1 detected unstable concentrations of tetrachloroethylene (PCE) and increasing concentrations of trichloroethylene (TCE). DNR provides the following options to further delineate the contamination vertically in this area:

1. Leave PZ-1 in place and continue to sample and install a deeper piezometer if concentrations do not decrease; or
2. Properly abandon and replace PZ-1.

It was noted in the SI Update Report that the annular space of PZ-1 may be compromised and contaminated water from above is reaching the screen. If PZ-1 is believed to be compromised, DNR recommends replacing it with a nested, double cased piezometer screened in the same interval (25-30'), along with the two sandy intervals above as shown on the attached cross section (Figure 3b, Geologic Cross Section B-B', 6/29/18). A nested piezometer screened lower is also recommended to rule out additional vertical migration in case PZ-1 is in fact contaminated.

Air/Vapor

DNR has reviewed historical off-site vapor sampling data, and past correspondence with adjacent residences. Outagamie land records show that there are new property owners for three of the four residences that screen in for vapor sampling due to proximity to residual CVOC contamination in soil. To complete the vapor investigation, the following is required at the off-site residences:

1. 1631 S. Lawe Street
 - a. Contact new owner listed on Outagamie Land Records and perform one round of concurrent sub-slab (30-minute) and indoor air (24-hour) sampling:
 - i. Must be performed during heating season (i.e. winter)
 - ii. Obtain sub-slab sample from vapor port that was installed by EnviroForensics in 2016
 - iii. Radon mitigation system must be turned off for at least 24 hours prior to sampling
2. 1713 S. Lawe Street
 - a. Contact new owner listed on Outagamie Land Records and perform two rounds of concurrent sub-slab (30-minute) and indoor air (24-hour) sampling:
 - i. One round of sampling must be performed during heating season (i.e. winter)
 - ii. Install one vapor port near the center of the building footprint.

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3. 613 E. Dennison Street
 - a. Perform two rounds of concurrent sub-slab (30-minute) and indoor air (24-hour) sampling:
 - i. One round of sampling must be performed during heating season (i.e. winter)
 - ii. Install one vapor port near the center of the building footprint
 - iii. Document any interferants that may be present within the basement.

The following still needs to be addressed from the *Response to Site Investigation Summary and Remedial Action Report* letter sent to you on April 16, 2019:

1. Discussion of the remedial actions performed along and adjacent to the sewers, the status of the historical sewer laterals and upgrades to utility mains along with a conceptual site model should be presented to specifically address the concern for migration of vapors within the utility pipes from the source area(s) to neighboring residences.
2. It is still unclear if a historical sanitary or storm sewer lateral was present on the north side of the Property adjacent to the water lateral and should be researched as well. Specifically, the vapor data from SG-4 within East Dennison Street needs further evaluation as the vapor data does not appear to correspond with soil or groundwater data.

Additional Post-Remedial Action Monitoring (Wis. Admin. Code chs. NR 724 and 726)

Residual contamination remains in groundwater. Groundwater monitoring over time for contaminants of concern and natural attenuation parameters is needed to meet the closure criteria under Wis. Admin. Code § NR 726.05(6). In order to assist with evaluation of residual groundwater contamination, DNR recommends screened intervals be added to the groundwater data table along with the dates for injections (2004 pilot scale, 2005 active full scale, 2006 passive full scale) and excavations (2003 exterior excavation and 2018 interior excavation).

Additional rounds of groundwater sampling are needed to show stable/decreasing trends. Natural attenuation parameters need to continue to be sampled and added to tables, along with the addition of final degradation products ethene, ethane, and methane.

Documentation (Wis. Admin. Code chs. NR 716 and 724)

Vapor data should be submitted to property owners and the DNR within 10 business days after receipt in accordance with Wis. Admin. Code § NR 716.14(2). However, it is not necessary to report results from the additional soil and groundwater investigation within this time frame. As allowed under Wis. Admin. Code § NR 716.14(3), it is appropriate at this site for the supplemental investigation results to be reported within a supplemental site investigation report within 60 days from completion of the delineation in accordance with Wis. Admin. Code § NR 716.15.

Additional information needs to be included on maps for future evaluation of data or the vapor pathway:

- Note on maps that there is an active radon mitigation system at 1631 South Lawe Street and the month/year it was verified as being operated;
- Cross sections should clarify that “clay fill” was used to backfill the excavation beneath the building; and
- If applicable, historical laterals should also be added to the maps.

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The soil analytical data table needs to reflect current exceedances. Information in text conflicts with the data table that indicates the following samples were excavated/removed: B3800 at 6-7.5 ft bgs, B3900 from 6-7.5 ft bgs and S14 at 7 ft bgs.

The groundwater analytical table should be revised to include natural attenuation factors, including ethene, ethane, and methane. Clarification is needed on if MW2100 was destroyed; figures show MW2100 as being destroyed however the well was sampled in 2021. Figures and table need to be reconciled.

The vapor analytical table needs to:

- Include the vapor sample collected on site by Northern Environmental in 01/29/2009;
- Update the data table to reflect that DHS (not AHD) sampled 613 East Dennison Street's basement indoor air and *sump crock headspace* on 02/18/2011;
- Remove BRDC-01 by AHD from the sub-slab vapor data at 1631 S. Lawe Street. This data is from the sump crock headspace sample collected at 613 E. Dennison Street by DHS (not AHD) on 02/18/2011;
- Indicate there is an active radon mitigation system at 1631 S. Lawe Street and the status of the system prior to sampling (e.g., shut down 24 hours in advance of sampling), as appropriate, if known; and
- Include small commercial and large commercial/industrial Vapor Risk Screening Levels (VRSLs) and Vapor Action Levels (VALs) on both tables.

Additional Considerations

Based on data presented in the SI Update Report, the following should be taken into consideration during drafting of the closure request once the site investigation is complete and post-remedial action groundwater monitoring supports natural attenuation as the remaining remedy for residual contamination:

1. Off-site notifications will be needed prior to submitting a request for closure in accordance with Wis. Admin. Code ch. NR 725 for the following:
 - a. Soil, groundwater and vapor contamination in the right-of-way for South Lawe Street;
 - b. Soil and vapor contamination in the right-of-way for East Dennison Street; and
 - c. Soil, groundwater (due to SB-8), and potential for vapor contamination with future development at 1724 South Lawe Street but no cap requirement.Additional notifications may be necessary dependent upon the additional investigation.
2. Monitoring well MW2100 was destroyed (i.e., "not abandoned" on the Case Closure Form 4400-202, Continuing Obligations / not properly filled and sealed in accordance with Wis. Admin. Code § 141.25) and therefore a continuing obligation will apply for South Lawe Street/East Dennison Street. If additional wells cannot be properly abandoned in accordance with NR 141, these well(s) will be continuing obligations for the respective properties as well.
3. An impermeable cover for exceedances of the groundwater pathway RCLs in residual soil contamination will require development of a Cover Maintenance Plan at 1700 South Lawe Street.
4. Residual CVOCs in soil and/or groundwater will pose a future risk of vapor intrusion at 1700 South Lawe Street, within South Lawe Street, within East Dennison Street and at 1724 South Lawe Street and will be a continuing obligation at the time of closure.

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Future Actions

A site investigation work plan (SIWP) that includes emerging contaminant scoping must be submitted prior to performance of the additional groundwater and vapor investigation in accordance with Wis. Admin. Code § NR 716.09. The SIWP must be submitted within the next 60 days, **by December 14, 2021.**

Thank you for the opportunity to review the SI Update Report. I look forward to receipt of an SIWP by December 14, 2021 as discussed above. Please contact me with any questions in Oshkosh by phone at 920-366-5685 or by email at josie.schultz@wisconsin.gov.

Sincerely,

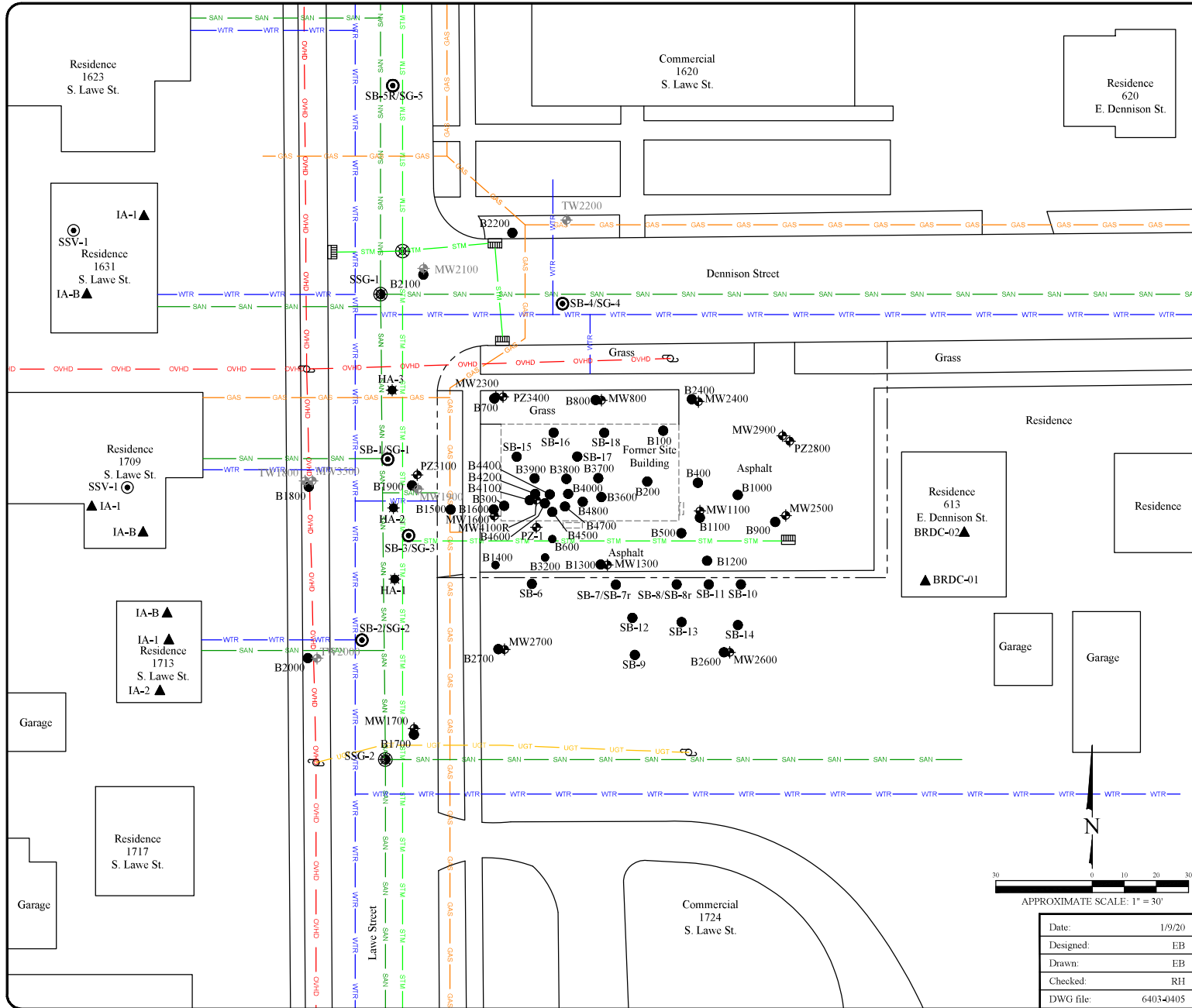


Josie Schultz
Hydrogeologist
Remediation & Redevelopment Program

Attachments:

Figure 1, Site Plan, 1/9/18
Figure 3b, Geologic Cross Section B-B¹, 6/29/18

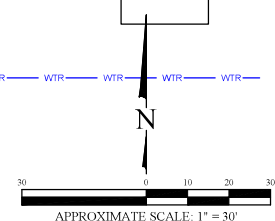
cc: Ron Van Asten, rvanasten@new.rr.com
Rob Hoverman, EnviroForensics, rhoverman@enviroforensics.com



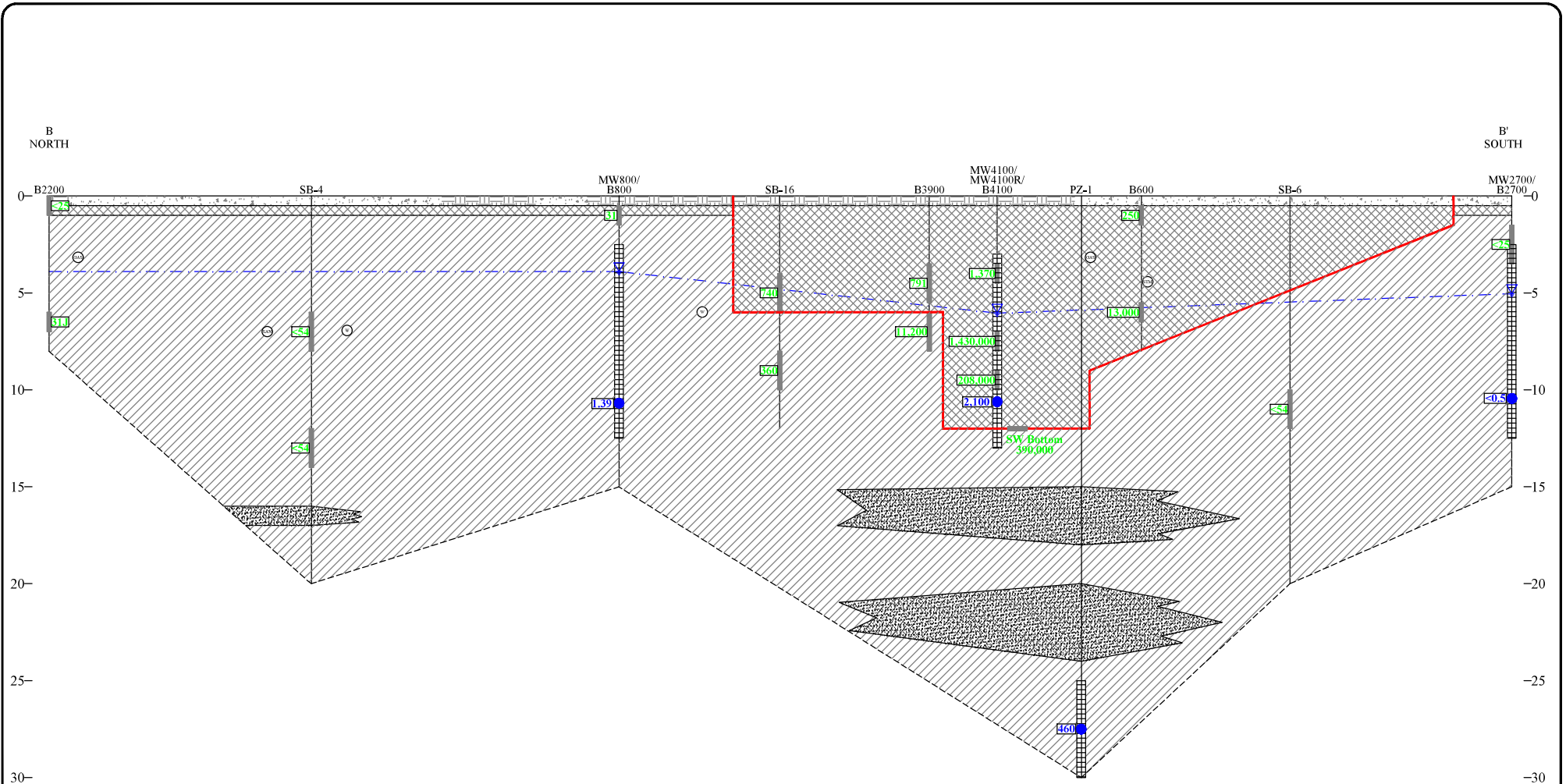
Legend

- Property boundary
- *Underground gas utility line
- *Underground water utility line
- *Underground sanitary utility line
- Underground telephone line
- Underground storm utility line
- *Over head electrical utility line
- *Underground electrical utility line
- Utility Pole
- Catch Basin
- Manhole
- SB-1 ● Soil boring location
- HA-1 ⚙ Hand auger location
- MW4100R ⬢ Monitoring well location
- SG-1 ⊕ Soil Gas sample location
- SSG-1 ⊕ Sewer soil gas sample location
- MW4100R ⬢ Monitoring well location is abandoned or destroyed
- SSV-1 ⊙ Sub-slab vapor sample
- IA-1 ▲ Indoor air sample

Notes:
 1. MW4100 was abandoned during 2018 excavation and replaced by EnviroForensics with MW4100R



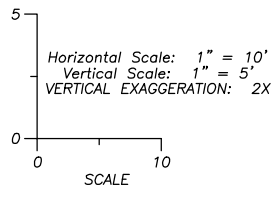
SITE PLAN											
Former Barb and Ron's Cleaners 1700 South Lawe Street Appleton, Wisconsin											
	Figure 1										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Date:</td><td>1/9/20</td></tr> <tr><td>Designed:</td><td>EB</td></tr> <tr><td>Drawn:</td><td>EB</td></tr> <tr><td>Checked:</td><td>RH</td></tr> <tr><td>DWG file:</td><td>6403-0405</td></tr> </table>	Date:	1/9/20	Designed:	EB	Drawn:	EB	Checked:	RH	DWG file:	6403-0405	Project 6403
Date:	1/9/20										
Designed:	EB										
Drawn:	EB										
Checked:	RH										
DWG file:	6403-0405										
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Legend

	Top Soil
	Concrete
	Fill
	Clay
	Sand
	Monitoring well screen

- Soil sample and detection of PCE ug/kg
 - Groundwater sample and PCE concentration (ug/L), November 2020
 - Dashed boundaries are inferred
 - Excavation extent
 - Observed groundwater elevation in monitoring well November 2020
 - Underground sanitary utility line
 - Underground gas utility line
 - Underground water utility line
 - Underground storm utility line
- Note:
1. $\mu\text{g}/\text{kg}$ = micrograms per kilogram
 2. $\mu\text{g}/\text{L}$ = micrograms per liter
 3. PCE = Tetrachloroethene
 4. Samples analyzed for VOCs using US EPA SW-846 Method 8260



GEOLOGIC CROSS SECTION B-B' Former Barb and Ron's Cleaners 1700 South Lawe Street Appleton, Wisconsin	
Date: 6/29/18 Designed: EB Drawn: EB Checked: KH DWG file: 6403-0493	 825 North Capital Avenue • Indianapolis, IN 46204 EnviroForensics.com
Figure	3b
Project	6403