



March 26, 2020

Mrs. Denise Danelski
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, Wisconsin 54313

Subject: Site Investigation Work Plan
Calumet Village
1717 E. Calumet Street
Appleton, Wisconsin 54911
UEC Project No. 19044

Dear Mrs. Danelski:

On behalf of Bridgeview Associates LLP, United Engineering Consultants, Inc. (United) is pleased to submit this Site Investigation Work Plan (SIWP) for the above referenced property. The Wisconsin Department of Natural Resources requested the preparation and submittal of a SIWP in written correspondence dated March 11, 2020 due to the documented tetrachloroethene and trichloroethene concentrations in the groundwater at the subject property. If you have any questions or would like to discuss any part of this submittal please contact us at (262) 785-1447.

Sincerely,
UNITED ENGINEERING CONSULTANTS, INC.

Kyle Henning, E.I.T.
Staff Engineer

Timothy J. Anderson, P.E.
Principal

SITE INVESTIGATION WORK PLAN

PREPARED FOR:

**CALUMET VILLAGE
1717 E. CALUMET STREET
APPLETON, WISCONSIN 54911**

PREPARED BY:

**UNITED ENGINEERING CONSULTANTS, INC.
2938 S. 166TH STREET
NEW BERLIN, WISCONSIN 53151**

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1.0 INTRODUCTION

United has prepared this Site Investigation Work Plan (SIWP) for the Calumet Village property on behalf of Mr. Steve Winter of Bridgeview Associates LLP, the current property owner. The SIWP summarizes a review of available information pertaining to the current and former activities at the subject property and the methodology to delineate the lateral and vertical extent of the tetrachloroethene (PCE) and trichloroethene (TCE) impacted groundwater identified on the parcel. This work plan has been prepared in general accordance with Wisconsin Administrative Code (WAC) NR 716.09.

Contact information for the responsible party, consultant and drilling and analytical service commodity providers for this project are indicated below:

<u>Responsible Party:</u>	Mr. Steve Winter Bridgeview Associates LLP 3305 North Ballard Road, Suite C Appleton, Wisconsin 54911 Phone: (920) 733-3214
<u>Consultant:</u>	Mr. Timothy J. Anderson, P.E. United Engineering Consultants, Inc. 2938 South 166 th Street New Berlin, Wisconsin 53151 Phone: (262) 785-1447
<u>Drilling Commodity Provider:</u>	Probe Technologies, Inc. 7781 Pathfinder Lane West Bend, Wisconsin 53090 Phone: (262) 470-4768
<u>Analytical Commodity Provider:</u>	Environmental Monitoring and Technologies, Inc. 509 N. 3 rd Avenue Des Plaines, Illinois 60016 Phone: (800) 246-0663

1.1 PURPOSE

The purpose of this SIWP is to summarize the proposed soil, groundwater and vapor sample locations and laboratory analytical methodologies utilized to determine the lateral and vertical extent of the PCE and TCE impacts to the subsurface on the subject property.

1.2 SITE LOCATION

The subject property is located at 1717 E. Calumet Street which is within the Northwest $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of Section 5, Township 20 North, Range 18 East of the City of Appleton in Calumet County, Wisconsin (See Figure 1: Site Location Map). The parcel's Wisconsin Transverse Mercator (WTM) X and Y coordinates are 649433 and 420221, respectively, as noted by the Bureau for Remediation and Redevelopment Tracking System (BRRTS).

The site is bordered to the west by several residences followed by the South Telulah Avenue right-of-way, to the south by the Coolidge Court right-of-way followed by an undeveloped parcel and an apartment complex (Schaefer Circle Apartments – 1503 Schaefer Circle), to the east by a multi-tenant commercial building (Ace Hardware, The Reel Shot and Ye Old Goat - 1919 E. Calumet Street) and associated asphaltic parking lot followed by a bank/insurance agency (Huntington Insurance – 1935 E. Calumet Street) and to the north by the East Calumet Street right-of-way followed by several residences.

1.3 SITE FEATURES

The subject property is approximately 0.94 acres in size and is currently developed with a six (6) unit, single-story commercial building, without a basement, approximately eight thousand four hundred (8,400) square feet in plan dimension. Concrete sidewalks are located west and east of the structure. A dumpster corral is located at the southwest corner of the parcel. The remainder of the site is covered with asphaltic concrete with the exception of landscaped areas of mown grass and a few deciduous trees located along the subject property's borders. The site building is currently leased by Highlites Hair Salon LLC, American Family Mutual Insurance Co., Edward D. Jones & Co LLP, Pizza King of Appleton LLC and Bayside Home Medical (See Figure 2: Site Plan Map).

Underground natural gas and potable water service enter the western elevation of the site building from laterals connected to mains in the East Calumet Street right-of-way. The sanitary sewer service enters the northeast corner of the structure from a lateral connected to a main in the East Calumet Street right-of-way. The existing interior floor drains are connected to the sanitary sewer lateral. Two (2) exterior catch basins are connected to the storm sewer in the East Calumet right-of-way. Overhead electric and telephone service also enter the western elevation of the site building from a utility pole located adjacent to the western property line.

A review of the information collected by the National Cooperative Soil Survey on behalf of the United States Department of Agriculture Natural Resources Conservation Service indicates the subject property is covered by Briggsville silt loam. The Briggsville silt loam is a moderately well-drained soil formed by stratified silty and clayey lacustrine deposits. This soil is considered prime farmland.

Topographic maps of the area indicate the site elevation ranges from approximately eight hundred (800) to eight hundred ten (810) feet above Mean Sea Level (MSL). The site is not located within an environmentally sensitive area.

Depth to bedrock in this region reportedly ranges from one hundred (100) to two hundred (200) feet below the ground surface (bgs). The uppermost bedrock unit below the subject property is believed to be of the Sinnipee Group. This formation is characterized by dolomite with some limestone and shale; includes Galena, Decorah and Platteville formations.

Based on documented water table elevations recorded during groundwater investigations at immediately adjacent properties, groundwater on the subject property was estimated to be between four (4) to twelve (12) feet bgs. Based on delayed measurements obtained from the temporary monitoring wells installed on the parcel in November of 2019, the depth to the water table was documented to be between approximately three (3) and six (6) feet (bgs). The shallow groundwater flow direction is anticipated to be to the west-southwest.

No private drinking water wells have been identified at the site. Potable water service is provided by the City of Appleton.

1.4 STORAGE TANKS

No Underground Storage Tanks (USTs) or Aboveground Storage Tanks (ASTs) were registered for the subject property's addresses on the Department of Agriculture and Consumer Trade Protection's (DATCP) Storage Tank Database. Evidence of current or former USTs or ASTs on the site was not encountered during the site investigation activities.

2.0 PREVIOUS INVESTIGATION ACTIVITIES

A Phase I Environmental Site Assessment (ESA) performed by Cedar Corporation (Cedar) of Green Bay, Wisconsin dated June 5, 2019 indicated dry cleaning operations were performed at the subject property from 1987 until 2007. The current owner stated that the dry cleaner operated in Unit B which is the second unit from the north, currently occupied by Highlites Hair Salon L.L.C. Cedar stated that the former presence of dry cleaning operations at the site is a Recognized Environmental Condition (REC). Based on this REC, Cedar recommended the performance of a Phase II ESA.

United subsequently coordinated the advancement of two (2) boreholes to an approximate depth of twenty (20) feet bgs, in the asphaltic concrete immediately east and west of Unit B to determine if the soils had been impacted by chlorinated solvents. The borings were converted to temporary groundwater monitoring wells to evaluate the groundwater quality. In addition, a sub-slab vapor point was installed within the unit's utility closet. The vapor point location was selected based on its proximity to the unit's floor drain and as near the former dry-cleaning machine as feasible (See Figure 3: Soil Boring, Temporary Well and Sub-Slab Vapor Point Location Map). The collected soil, groundwater and vapor samples were analyzed for the presence of Volatile Organic Compounds (VOC).

The Phase II ESA analytical results did not indicate the presence of any VOCs in the soil at concentrations in exceedance of their respective detection limits. However, PCE and TCE were documented in the groundwater immediately west of the site building in exceedance of their respective NR 140 Preventive Action Limit (PAL) and Enforcement Standard (ES). Based on these exceedances, a release of PCE and TCE to the groundwater had occurred and the Wisconsin Department of Natural Resources (WDNR) was notified on February 26, 2019 by submitting Form 4400-225 Notification for Hazardous Substance Discharge per section Chapter 292.11(a) of the Wisconsin Statutes.

The results of the vapor analysis indicate the presence of acetone and PCE in the sub-slab vapor at concentrations significantly below their residential and small commercial Vapor Risk Screening Levels (VRSL). Several other compounds were present, however, none were in exceedance of either their residential or small commercial VRSLs.

3.0 FIELD SAMPLING PLAN

The following sections discuss the planned activities including soil boring advancement, NR 141 compliant groundwater monitoring well and sub-slab vapor point installation and analytical sampling, sample handling, site survey and schedule.

3.1 SOIL INVESTIGATION

3.1.1 Soil Boring Advancement

Although no VOCs were encountered in the soil at concentrations in exceedance of their respective detection limits during the Phase II ESA, United recommends the advancement of one (1) soil boring to an approximate depth of sixteen (16) feet west of Unit D of the site building. An NR 141 complaint groundwater monitoring well is planned at this location which is anticipated to be side or down gradient from the documented PCE and TCE impacted groundwater. The soil boring will be advanced in late spring or early summer by a track or truck mounted geo-probe utilizing direct push methods. Soil samples will be obtained continuously in four (4) foot lengths using a geo-probe sampler (See Figure 4: Proposed Soil Boring, Groundwater Monitoring Well and Sub-Slab Vapor Point Sample Location Map).

United personnel will log the soil borings using the Unified Soil Classification System. In addition, visual and olfactory observations such as staining and odor will be recorded along with other pertinent information.

3.1.2 Soil Analytical Sampling

The soil samples will be collected in accordance with NR 716.13 and a minimum of two (2) samples will be submitted to a state-certified laboratory. The soil samples will be submitted for VOC analysis.

3.2 GROUNDWATER INVESTIGATION

3.2.1 Groundwater Monitoring Well Installation

Three (3) NR 141 compliant monitoring wells, two (2) inches in diameter, will be installed in late spring or early summer by a truck or track-mounted drill rig utilizing continuous flight hollow stem augers. The monitoring wells are to be located directly adjacent to GP-1 and GP-2 and west of Unit D of the site building (See Figure 4: Proposed Soil Boring, Groundwater Monitoring Well and Sub-Slab Vapor Point Sample Location Map). If additional monitoring wells are warranted to determine the lateral extent of the TCE and PCE contaminant plume(s), they will be installed as needed to determine the down gradient extent of the plume(s).

The monitoring well construction will consist of a ten (10) foot section of two (2) inch diameter PVC screen, with 0.010 inch factory machine cut slots, and two (2) inch diameter PVC flush-threaded riser pipe extending to within approximately two (2) inches of the ground surface.

A medium-grained silica sand backfill will be utilized as a filter medium around the screened PVC to about six (6) inches above the top of the screen section, and an approximate six (6) inch layer of fine silica sand will be placed on top of the filter medium. The remaining annular space will be filled to within about one (1) foot of the ground surface with bentonite chips.

Subsequently, a protective cover will be installed. To reduce disturbance to the installation, a locking expandable cap will be fitted onto the top of the PVC riser.

3.2.2 Groundwater Analytical Sampling

The groundwater samples will be collected with a Teflon bailer subsequent to development utilizing a submersible pump. Groundwater samples will be submitted to a state-certified laboratory for analysis for the presence of VOC. All analysis will be performed by WDNR approved methods.

3.3 VAPOR INVESTIGATION

3.3.1 Sub-Slab Vapor Point Installation

One (1) sub-slab vapor point will be installed within the interior of Unit B of the site building immediately adjacent to VP-1 to confirm the absence of PCE in the sub-slab vapor at concentrations above its residential and small commercial VRSL (See Figure 4: Proposed Soil Boring, Groundwater Monitoring Well and Sub-Slab Vapor Point Sample Location Map).

The sampling will be performed by installing a five-eighth (5/8) inch diameter brass vapor pin with an exterior silicon seal into the concrete slab. The airtightness of the probe seal is to be confirmed utilizing the water dam method. This method consists of sealing a small section of two (2) inch PVC pipe to the concrete floor with a soft pliable adhesive compound and subsequent placement of water in the pipe section. A constant water level indicates an airtight seal.

3.3.2 Vapor Analytical Sampling

United will collect the vapor sample by connecting a semi-rigid, one-quarter (1/4) inch outside diameter silicone tube from the vapor pin to a six (6) liter Summa Canister regulated at a collection rate of approximately one hundred (100) mL/min. The vapor sample will be submitted to Pace Analytical Services, Inc. for analysis for the presence of VOC by EPA method TO-15.

3.4 SAMPLE HANDLING

Samples will be collected in containers provided by the laboratories and following WDNR field sampling protocol and standard chain-of-custody procedures. Applicable field preservatives will be used as directed by laboratory methods, and all soil and groundwater samples will be preserved on ice. Chain-of-custody forms will be included in the Site Investigation (SI) report.

3.5 SITE SURVEY

United will complete a site survey including, but not limited to, the location of the site buildings, property lines, underground utilities, current and former soil borings, NR 141 compliant groundwater monitoring wells, previously installed temporary groundwater monitoring wells and current and former sub-slab vapor points. Additionally, the elevation of the NR 141 compliant groundwater monitoring wells, based on MSL, will be determined. This information will be incorporated into figures and maps as required.

3.6 REPORTING

Upon delineation of the lateral and vertical extent of the TCE and PCE contaminant plume, an NR 716 compliant SI report will be submitted to the WDNR summarizing the investigation methods, analytical results and other pertinent field information collected during the investigative activities. The SI report will also include conclusions and recommendations for remediation and/or case closure.

4.0 REFERENCES

Wisconsin Administrative Code: Chapter NR 716

Depth to Bedrock In Wisconsin - Compiled by L. C. Trotta and R. D. Cotter, 1973

Bedrock Geology of Wisconsin - Geological and Natural History Survey, Revised 2006

CERTIFICATION

I, Timothy J. Anderson, 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.



Principal

March 26, 2020

I, Scott Brockway, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the 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.



Hydrogeologist

March 26, 2020

I, Nicholas J. Anderson, 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 of the 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.

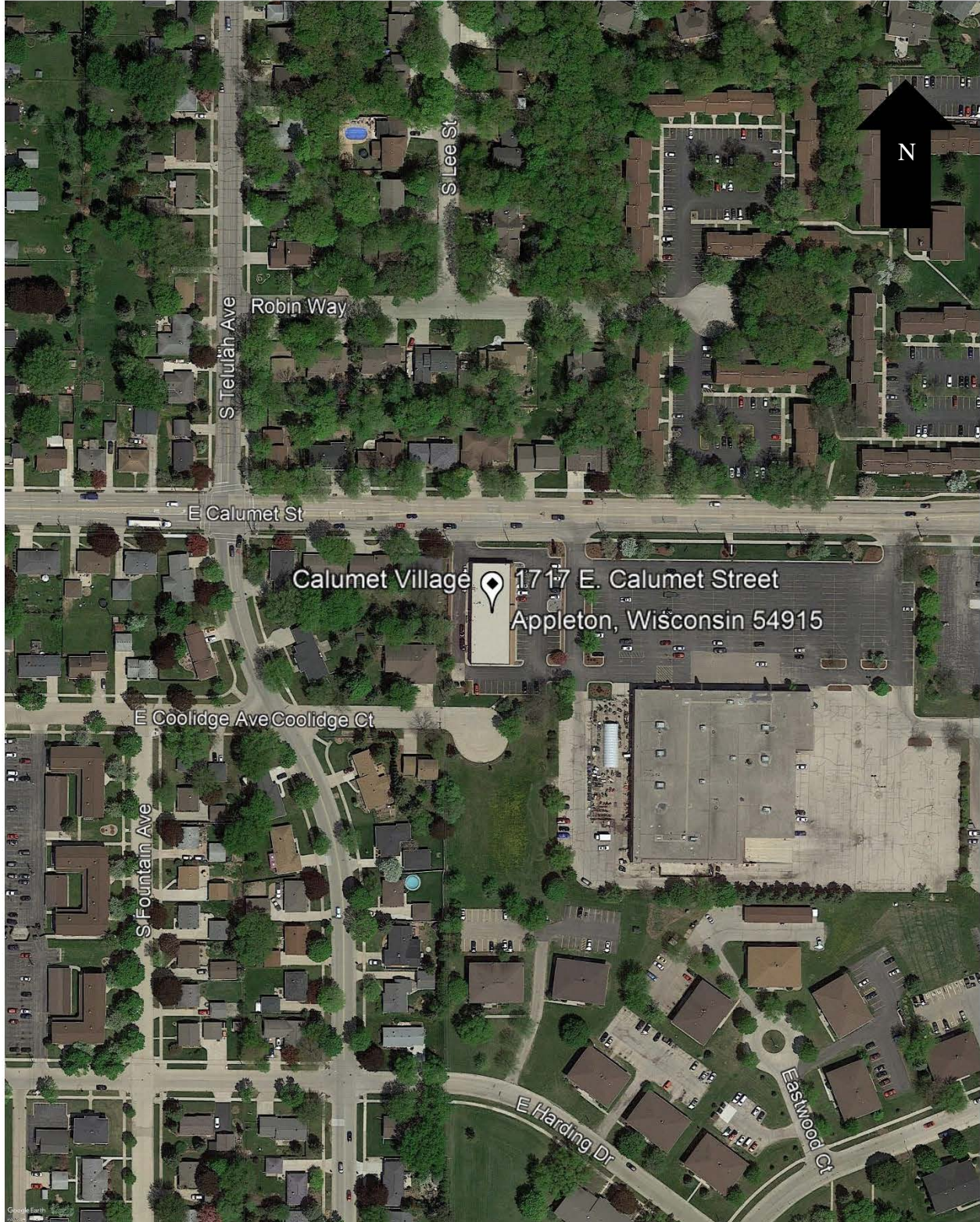


Staff Engineer

March 26, 2020

FIGURES

**FIGURE 1
SITE LOCATION MAP**



Legend

- Property Line
- Former Location of Dry Cleaning Machine
- Floor Drain

ALL LOCATIONS ARE APPROXIMATE



SCALE: 1"=35'

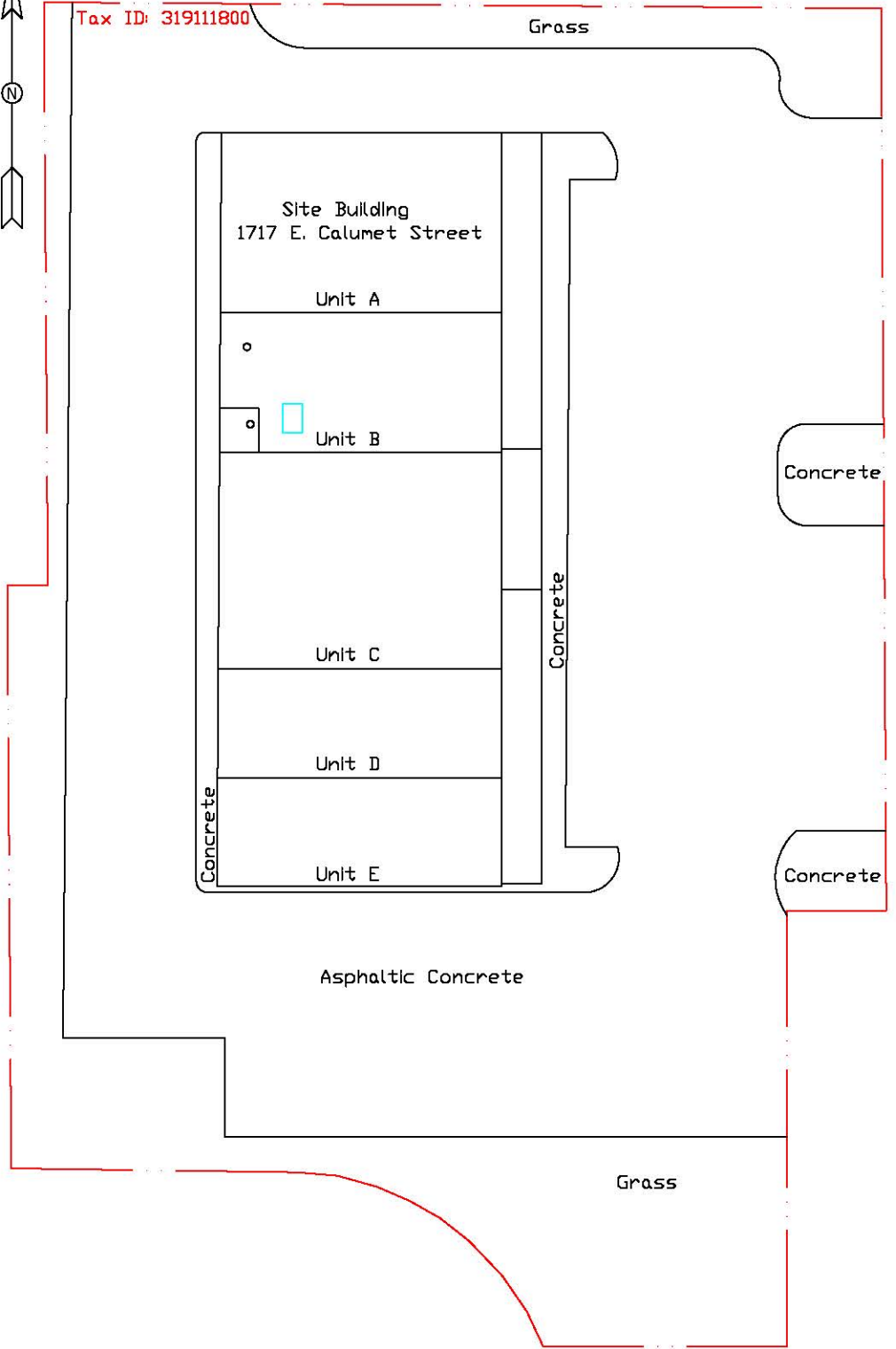


Figure 2: Site Plan Map

**United Engineering
Consultants, Inc.**

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New Berlin, WI 53151

Tel. (262) 785-1447
Fax (262) 706-4400

#19044

DRAWN BY: KRH

DATE: 12/04/2019

**Site Investigation Work Plan
Calumet Village
1717 E. Calumet Street
Appleton, WI 54915**

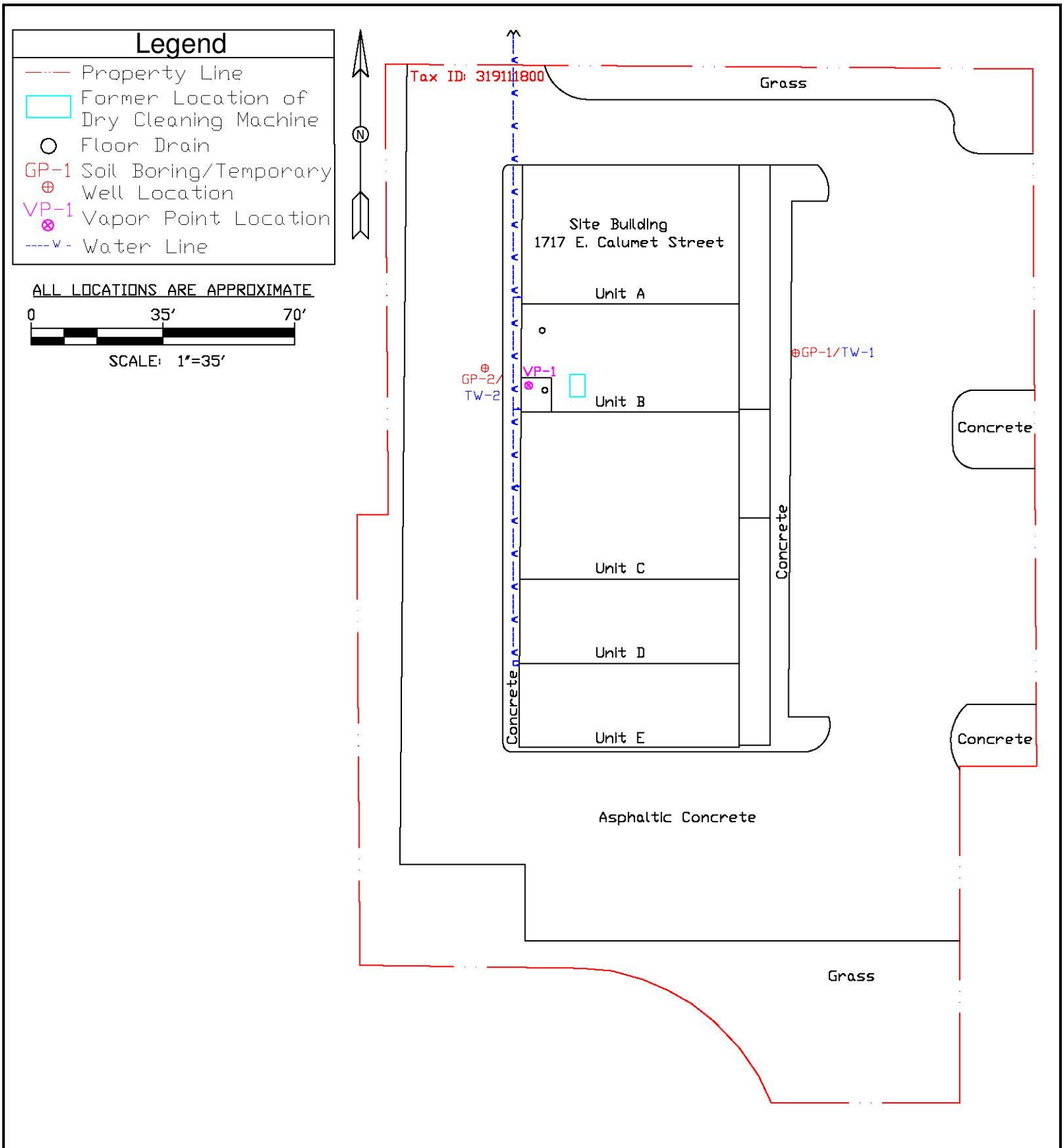


Figure 3: Soil Boring, Temporary Well and Sub-Slab Vapor Point Location Map

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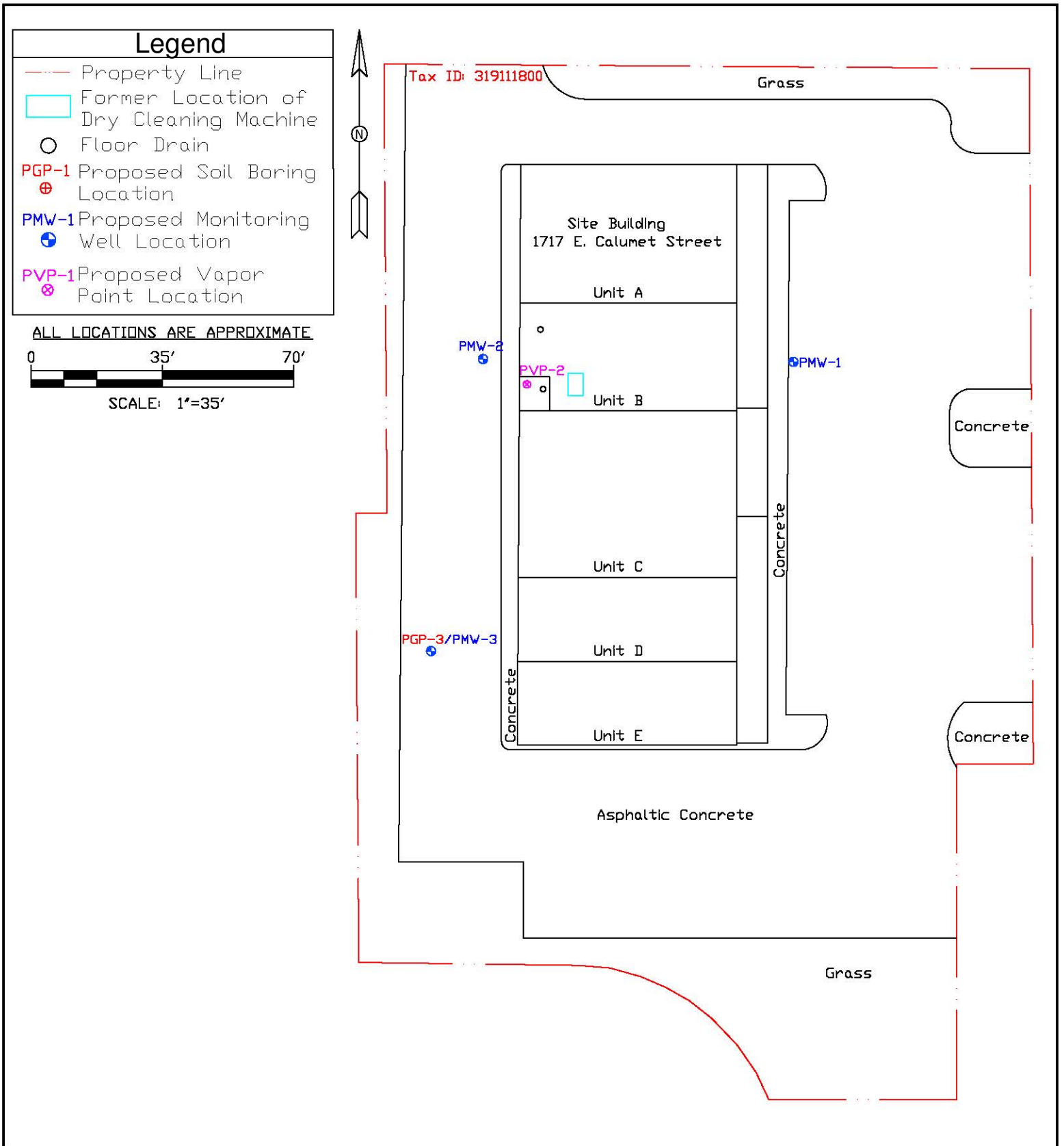


Figure 4: Proposed Soil Boring, Groundwater Monitoring Well and Sub-Slab Vapor Point Location Map

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DATE: 03/12/2020

Site Investigation Work Plan
Calumet Village
1717 E. Calumet Street
Appleton, WI 54915

TABLES

Table 1 - VOC Analytical Results - Soil
 Calumet Village
 1717 E. Calumet Street
 Appleton, WI 54915

Sample Date	November 14, 2019				RCL		
Sample Identification	GP-1	GP-1	GP-2	GP-2	GWP	NIDC	IDC
Sample Depth	2'-3'	10'-11'	2'-3'	10'-11'			
Volatile Organic Compounds (VOC) (Method: SW-846 8260B/PUBL-FW-140)							
Acetone	<0.00448	<0.000713	<0.00416	<0.00405	3.6766	63400	100000
Acrylonitrile	<0.00129	<0.000205	<0.00120	<0.00117	-	<0.338	1.5
Benzene	<0.000264	<0.000042	<0.000245	<0.000239	0.0051	1.6	7.07
Bromodichloromethane	<0.000394	<0.0000627	<0.000366	<0.000356	0.0003	0.39	1.96
Bromoform	<0.000429	<0.0000683	<0.000398	<0.000388	0.0023	23.6	115
2-Butanone	<0.00261	<0.000416	<0.00243	<0.00236	-	28400	28400
Carbon disulfide	<0.00321	<0.0000511	<0.000298	<0.000290	0.5919	738	738
Carbon tetrachloride	<0.000277	<0.0000441	<0.000258	<0.000251	0.0039	0.854	4.25
Chlorobenzene	<0.000305	<0.0000486	<0.000284	<0.000276	-	392	761
Chloroform	<0.00057	<0.0000908	<0.000530	<0.000516	0.0033	0.423	2.13
1,2-Dibromo-3-chloropropane	<0.0010	<0.00016	<0.000934	<0.000909	0.0002	0.008	0.092
1,2-Dibromoethane	<0.000307	<0.0000489	<0.000286	<0.000278	0.0000282	0.05	0.221
Dibromochloromethane	<0.000499	<0.0000794	<0.000464	<0.000451	0.032	8.28	38.9
1,1-Dichloroethane	<0.000918	<0.000146	<0.000853	<0.000830	0.4834	4.72	23.7
1,2-Dichloroethane	<0.000223	<0.0000354	<0.000286	<0.000278	0.0028	0.608	2.87
1,1-Dichloroethene	<0.000718	<0.000114	<0.000667	<0.000649	0.005	342	1190
cis-1,2-Dichloroethene	<0.000629	<0.000100	<0.000584	<0.000569	0.0412	156	2040
trans-1,2-Dichloroethene	<0.000866	<0.000138	<0.000804	<0.000783	0.0626	1560	1850
1,2-Dichloroethene, Total	<0.00149	<0.000238	<0.00139	<0.00135	-	-	-
1,2-Dichloropropane	<0.000412	<0.0000656	<0.000383	<0.000373	0.0033	3.4	15
Ethylbenzene	<0.000392	<0.0000625	<0.000365	<0.000355	1.57	8.02	35.4
2-Hexanone	<0.0018	<0.000287	<0.00168	<0.000415	-	237	1760
Methyl tert-butyl ether	<0.000458	<0.0000729	<0.000426	<0.000415	0.027	63.8	282
Methylene chloride	<0.00107	<0.000171	<0.000997	<0.000971	0.0026	60.7	1150
4-Methyl-2-pentanone	<0.00121	<0.000193	<0.00113	<0.00110	0.2252	3360	3360
Styrene	<0.000392	<0.0000624	<0.000364	<0.000355	0.22	867	867
1,1,2,2-Tetrachloroethane	<0.00059	<0.0000939	<0.000548	<0.000534	0.0002	0.753	3.69
Tetrachloroethene	<0.000475	<0.000757	<0.000442	<0.000430	0.0045	33	145
Toluene	<0.000356	<0.0000567	<0.000331	<0.000323	1.1072	818	818
1,1,1-Trichloroethane	<0.000611	<0.0000972	<0.000567	<0.000552	0.1402	640	640
1,1,2-Trichloroethane	<0.000606	<0.0000956	<0.000563	<0.000549	0.0032	1.48	7.01
Trichloroethene	<0.000317	<0.0000504	<0.000294	<0.000286	0.0036	1.26	8.41
1,2,4-Trimethylbenzene	<0.000354	<0.0000564	<0.000329	<0.000321	-	219	219
1,3,5-Trimethylbenzene	<0.000347	<0.0000552	<0.000322	<0.000314	-	182	182
Vinyl Acetate	<0.000703	<0.000112	<0.000653	<0.000636	-	1300	2750
Vinyl Chloride	<0.000434	<0.0000690	<0.000403	<0.000392	0.0001	0.067	2.03
m,p-Xylene	<0.00195	<0.000310	<0.00181	<0.00176	-	388	388
o-Xylene	<0.000271	<0.0000432	<0.000252	<0.000245	-	434	434
Xylenes, Total	<0.00222	<0.000354	<0.00206	<0.00201	3.96	260	260

- Notes: All samples collected from the unsaturated zone
 All results expressed as mg/kg
- RCL Residual Contaminant Level (December 2018 RCL Spreadsheet Update)
- GWP Groundwater Pathway RCL (Exceedances in underline)
- NIDC Non-Industrial Direct Contact Pathway RCL (Exceedances in **bold**)
- IDC Industrial Direct Contact Pathway RCL (Exceedances in **bold** and shaded)
- RCL not established for this compound
- < Compound not detected at or above LOD

Table 2 - VOC Analytical Results - Groundwater
 Calumet Village
 1717 E. Calumet Street
 Appleton, WI 54915

Analyte	TW-1	TW-2	ES	PAL
	11/21/19	11/21/19		
Volatile Organic Compounds (VOC) (Method: 8260)				
Acetone	14.3J	9.55J	9000	1800
Acrylonitrile	<0.742Q,S1	<0.742Q,S1	-	-
Benzene	<0.370	<0.370	5	0.5
Bromodichloromethane	<0.310	<0.310	0.6	0.06
Bromoform	<0.254	<0.254	4.4	0.44
Bromomethane	<3.30Q,S1	<3.30Q,S1	10	1
1-Butanol	<6.69	<6.69	-	-
2-Butanone	<1.38Q,S1	<1.38Q,S1	-	-
Carbon disulfide	<0.259Q,S1	<0.259Q,S1	1000	200
Carbon tetrachloride	<0.390Q,S1	<0.390Q,S1	5	0.5
Chlorobenzene	<0.358	<0.358	-	-
Chloroethane	<0.906Q	<0.906Q	400	80
Chloroform	<0.397	<0.397	6	0.6
Chloromethane	<2.23Q	<2.23Q	30	3
1,2-Dibromo-3-chloropropane	<0.488	<0.488	0.2	0.02
1,2-Dibromoethane (EDB)	<0.320	<0.320	0.05	0.005
1,1-Dichloroethane	<1.94	<1.94	850	85
1,2-Dichloroethane	<0.274	<0.274	5	0.5
1,1-Dichloroethene	<1.02	<1.02	7	0.7
cis-1,2-Dichloroethene	<0.421	2.25	70	7
trans-1,2-Dichloroethene	<0.433	0.460J	100	20
1,2-Dichloropropane	<1.11	<1.11	5	0.5
Dibromochloromethane	<0.492	<0.492	700	140
1,3-Dichloropropene, Total	<0.278	<0.592	0.4	0.04
Ethylbenzene	<0.431	<0.431	700	140
2-Hexanone	<1.04	<1.04	-	-
4-Methyl-2-pentanone	<0.660	<0.660	-	-
Methyl tert-Butyl ether	<0.322	<0.322	60	12
Methylene chloride	<0.358	<0.358	5	0.5
Styrene	<0.534Q,S1	<0.534Q,S1	100	10
1,1,2,2-Tetrachloroethane	<0.291	<0.291	0.2	0.02
Tetrachloroethene	<0.400Q,S1	63.5Q,S1	5	0.5
1,2,4-Trimethylbenzene	<0.338Q,S1	<0.338Q,S1	480	96
1,3,5-Trimethylbenzene	<0.310Q,S1	<0.310Q,S1		
Toluene	<0.299	<0.299	800	160
1,1,1-Trichloroethane	<0.349	<0.349	200	40
1,1,2-Trichloroethane	<0.264	<0.264	5	0.5
Trichloroethene	<0.439	14.9	5	0.5
Vinyl acetate	<1.01	<1.01	-	-
Vinyl chloride	<0.316Q	<0.316Q	0.2	0.02
m,p-Xylene	<0.310	<0.310	-	-
o-Xylene	<0.349	<0.349	-	-
Xylenes, Total	<0.660	<0.660	2000	400

Notes: All results expressed as µg/L (parts per billion)
 ES NR140 Enforcement Standard (Exceedances in **bold**)
 PAL NR140 Preventive Action Limit (Exceedances in underline)
 - ES/PAL not established for this compound
 J Analyte detected above limit of detection (LOD) and below limit of quantitation (LOQ)
 </ND Compound not detected at or above the LOD
 Q One or more quality control results were outside of the acceptable limits
 S1 The percent recovery is above the limits, but the analyte was not detected in the sample. Data is acceptable

Table 2 - VOC Analytical Results - Groundwater
 Calumet Village
 1717 E. Calumet Street
 Appleton, WI 54915

Analyte	Trip Blank	ES	PAL
	11/21/19		
Volatile Organic Compounds (VOC) (Method: 8260)			
Acetone	<0.375	9000	1800
Acrylonitrile	<0.742	-	-
Benzene	<0.370	5	0.5
Bromodichloromethane	<0.310	0.6	0.06
Bromoform	<0.254	4.4	0.44
Bromomethane	<3.30	10	1
1-Butanol	<6.69	-	-
2-Butanone	<1.38	-	-
Carbon disulfide	<0.259	1000	200
Carbon tetrachloride	<0.390	5	0.5
Chlorobenzene	<0.358	-	-
Chloroethane	<0.906	400	80
Chloroform	<0.397	6	0.6
Chloromethane	<2.23	30	3
1,2-Dibromo-3-chloropropane	<0.488	0.2	0.02
1,2-Dibromoethane (EDB)	<0.320	0.05	0.005
1,1-Dichloroethane	<1.94	850	85
1,2-Dichloroethane	<0.274	5	0.5
1,1-Dichloroethene	<1.02	7	0.7
cis-1,2-Dichloroethene	<0.421	70	7
trans-1,2-Dichloroethene	<0.433	100	20
1,2-Dichloropropane	<1.11	5	0.5
Dibromochloromethane	<0.492	700	140
1,3-Dichloropropene, Total	<0.278	0.4	0.04
Ethylbenzene	<0.431	700	140
2-Hexanone	<1.04	-	-
4-Methyl-2-pentanone	<0.660	-	-
Methyl tert-Butyl ether	<0.322	60	12
Methylene chloride	<0.358	5	0.5
Styrene	<0.534	100	10
1,1,2,2-Tetrachloroethane	<0.291	0.2	0.02
Tetrachloroethene	<0.400	5	0.5
1,2,4-Trimethylbenzene	<0.338	480	96
1,3,5-Trimethylbenzene	<0.310		
Toluene	<0.299	800	160
1,1,1-Trichloroethane	<0.349	200	40
1,1,2-Trichloroethane	<0.264	5	0.5
Trichloroethene	<0.439	5	0.5
Vinyl acetate	<1.01	-	-
Vinyl chloride	<0.316	0.2	0.02
m,p-Xylene	<0.310	-	-
o-Xylene	<0.349	-	-
Xylenes, Total	<0.660	2000	400

Notes: All results expressed as µg/L (parts per billion)
 ES NR140 Enforcement Standard (Exceedances in **bold**)
 PAL NR140 Preventive Action Limit (Exceedances in underline)
 - ES/PAL not established for this compound
 J Analyte detected above limit of detection (LOD) and below limit of quantitation (LOQ)
 </ND Compound not detected at or above the LOD
 Q One or more quality control results were outside of the acceptance limits
 S1 The percent recovery is above the limits, but the analyte was detected in the sample. Data is acceptable

Table 3 - VOC Analytical Results - Vapor
 Calumet Village
 1717 E. Calumet Street
 Appleton, WI 54915

Sample Identification	SS-1	Residential	Small Commercial
Sample Type	SS	Sub-Slab VRSL	Sub-Slab VRSL
Sample Date	11/21/2019		
Sample Duration (Hours)	0.5		
Volatile Organic Compounds (VOC) (Method: TO-15)			
Acetone	176	1066667	4666667
Benzene	0.71	120	530
Benzyl Chloride	<2.1	19	83
Bromodichloromethane	<0.66	25	110
Bromoform	<2.5	867	3667
Bromomethane	<0.41	17	733
1,3-Butadiene	<0.23	31	137
2-Butanone	5.3J	173333	733333
Carbon Disulfide	<0.39	24333	103333
Carbon tetrachloride	<0.77	160	670
Chlorobenzene	<0.49	1733	7333
Chloroethane	<0.47	-	-
Chloroform	<0.35	40	180
Chloromethane	<0.28	3100	13000
Cyclohexane	1.3J	210000	866667
Dibromochloromethane	<1.3	-	-
1,2-Dibromoethane	<0.66	2	7
1,2-Dichlorobenzene	<0.89	7000	29333
1,3-Dichlorobenzene	<1.0	-	-
1,4-Dichlorobenzene	<1.8	87	367
Dichlorodifluoromethane	<0.52	3300	15000
1,1-Dichloroethane	<0.40	600	2600
1,2-Dichloroethane	<0.27	37	160
1,1-Dichloroethene	<0.49	7000	29000
cis-1,2-Dichloroethene	<0.39	-	-
trans-1,2-Dichloroethene	<0.51	-	-
1,2-Dichloropropane	<0.41	25	110
cis-1,3-Dichloropropene	<0.54	-	-
trans-1,3-Dichloropropene	<0.79		
Dichlorotetrafluoroethane	<0.78	-	-
Ethanol	9390	-	-
Ethyl acetate	3.1	2433	10333

Notes: All results expressed as µg/m³
 VRSL Vapor Risk Screening Level (November 2017 Version)
 Residential Sub-slab VRSL exceedances in underline (AF=0.03)
 Small Commercial Sub-slab VRSL exceedances in bold (AF=0.03)
 Large Commercial Sub-slab VRSL exceedances in bold and shaded (AF=0.01)
 - Sub-slab VRSL not established for this compound
 J Analyte detected below limit of quantitation
 E Analyte concentration exceeded the calibration range. The reported result is estimated.

Table 3 - VOC Analytical Results - Vapor
 Calumet Village
 1717 E. Calumet Street
 Appleton, WI 54915

Sample Identification	SS-1	Residential	Small Commercial
Sample Type	SS	Sub-Slab VRSL	Sub-Slab VRSL
Sample Date	11/21/2019		
Sample Duration (Hours)	0.5		
Volatile Organic Compounds (VOC) (Method: TO-15)			
Ethylbenzene	1.3J	370	1600
4-Ethyltoluene	<1.0	-	-
N-Heptane	4.6	14000	60000
Hexachloro-1,3-butadiene	<3.5	-	-
N-Hexane	2.5	24333	103333
2-Hexanone	2.6J	1033	4333
Methylene chloride	2.9J	21000	87000
4-Methyl-2-pentanone	<0.93	103333	433333
Methyl tert-butyl ether	<1.2	3700	16000
Naphthalene	<2.3	28	120
2-Propanol	612	-	-
Propylene	<0.25	103333	433333
Styrene	<0.62	33333	146667
1,1,2,2-Tetrachloroethane	<0.55	16	70
Tetrachloroethene	1.1J	1400	6000
Tetrahydrofuran	<0.47	-	-
Toluene	2.7	173333	733333
1,2,4-Trichlorobenzene	<6.7	70	293
1,1,1-Trichloroethane	<0.55	170000	730000
1,1,2-Trichloroethane	<0.43	7	29
Trichloroethene	<0.45	70	290
Trichlorofluoromethane	17.1	-	-
1,1,2-Trichlorotrifluoroethane	<1.0	-	-
1,2,4 -Trimethylbenzene	3.2	2100	8700
1,3,5 -Trimethylbenzene	1.7J	2100	8700
Vinyl Acetate	<0.48	7000	29333
Vinyl Chloride	<0.23	57	930
m&p-Xylene	2.0J	3300	15000
o-Xylene	1.2J	3300	15000

Notes: All results expressed as µg/m³
 VRSL Vapor Risk Screening Level (November 2017 Version)
 Residential Sub-slab VRSL exceedances in underline (AF=0.03)
 Small Commercial Sub-slab VRSL exceedances in bold (AF=0.03)
 Large Commercial Sub-slab VRSL exceedances in bold and shaded (AF=0.01)
 - Sub-slab VRSL not established for this compound
 J Analyte detected below limit of quantitation
 E Analyte concentration exceeded the calibration range. The reported result is estimated.