AECOM Environment

Prepared for:
City of Kenosha
Kenosha, Wisconsin

Prepared by:
AECOM
Milwaukee, WI
60578411
July 2018

Former Gasoline Station Site Investigation Work Plan

704 75th Street, Kenosha, Wisconsin 53143

WDNR BRRTS # 03-30-532981

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"I, Lanette L. Altenbach certify that I am a hydrogeologist as that term is defined in s.NR712.03(1), 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. NR700 to 726, Wis. Adm. Code."

Lanette Altenbach

October 2, 2018

Lanette L. Altenbach, P.G., CPG
Senior Hydrogeologist

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1.0 Introduction

1.1 Purpose

This NR 716 Site Investigation Work Plan (Work Plan) provides the investigation purpose, strategy, methods and procedures proposed to be implemented to evaluate the nature and extent of petroleum impact present at the former gas station associated with leaking underground storage tanks (USTs). This Work Plan describes the investigation planned to assess the nature and extent of the contamination that may be present and to evaluate whether remedial activities are required. The City intends to demolish the building as part of blight elimination for the neighborhood and to remove a potential barrier to redevelopment of the site. The site location is depicted in Figure 1.

1.2 Project Information

Site Address:

704 75th St
Kenosha, Wisconsin 53143

Tax Parcel ID: 05-123-06-479-017

Site Location:

Southeast ¼ of the Southeast ¼ of Section 06, Township 01 North, Range 23 East

WTM Coordinates:

698978 (East), 234934 (North)

Zoning: B-2 Community Business

Site investigation participants:

Site Owner	City of Kenosha 625 52nd Street Kenosha, Wisconsin 53140	Ms. Shelly Billingsley, PE Director of Public Works (262) 653-4149
State Agency	Wisconsin Department of Natural Resources, Southeast Region	Project Manager: Lee Delcore
Environmental Consultant	AECOM 1555 N. RiverCenter Drive, Suite 214 Milwaukee, Wisconsin 53212	Ms. Lanette Altenbach, P.G. Senior Hydrogeologist (414) 944-6186

Drilling Subcontractor	On-Site Environmental Services PO Box 280 Sun Prairie, WI 53590	Ms. Kim Kapugi 608-837-8992
Analytical Laboratory	Pace Analytical 1795 Industrial Drive Green Bay, WI 54302	Mr. Christopher Hyska (920) 469-2436

1.3 Site Background and Summary of Previous Work

The 0.35 acre former gas station (subject property) is located at 704 75th Street, Kenosha, Kenosha County, Wisconsin 53143. The subject property is situated approximately ⅓-mile west of Lake Michigan on 75th Street, and is accessed from 75 th Street (southern property boundary) and 7th Avenue (eastern property boundary). The subject property was most recently used as a gasoline station and convenience store. The subject property is bordered to the north and west by residential properties, to the south by 75th Street and further south by Southport Pantry (convenience store) and to the east by 7th Avenue, followed by SPS Dental (dentist office). The site layout is depicted in Figure 2.

UST Removals

Five underground storage tanks were located on the subject property. The first tank, a 550-gallon fuel oil UST with registration number 817141, was located on the north side of the convenience store building. This tank was removed in 2001 by SIGMA Environmental Services Inc. (Sigma). According to the Sigma report, the UST measured approximately 4-feet in diameter by 6-feet long. Pitting or holes were not observed on this UST and no obvious signs of contamination were observed within the UST excavation. One soil sample was collected at the excavation base (6' bgs) and analyzed for Diesel Range Organics (DRO); DRO was not detected above the laboratory reporting limit. Underground vent piping from the UST extended west toward the convenience store building and was removed during closure.

REI under contract to the WDNR conducted the removal of the second, third and fourth tanks in response to an order from the Department of Justice for UST removal. The USTs were each 8,000-gallon in size and contained unleaded gasoline, with registration numbers 404303, 404304 and 404305 respectively. The fifth UST was a 12,000-gallon tank, previously abandoned in place and contained gravel with a registration number of 404306. The gravel was removed and disposed prior to tank removal. These four USTs were located on the east side of the convenience store building. During the UST removals stained soils and petroleum odor were detected. Samples were collected and analyzed for petroleum volatile organic compounds (PVOCs) from the tank bed, piping run and dispenser islands. Of these samples, two tank bed samples, one sample along the south sidewall, and two samples below the dispenser piping contained PVOCs above Groundwater Pathways Residual Contaminant Levels (RCLs). A copy of the sample location map and table of results are included as Appendix A.

1.4 Investigative Scope and Regulatory Framework

The scope of the NR 716 site investigation includes:

- Advancing five soil probes and collecting soil samples to evaluate the horizontal and vertical extent of petroleum impact in the soil.

- Installing four Wisconsin Administrative Code (WAC) Chapter (ch.) NR141-compliant monitoring wells to evaluate the groundwater for flow direction and potential petroleum impacts. If impacts are found the monitoring wells will be used to identify the extent of the groundwater impact.

The WAC ch. NR 700 process will be followed for site investigation, interim action, if necessary, development and implementation of a remedial action, and case closure.

2.0 Site Setting

According to the United States Geological Survey 7.5-minute (USGS) topographic map of the subject property area (Kenosha quadrangle) and a review of the Google Earth application, the elevation of the subject property is approximately 605 feet above mean sea level. Based on a review of these technical resources and AECOM's site visit, the subject property appears to be generally flat with a slight downward slope toward Lake Michigan to the east.

2.1 Regional Geology

The subject property is underlain with Boyer loamy sand. The Boyer loamy sand soils have moderate infiltration rates and are moderately well and well drained soils. These soils are described as moderately coarse textured soils down to depth of approximately 60 inches. The Boyer loamy sand soils are classified as non-hydric (not supporting wetlands). Additionally, the bedrock geology of the subject property is of the Paleozoic era, Silurian system, Middle Silurian (Niagrian), and is predominantly dolomite.

2.2 Regional Hydrogeology

Regional bedrock groundwater flow in the area is to the east toward Lake Michigan (Skinner, 1973).

2.3 Site Specific Geology and Hydrogeology

Soil types encountered during the UST removals included silty sand.

Groundwater was encountered at approximately 11.5 feet below ground surface (bgs) during the UST removal. The site-specific flow direction has not been evaluated, but the flow is anticipated to be easterly, toward Lake Michigan which is located approximately one-third mile to the east.

2.4 Potential Exposure Pathways

The subject property is serviced by the City of Kenosha municipal water supply and sanitary sewer. The City of Kenosha uses Lake Michigan for its potable water supply.

Land use in the vicinity of the subject property is residential to the west and north and neighborhood business (Southport Pantry and SPS Dentist) to the south and east. Southport Elementary School is located at 723 76th St, one block south of the subject property, approximately 430 feet to the south. Additionally, St James Cemetery is located at 7002, 7th Ave, approximately 750 feet to the north.

2.4.1 Direct Contact Pathway

The subject property is served by City of Kenosha water and sewer. The former gas station area is located next to residential properties and not fenced in and is generally accessible by the public. The current pavement and surficial materials serve as a direct contact barrier.

2.4.2 Groundwater Pathway

Four USTs were removed from the subject property in 2014. Post-removal soil testing indicated petroleum contaminated soil levels that exceed the WDNR Groundwater Pathway RCLs at the south side of the property. A groundwater assessment will be conducted as part of this site investigation to further evaluate this pathway.

2.4.3 Vapor Intrusion

Residual contamination is present on the subject property in soil. Since the contaminant source is still present, on-site sources of vapor (e.g. PVOC contaminated soil) were identified during the UST removals. The soil and groundwater data collected as part of this planned site investigation will be used to determine if further evaluation of the vapor intrusion pathway is required.

2.4.4 Ecological Receptors

Lake Michigan is approximately 0.38 miles east of subject property. Wetlands are located approximately 0.88 miles to the south and are identified on the USGS topographic quadrangle map for the area.

3.0 Technical Approach

The technical approach provided below has been designed to assess whether impacts associated with the former gasoline station use of the subject property has the potential to impact human health or the environment, focusing on the potential exposure pathways outlined in Section 2.4. The work focuses on the area surrounding the former UST dispensers and adjacent to the tank bed where impacted soil has been identified.

3.1 Investigative Approach

Residual soil impacts were identified during the UST closure activities on the floor of the tank bed, on the south sidewall of the UST basin and below the dispenser piping. The scope of the investigation has been developed to evaluate the horizontal and vertical extent of soil impacts and to evaluate if groundwater has been impacted.

Five soil probes will be advanced and four groundwater monitoring wells will be installed to evaluate the soil and groundwater in the vicinity of the former dispenser islands and along the project boundary. The soil probes will be advanced to an approximate depth of 20 feet below ground surface (bgs) and the monitoring wells will be installed such that the well screen intersects the water table. Soil samples will be collected from each of the soil boring and monitoring well locations.

Two soil samples per soil probe boring or monitoring well location will be collected. Soil samples may be collected from below the water table, if indicated by PID readings or visual observations. The anticipated sampling intervals are:

- From zero to two feet below bgs;
- From the one-foot interval above the water table; and/or
- An interval with elevated PID readings, visually stained or markedly odorous.

One groundwater sample will be collected from each monitoring well approximately two weeks after the wells are developed.

Table 1 lists the planned soil and groundwater samples. The proposed sample locations are depicted in Figure 3.

3.1.1 Utility Clearance

AECOM will contact Digger's Hotline for the location of public utilities in the area of the investigation and will also review maps and other available information regarding the locations of private utilities that have been provided by the property owner. A private utility locating subcontractor will provide locating services of the private utilities at the site prior to drilling.

3.1.2 Soil Sampling

Soil probes will be advanced using a hydraulic probe utilizing a 2-inch diameter drive rod to collect a continuous soil sample. The soil samples will be collected inside of a polyethylene sheath inserted

into the end of the drive rod. The soil samples will be subdivided by depth into 1-2-foot increments, depending on the sample recovery and textural character.

To avoid cross-contamination between borings, the drilling equipment (i.e., augers and rig) will be decontaminated using a high pressure hot-water washer after each boring. The down hole sampling equipment will be decontaminated using a wash of Alconox© soap and clean water, followed by a rinse with clean water. Equipment will be scrubbed with a brush during each step of the decontamination process to remove soil particles which may adhere to the equipment.

Soil samples will be evaluated and visually classified in the field. The soil samples will be described in the field with respect to the soil type, grain size distribution, and color (or discoloration), odor, and moisture content. Visual observations of the recovered material will also be documented in accordance with American Society for Testing and Materials (ASTM) Method D-2488-93. Field observations from the boring will be recorded on soil boring logs. The logs will be reviewed by the project manager and presented in final form in the investigation report.

Each soil sample collected during soil probe or auger drilling methods is split to form duplicate samples, upon collection. A portion of the sample, to be utilized for screening purposes and classification is placed in an 8-ounce glass jar, covered with aluminum foil and sealed with a screw-on lid. The remainder of the sample is placed in laboratory-provided jars, if the sample is to be submitted to a laboratory for analytical testing.

Samples will be screened in the field with a photo-ionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. The PID will be calibrated in the field according to manufacturer's instructions, using 100 ppm isobutylene span gas and air (zero gas) at least once per day. PID screening is performed by first allowing the screening sample to warm to approximately room temperature (70° F). The sample is shaken vigorously for several seconds. This procedure breaks up the soil and increases the surface area of the soil particles exposed to the air inside of the jar. The tip of the PID probe is inserted about one inch into the jar through the aluminum foil. The highest PID reading during the first few seconds after inserting the probe tip will be recorded as the PID reading for the soil sample.

Because organic compounds have varying ionization potentials, the response of the PID depends on the compounds being ionized. In addition, because the PID responds only to compounds which are present in the vapor phase, the relative volatility is also a factor in the response. As a result, when a variety of VOCs are present in the screening sample, the meter reading does not necessarily indicate the concentrations of any specific VOC, but a response to total VOCs present relative to the concentrations and ionization potential of each compound.

Soil samples to be submitted for analytical testing will be placed into laboratory-provided sample containers and preserved (as appropriate).

Soil samples to be tested for VOCs will be collected either with a premeasured disposable sampler or as a grab sample that is weighed immediately after collection. Sample volume can vary from 10 to 25 grams and a matching amount of laboratory grade methanol will be added to the sample in a 40ml vial for the 10 gram sample or a 2-ounce jar for the 25 gram sample. The entire soil sample should be covered with the methanol and after the sample containers are gently shaken to mix the methanol and soil. Each sample will be labeled with the sample designation, sample date and time, sampler’s initials, project number and preservative added. The sample will be placed in a cooler on ice to maintain a temperature of 4° C or less and submitted to the laboratory the same day, if possible.

A chain-of-custody will be filled out after sample collection and will accompany the samples from time of collection until received at the laboratory. Any notes regarding soil sample collection are included in the field book while in the field.

Each borehole or probe hole advanced at the site will be abandoned in accordance with the procedures outlined in WAC ch. NR141 . Typically, probe holes are backfilled with bentonite chips from the bottom of the boring to the surface. If surface improvements are present (i.e., concrete or asphalt), bentonite is placed up to the bottom of the improvement and the surface is repaired with a like material. The AECOM representative present in the field during abandonment procedures will complete WDNR form 3300-5B. A copy of this form will be prepared for each probe location and submitted with the site investigation report.

3.1.3 Well Installation and Development

WAC ch. NR 141 groundwater monitoring wells will be installed by advancing a boring drilled with truck-mounted hollow stem auger drill rig equipped with 4.25-inch inside diameter hollow stem augers to accommodate the well screen and riser and the required filter pack and annular space seal. The monitoring wells will be constructed using 2-inch diameter polyvinyl chloride (PVC) well screen and riser. Water table well screens will consist of a 10-foot length of 0.01-inch machine slotted screen, placed to intersect the water table. The wells will be completed with flush mount protective covers.

The material filling the annular space between the borehole walls and the well casing will be poured inside of the augers and the augers are pulled up during placement of the fill material. Approximately 6-inches of fine grained, washed silica sand is placed below the well screen. Silica sand will be placed as a filter pack, around the screened portion of the well. If the depth to groundwater is ll feet bgs or greater standard WAC ch NR 141 well completions as described next will be used. The filter pack will be placed from 6-inches below the well to approximately 2-feet above the well screen. Above the filter pack, 2-feet of fine-grained sand will be placed. Above the fine sand, a bentonite seal will be placed and consists of a minimum of 2-feet of chipped bentonite. Bentonite will be used to fill the remaining annular space from the top of the seal to the bottom of the flush mount cover which will be placed at the top of the well, flush with grade, to protect the well from damage. Cement will be used around the outside of the flush mount cover, to secure it in place. If the depth to groundwater is less than 11 feet bgs, the filter pack and filter pack seal will be shortened as described in WAC ch. NR 141.

During well installation, a field boring log will be completed as outlined in Section 3.1.2 and WDNR form 4400-113A (monitoring well construction form) will be completed in the field. Copies of the boring logs (4400-133A) will be provided in the final report. Care will be taken to prevent contaminating the well material during installation.

The wells will be developed in accordance with WAC ch. NR 141.21. Prior to developing the well, the water level will be measured, using an electronic water level indicator to the nearest 0.01-foot. Each well will be developed by surge and purge methods and by removing 10 well volumes of water, calculated using the formula provided in WAC ch. NR 141, WAC. If 10 well volumes of water cannot be removed from the well because it bails or pumps dry (due to the presence of low permeability soils), the well will be slowly purged dry several times or until the turbidity of the water is reduced. WDNR form 4400-113B (monitoring well development form) will be completed in the field, during the development activities. The wells will be allowed to equilibrate for approximately two weeks, prior to collecting depth to groundwater measurements and groundwater samples.

3.1.4 Groundwater Sampling

Groundwater samples will be collected from each of the proposed water table monitoring wells. The newly installed wells will be allowed to equilibrate for approximately two weeks after well development, before groundwater sampling. Prior to groundwater sampling, the depth to groundwater will be measured in each of the monitoring wells. Groundwater samples will be collected using a low-flow sampling technique with a peristaltic pump and new tubing at each well. Field parameters (pH, conductivity, oxygen reducing potential, dissolved oxygen, and temperature) will be measured during well purging. When each reading varies less than 10%, the well will be sampled.

Groundwater for VOCs samples will be placed into laboratory-provided 40-ml VOC vials containing hydrochloric acid (HCl) preservative. The bottle will be filled to a positive meniscus and covered with a cap fitted with a Teflon© septum. The bottle will be inverted and gently tapped to verify that air bubbles are not present in the sample. Each bottle will be labeled, typically with a label provided by the laboratory, with the well number, sample number, date, sampler's initials, project number and preservatives added. After labeling, the samples will be placed in a cooler with the chain of custody, on ice, for shipment to the analytical laboratory.

3.1.5 Surveying

The location and elevations of each sampling point will be surveyed relative to State Plane Coordinates and mean sea level using global positioning system and/or standard surveying techniques. Elevations of the ground surface, top of PVC and top of protector pipe will be surveyed for each groundwater monitoring well installed and sampled for this assessment. Groundwater elevations will be calculated based on the top of PVC elevation measurements.

3.1.6 Laboratory Analytical Methods

The soil and groundwater samples will be analyzed at a Wisconsin-certified laboratory. Field measurements of groundwater will also include pH, redox potential, dissolved oxygen and temperature. Soil VOC samples will be preserved with methanol. Groundwater VOC samples will be preserved with hydrochloric acid. All samples will be maintained on ice until delivery to the laboratory. The samples will be collected and tracked using standard chain of custody procedures

The following analytical testing methods will be used for the site investigation:

- VOCs (SW846 Method 8260B)
- PAHs (SW846 Method 8270C)

The samples will be submitted to Pace Analytical Services, in Green Bay, Wisconsin for analytical testing.

3.2 Quality Assurance/Quality Control

Project quality assurance will be provided through the preparation and communication of the methods and procedures contained in this work plan. Quality control will be provided by the analysis of blank and duplicate samples.

A methanol trip blank sample will be analyzed with the soil samples to evaluate the methanol used for soil preservation. No field duplicate samples are planned for soil samples because of the natural heterogeneity of soils.

Groundwater quality control samples will include one trip blank per sample event and one duplicate sample for every 10 or less groundwater samples collected. Field blank samples are not planned because sampling equipment will be disposable and each well will be purged and sampled with new tubing.

3.3 Investigative Waste Management

Soil and groundwater generated by well installation, development and purging will be containerized in 55-gallon drums that will be stored onsite. The investigative waste will be temporarily left on-site until the results of a waste characterization sample are obtained. The site investigation report will discuss handling of any wastes generated during this work.

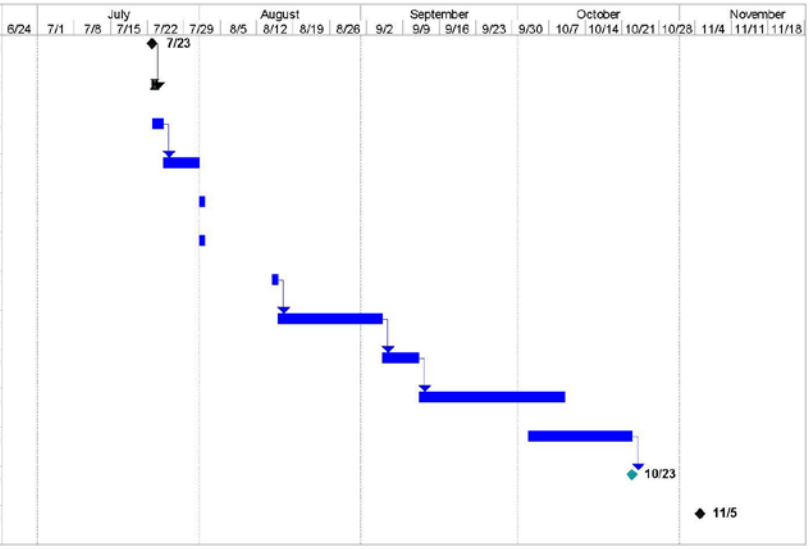
3.4 Reporting

The data collected during the investigation will be summarized and interpreted in a site investigation report. This report is required by and will be prepared in accordance with WAC ch. NR716. The report will include tables of results and figures where appropriate. Soil sampling results will be compared to WAC ch. NR720 generic RCLs. Groundwater sampling results will be compared to the WAC ch. NR140 Enforcement Standard (ES) and the Preventive Action Limit (PAL). The conclusions from the site investigation will be included in the report and will be used to determine the next course of action for the site.

4.0 Schedule

The proposed drilling has been scheduled for July 2018 and the proposed schedule is depicted below.

ID	Task Name	Duration
1	**Site Investigation**	0 days
2	Utility clearance	1 day
3	Drilling wells/Sampling Soil	2 days
4	Soil Laboratory Analysis	5 days
5	Develop wells	1 day
6	Survey wells	1 day
7	Sample Wells	1 day
8	Monitoring Well Equilibration	14 days
9	Grounwater Lab Analysis	5 days
10	Data Evaluation	20 days
11	Report Preparation	14 days
12	Draft Report to City for Review	0 days
13	Submit SI Report to WDNR	0 days



5.0 References

Kenosha County Property Inquiry website: http://www.co.kenosha.wi.us/964/Property-Inquiry

Kenosha County Assessor's Office website: http://www.co.kenosha.wi.us/530/Assessors

United States Department of Agriculture (USDA) Soil Survey of Milwaukee County, Wisconsin, Soil Conservation Service website: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.

Wisconsin Department of Natural Resources, Remediation and Redevelopment (RR) Site Maps website: http://dnrmaps.wi.gov/.

Wisconsin Department of Natural Resources, Bureau for Remediation and Redevelopment Tracking System (BRRTS) website: http://dnr.wi.gov/topic/brownfields/botw.

Wisconsin Geological and Natural History Survey (WGNHS) website: http://wgnhs.uwex.edu/.

United States Geological Survey, 2010. *7.5-Minute Topographic Map of the Racine South and Kenosha Wisconsin Quadrangles.* Scale=1:24,000 (nationalmap.gov/viewer)

Tables

Table 1
Proposed Soil and Groundwater Samples
704 75th Street, Kenosha, Wisconsin

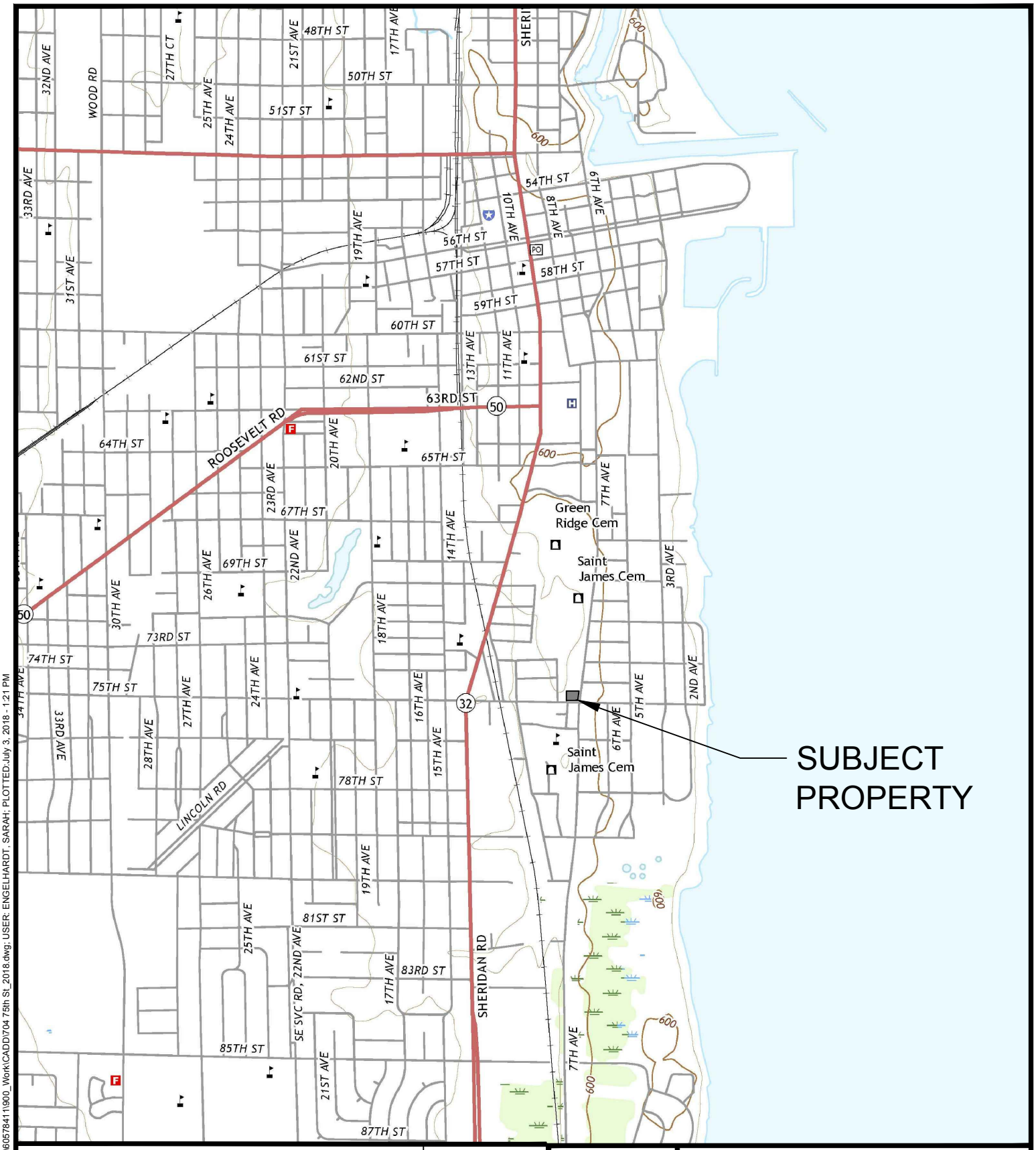
Sample Location	Sample Name[1]	Analyses[2]
Soil Samples		
SB-1	SB-1 (1-2)	VOCs, PAHs
SB-1	SB-1 (10-11)	VOCs, PAHs
SB-2	SB-2 (1-2)	VOCs, PAHs
SB-2	SB-2 (10-11)	VOCs, PAHs
SB-3	SB-3 (1-2)	VOCs, PAHs
SB-3	SB-3 (10-11)	VOCs, PAHs
SB-4	SB-4 (1-2)	VOCs, PAHs
SB-4	SB-4 (10-11)	VOCs, PAHs
SB-5	SB-5 (1-2)	VOCs, PAHs
SB-5	SB-5 (10-11)	VOCs, PAHs
MW-1	MW-1 (1-2)	VOCs, PAHs
MW-1	MW-1 (10-11)	VOCs, PAHs
MW-2	MW-2 (1-2)	VOCs, PAHs
MW-2	MW-2 (10-11)	VOCs, PAHs
MW-3	MW-3 (1-2)	VOCs, PAHs
MW-3	MW-3 (10-11)	VOCs, PAHs
MW-4	MW-4 (1-2)	VOCs, PAHs
MW-4	MW-4 (10-11)	VOCs, PAHs
Methanol Blank	TB-1	VOCs
Groundwater Samples		
MW-1	MW-1	VOCs, PAHs
MW-2	MW-2	VOCs, PAHs
MW-3	MW-3	VOCs, PAHs
MW-4	MW-4	VOCs, PAHs
Trip Blank	TB-1	VOCs

Notes:

[1] For Soil samples actual sample depth interval should be inserted in the sample name instead of "(depth)".

[2] Laboratory methods are: VOCs SW-846 8260, PAHs, SW-846 8270C

Figures



SCALE

0 1000 2000 3000

FEET

Notes:

1. USGS 7.5 MINUTE TOPOGRAPHIC MAPS: KENOSHA, WI QUADRANGLE (2013)

WISCONSIN

QUADRANGLE LOCATION

AECOM
Milwaukee Office
1555 RiverCenter Dr
Milwaukee, WI
414.944.6080

Former Gas Station
704 75th Street
Kenosha, WI 53143

SITE LOCATION

Project Number:	Drawn By:	Date:	Figure No. 1
60578411	ZPA	6/12/18	

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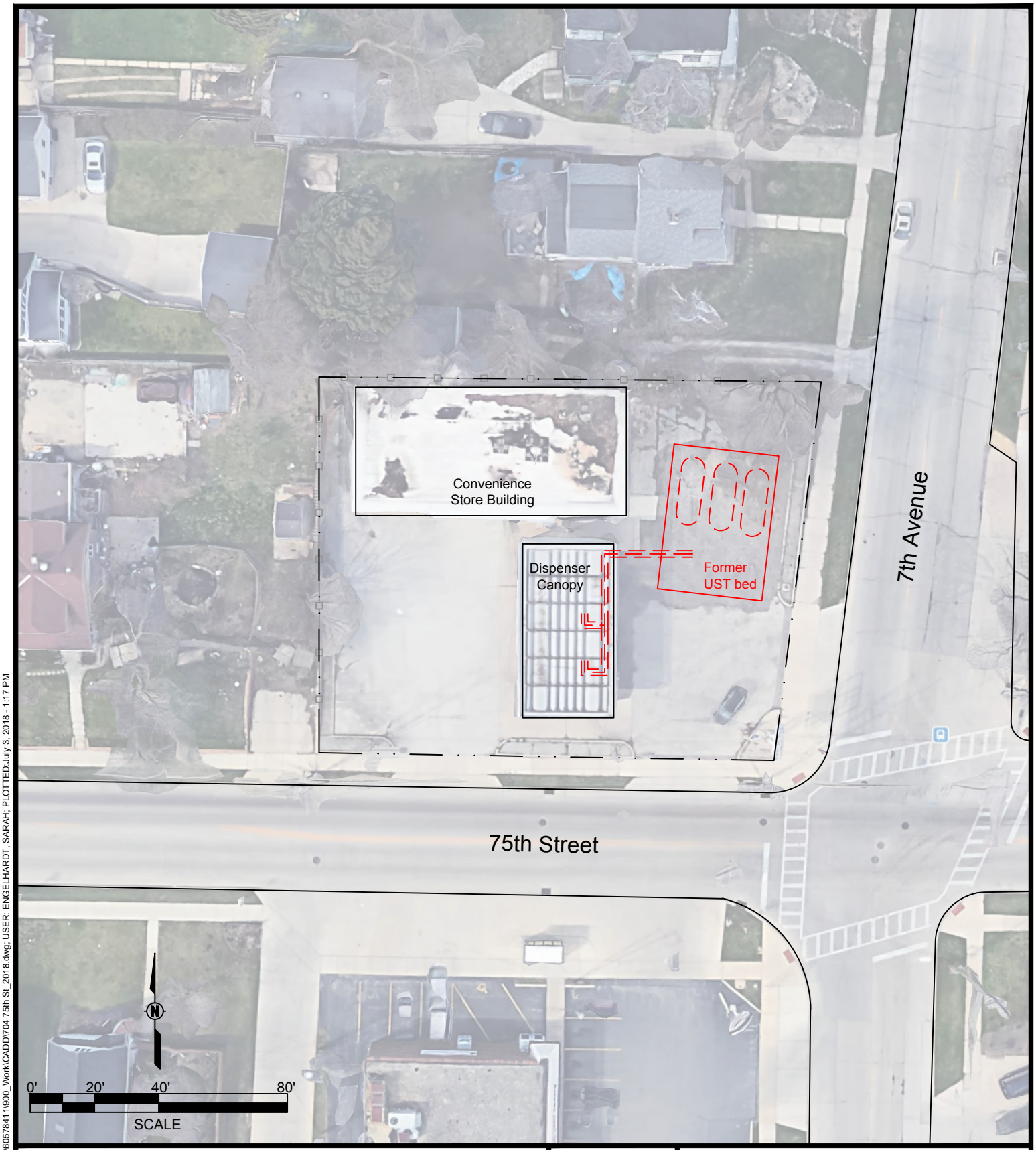

NOTES:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO, IMAGE DATED 4/6/2017; DOWNLOADED ON 6/12/2018.

LEGEND:

- PROPERTY BOUNDARY
- FENCE
- ROADS
- FORMER BUILDING & CANOPY
- FORMER USTs AND PIPING

AECOM
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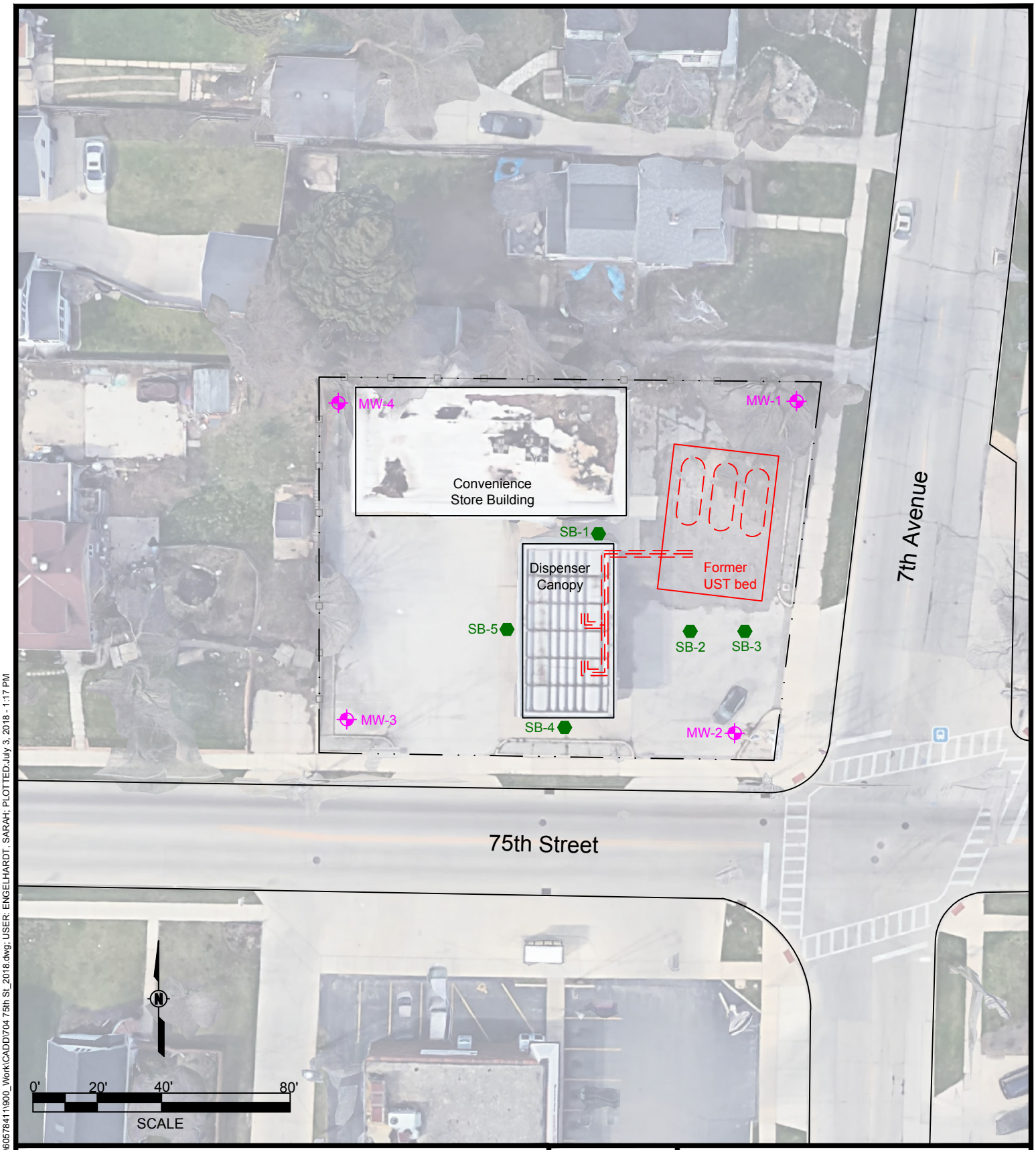
Former Gas Station
704 75th Street
Kenosha, WI 53143

SITE LAYOUT

Project Number:	Drawn By:	Date:	Figure No. 2
60578411	ZPA	6/12/18	



NOTES:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO, IMAGE DATED 4/6/2017; DOWNLOADED ON 6/12/2018.

LEGEND:

- PROPERTY BOUNDARY
- FENCE
- ROADS
- FORMER BUILDING & CANOPY
- FORMER USTs AND PIPIING
- PROPOSED MONITORING WELL
- PROPOSED SOIL BORING

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Former Gas Station
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Kenosha, WI 53143

PROPOSED MONITORING WELLS AND SOIL BORINGS

Project Number:	Drawn By:	Date:	Figure No. 3
60578411	ZPA	6/12/18	

Appendix A

UST Removals Results Tables and Figures

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

REI Engineering, INC.

GURPAL WISCONSIN STATIONS, LLC 704 75TH STREET KENOSHA, WISCONSIN	FIGURE 2 : SITE MAP		
	PROJECT NO. 6752	DRAWN BY: NAP	DATE: 08/06/14

DRAWING FILE: P:\6700-6799\6752 - GURPAL WISCONSIN STATIONS\DWG\6752-SITE.DWG LAYOUT: SITE PLOTTED: AUG 07, 2014 - 4:21PM PLOTTED BY: NATHANP

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
GURPAL WISCONSIN STATIONS, LLC
704 75TH STREET
KENOSHA, WI

		Date →	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*	*8/5/14*
		Sample ID →	*SS-1*	*SS-2*	*SS-3*	*SS-4*	*SS-5*	*SS-6*	*SS-7*	*SS-8*	*SS-9*	*SS-10*	*SS-11*	*SS-12*	*SS-13*	*SS-14*	*SS-15*	*SS-16*	*SS-17*	*SS-18*	*SS-19*	*SS-20*
		Sample Depth (Feet) →	*11*	*11*	*11*	*11*	*11*	*11*	*11*	*11*	*11*	*12.5*	*11*	*2*	*3.5*	*3*	*3*	*3.5*	*11*	*11*	*11*	*11*
Petroleum VOC's (mg/kg)	Non-Industrial Not-To-Exceed DC RCL	NR 140 Groundwater Pathway Protection (DF=2)																				
Benzene	1.49	0.0051	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	<0.025	<0.025	<0.050
Ethylbenzene	7.47	1.57	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.55	0.091	<0.025	<0.025	0.035[J]	<0.025	<0.025	0.249	0.136	0.046[J]	0.140
Toluene	818	1.1072	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.035[J]	<0.025	<0.025	0.038[J]	<0.025	<0.025	0.057[J]	0.035[J]	0.043[J]	<0.050	<0.025	<0.025	<0.050
Xylenes (Total)	258	3.9400	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.594	0.277	<0.025	<0.025	0.216	0.055[J]	<0.025	0.476	0.396	<0.025	0.318
Methyl tert Butyl Ether	59.4	0.027	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.050	<0.025	<0.025	<0.050
1,2,4-Trimethylbenzene	89.8	NS	<0.025	<0.025	<0.025	<0.025	<0.025	0.0346[J]	<0.025	0.028[J]	<0.025	0.333	0.264	<0.025	<0.025	0.143	0.044[J]	<0.025	1.53	9.42	<0.025	2.66
1,3,5-Trimethylbenzene	182	NS	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.186	<0.025	<0.025	<0.025	0.074	<0.025	<0.025	0.584	3.27	<0.025	1.52
Trimethylbenzenes (Total)	NS	1.3793	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.519	0.264	<0.025	<0.025	0.217	0.044[J]	<0.025	*2.114*	*12.69*	<0.025	*4.18*
Naphthalene	5.15	0.6587	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.209	0.084	<0.025	<0.025	0.073	0.044[J]	<0.025	*0.985*	*4.62*	0.095	*0.690*

Notes:

NR720 Standards Obtained From WDNR Online Excel Database
RCL - NR 720 Proposed Soil Residual Contaminant Level
DC - Direct Contact
< - Concentration below listed laboratory detection limit
NS - No Standard
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Bold	Exceeds Non-Industrial Not-To-Exceed DC RCL
Outline	Exceeds Industrial Not-To-Exceed DC RCL
Italic	Exceeds NR 140 Groundwater Pathway Protection