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# Remedial Action Options Report

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## Suggar Property Kenosha, WI

*March 19, 2020*

Prepared By:  
**Midwest Environmental Consulting**  
Burlington • Wisconsin

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**March 19, 2020**

Mr. Jennifer Dorman  
Wisconsin Department of Natural Resources  
2300 N. Martin Luther King Dr.  
Milwaukee, WI 53212

RE: Remedial Action Options Report  
Suggar Property  
3301 – 60<sup>th</sup> Street  
Kenosha, WI  
BRRTS#: 03-30-556490  
FID#: 230156410  
PECFA#: 53144-4143-05

Dear MS. Dorman:

Please find enclosed the Remedial Action Options Report (RAOR) for the above-referenced site. Midwest Environmental Consulting is not requesting that the Department review the RAOR or take other action at this time.

Please let me know if you have any questions.

Sincerely,  
**MIDWEST ENVIRONMENTAL CONSULTING**

A handwritten signature in blue ink that reads 'Sean Cranley'. The signature is written in a cursive style and is positioned above a horizontal line.

Sean Cranley, P.G.  
Principal Hydrogeologist  
(262) 237-4351

# Remedial Action Options Report Suggar Property



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**Remedial Action Options Report**

**Suggar Property**

**3301 – 60<sup>th</sup> Street**

**Kenosha, WI**

**FID#: 230156410**

**BRRTS#: 03-30-004964 & 03-30-556490**

**PECFA#: 53144-4143-05**

**1.0 INTRODUCTION**

Midwest Environmental Consulting (MEC) has completed an evaluation of remedial options for the Suggar Property site at 3301 – 60<sup>th</sup> Street in Kenosha, Wisconsin. The remedial evaluation is being conducted on behalf of Mr. Jose Ochoa Martinez, the site owner. The site is located in the NE  $\frac{1}{4}$ , NW  $\frac{1}{4}$ , Sec. 1, T 1N R 22E in Kenosha County, Wisconsin (United States Geological Survey [USGS] 1958, 1971). The site location is illustrated on Figure 1. The site configuration is illustrated on Figure 2.

This Remedial Action Options Report (RAOR) documents the evaluation of an appropriate range of remedial options to address soil and groundwater contamination at the site related to the past presence of petroleum underground storage tanks and to select the most appropriate option to address potential exposure pathways and restore the environment. The most appropriate option was determined to be natural attenuation with a Cap Maintenance Plan for the source property, requiring maintenance and inspection of the existing concrete pavement that covers the entire site. In addition, notifications of use restrictions and/or continuing obligations will apply to the source property and affected off-site properties.

No environmental factors are present at the site. As a consequence, only non-active treatment approaches were considered, as required by NR 747.

## 2.0 GENERAL SITE INFORMATION

### 2.1 Site Location and Description

The site is located at 3301 – 60<sup>th</sup> Street in Kenosha, Kenosha County, WI. The property is part of the NE ¼, NW ¼, Sec. 1, T 1N R 22E. The site is bounded by 60<sup>th</sup> Street to the north, 33<sup>rd</sup> Avenue to the east, an alley to the south and a business/apartment building to the west.

The property is 0.14 acres in size and is occupied by a single story, slab-on-grade concrete block building. A second-floor apartment on the south end, which includes a small basement in the southwestern corner. The building is approximately 4,200 square feet and houses an automobile service shop, a small office area and the apartment with an attached garage on the south end. Three 500-gallon gasoline underground storage tanks (USTs) located on the north end of the building were closed in place in 1980 by filling them with concrete.

Until the area to the north of the building was repaved with concrete in 2019, the apparent location of a former fuel dispenser island was visible as an oval concrete patch approximately 15 feet northeast of the office. The area surrounding the former dispenser island is a small paved lot used to park cars prior to servicing. A concrete patch is present in the sidewalk adjacent to the east side of the building where a 275-gallon used oil UST was removed in 2010. The site surface consists of concrete. The site configuration is illustrated on Figure 2.

The surrounding land use is a mix of commercial as well as single and multi-family residential use. Topography in the area is generally flat, sloping gently to the east toward Lake Michigan. According to the Kenosha County Land Information website, the property is zoned for commercial use.

### 2.2 Site History

Midwest reviewed several reports that provided documentation of environmental activities and conditions on, and in the vicinity of, the site as summarized below. For a more detailed discussion, please refer to the Site Investigation Work Plan (MEC – November 2016).

The building was constructed in 1912, based on the Kenosha County online property detail. The

1950 and 1969 Sanborn Fire Insurance maps depict the subject property as a filling station.

In April 1995, Phase I and Limited Phase II Environmental Site Assessments (ESA) were conducted for the property adjacent to the west at 3305 – 60<sup>th</sup> Street by Key Environmental Services. The Phase I ESA identified three 500-gallon gasoline USTs located on the north end of the on-site building and closed in place by filling them with concrete. The Limited Phase II ESA identified the presence of low-level petroleum soil contamination which was attributed to the closed USTs on the Suggar Property and reported to the Wisconsin Department of Natural Resources (WDNR).

In June 2006, Mr. Suggar had a Phase I ESA performed for the subject site by Gabriel Environmental Services, which identified the presence of a 275-gallon used oil UST located on the east side of the building, which was no longer in use.

In 2006 ChemReport, Inc. (CRI) advanced a direct-push soil boring (GP-12) at the site as part of the site investigation for the Mueller's Auto site at 3300 – 60<sup>th</sup> Street. Soil sample analytical results revealed the presence of low-level petroleum soil contamination. In 2008 ChemReport installed groundwater monitoring well MW-8 associated with the Mueller's Auto site. MW-8 is located near the southeast corner of the intersection of 60<sup>th</sup> St. and 33<sup>rd</sup> Ave. and, down gradient from the Suggar property. Soil samples collected from soil boring MW-8 revealed the presence of low-level petroleum soil contamination. In July 2010 ChemReport collected a groundwater sample from Mueller's monitoring well MW-8 as part of the Phase II ESA for the Suggar property. Petroleum related volatile organic compounds (VOCs) were present, exceeding their enforcement standards (ESs). The contamination at MW-8 was deemed likely to be attributable, at least in part, to the Suggar property.

In August 2010 ChemReport advanced two direct-push soil borings (DP-1 and DP-2) on site as part of the Suggar Property Phase II ESA. Petroleum related VOCs were detected in both soil and groundwater.

In November 2010, CRI removed the used oil UST from the site and conducted a Tank System Site Assessment (TSSA) One soil sample (SS-1) was collected during the TSSA from obviously contaminated soil at the base of the excavation for laboratory analysis, which confirmed the presence of petroleum soil contamination exceeding their respective RCLs for the protection of groundwater and a non-industrial direct contact RCL. The soil and groundwater sampling locations are illustrated on Figure 2. The historical soil and groundwater analytical results are summarized on Tables 1 and 2, respectively.

## 3.0 SITE CHARACTERIZATION SUMMARY

### 3.1 Site Geology and Hydrogeology

Site geology generally consisted of 0 to 5 feet of fill material consisting of sand and clay overlying native clay. Layers of sand and silt with some interbedded clay were typically encountered at 4 to 8 feet below land surface (bls) and extended to 16 feet the termination depth of most of the soil borings.

Local topography (within one mile of the site) exhibits low to moderate relief from 620 to 650 feet above mean sea level (MSL) and generally slopes to the east toward Lake Michigan (USGS 1958 and 1971).

Locally, unconsolidated deposits range in thickness between 50 and 100 feet, which is also the anticipated thickness of unconsolidated deposits beneath the site. (Trotta and Cotter, 1973). The local glacial/surficial geology is composed of glacial lake deposits. Glacial lake deposits consisting of stratified clay, silt, sand and gravel (Hadley and Pelham 1976).

Apparent saturated conditions were encountered between approximately 9 and 12 feet bls in the site borings and monitoring wells. Shallow aquifers are not typically used for water supply purposes, but may act as a conduit for groundwater contaminant migration.

Groundwater flow at the Suggar Property is toward the east-northeast. Groundwater flow at the Mueller's Auto site directly across 60<sup>th</sup> street to the north of the subject site is toward the east-southeast indicating that local flow is influenced by deep utility trenches beneath 60<sup>th</sup> Street that may be acting to drain groundwater in the area.

### 3.2 Local Contaminant Pathways and Receptors

Lake Michigan, approximately one mile to the east of the site is the nearest potentially affected surface water body.

There are a number of buried utilities present adjacent to the site beneath 33<sup>rd</sup> Avenue and 60<sup>th</sup> Street. These utilities include storm and sanitary sewer trenches that appear to intersect the water table which is at approximately 9 to 12 feet bls. In particular there is a storm sewer



beneath 60<sup>th</sup> Street that extends to a depth of about 21 feet bls, well into the saturated zone at the site.

The groundwater flow at the Suggar Property and several other contaminated sites in the area appears to be influenced by these deep utility trenches beneath 60<sup>th</sup> Street. There is a potential that groundwater contamination from these sites is migrating to the 21-foot deep storm sewer trench beneath 60<sup>th</sup> Street which may be acting as a preferential migration pathway.

Potable water at the site is supplied by the Kenosha Water Utility. Therefore, the potential for potable water at the site to be impacted by contamination from the former USTs is extremely remote.

Screening for the on-site building indicated the potential for vapor intrusion of the building, leading to the performance of a vapor intrusion investigation. Sub-slab vapor sampling within the building revealed that vapor intrusion is not occurring at levels above applicable vapor risk screening levels (VRSLs).

MEC also conducted a survey of the buildings on the 3200 block of 60<sup>th</sup> Street on the south side of the street and down gradient of the site using visual observations, a four-gas meter and a photoionization detector (PID) to assess the potential for vapor or groundwater intrusion of the basements. The basement survey was followed by a vapor intrusion assessment for these buildings. No evidence of vapor or groundwater intrusion was noted and vapor screening indicated that a vapor investigation for the buildings was not warranted.

### **3.3 Soil Contaminant Characterization**

From December 2016 through January 2020, MEC advanced 9 direct-push soil borings (DP-3 through DP-11) and 8 hollow-stem auger (HSA) (SB-1 through SB-7 and SB-9) at the site. HAS soil boring MW-8 was advanced down-gradient as part of the Muellers Auto site investigation. The HSA borings were completed as groundwater monitoring wells MW-1 through MW-9. The direct-push soil boring locations are illustrated on Figure 2.

The soil cores were characterized per the Unified Soil Classification System and screened in the field for the presence of volatile organic vapors using a photoionization detector (PID). Elevated PID readings, petroleum odors and/or staining were observed at several of the soil borings on site and at the water table in some of the down-gradient borings. Based on field observations,

and prior site data soil samples were collected from all but three of the borings for laboratory analysis.

Site geology generally consisted of 0 to 5 feet of fill material consisting of sand and clay overlying native clay. Layers of sand and silt with some interbedded clay were typically encountered at 4 to 8 feet bls and extended to 16 feet the termination depth of most of the soil borings. Geological cross-sections A-A' and B-B' are illustrated on Figures 3 and 4, respectively.

A total of 20 soil samples were submitted to a state-certified laboratory for analysis. Ten soil samples collected from direct-push borings advanced in the vicinity of the former used oil tank cavity were analyzed for VOCs, PAHs, lead and cadmium. Eight soil samples collected from direct-push borings located in the vicinity of the closed in place gasoline USTs were analyzed for VOCs and lead. One soil sample collected from SB-1 was analyzed for PVOCs and naphthalene. The soil sample analytical results are summarized on Table 3.

MEC evaluated all of the Phase II ESA, TSSA and site investigation soil sample results using the most recent (December 2018) WDNR spreadsheet for determining RCL exceedances for both direct contact and groundwater protection.

None of the lead or cadmium concentrations exceeded RCLs. Of the 10 soil samples collected from within the direct contact exposure zone (0 to 4 feet bls) only one sample, SS-1 collected from the bottom of the used oil UST excavation during the TSSA, exhibited a contaminant concentration exceeding a direct contact RCL. Sample SS-1 collected at 4 feet bls exhibited a naphthalene concentration exceeding the RCL for non-industrial direct contact exposure.

Five soil samples collected from the unsaturated zone exhibited contaminant concentrations exceeding RCLs protective of groundwater. All of the contaminants exceeding groundwater protection RCLs were petroleum related VOCs and PAHs except for the chlorinated VOC, tetrachloroethene (PCE) present in one sample collected from soil boring DP-6.

Soil contamination exceeding direct contact RCLs has been defined and is limited to the immediate area of the former used oil tank cavity. The distribution of soil contamination exceeding groundwater protection RCLs limited to the source area between the three gasoline USTs closed in place, the former used oil tank cavity and the immediately adjacent portion of the 33<sup>rd</sup> Avenue ROW. The distribution of soil contamination exceeding RCLs is illustrated in plan-view on Figure 5 and in cross-sectional view on Figures 3 and 4.

Based on the moderate to strong odors and elevated PID readings noted in the soil cores in the source area and the relative absence of lighter end VOCs, such as benzene and the prevalence of heavier end VOCs, such as naphthalene and the trimethylbenzenes, the petroleum soil contamination appears to be highly weathered.

### 3.4 Groundwater Contaminant Characterization

On December 12, 2016 and January 10, 2017, temporary groundwater sampling points were installed in all nine of the direct-push soil borings advanced at the site. Groundwater samples (DP-1W to DP-9W) were collected from each of these temporary sampling locations. The direct-push soil boring and temporary groundwater sampling locations are illustrated on Figure 2.

Monitoring wells MW-1 through MW-5, as well as MW-8 associated with the Mueller's Auto site at 3300 – 60<sup>th</sup> Street, were purged and sampled on June 6, 2018. On June 13, 2019, all seven Suggar Property monitoring wells (MW-1 through MW-7) were sampled for a second time. All nine wells associated with the Mueller's Auto site across 60<sup>th</sup> Street to the north (including MW-8) were also sampled the same day in order to provide the most optimal comparisons of groundwater quality, elevation and flow direction data in the area of the two sites. Downgradient monitoring well MW-9 was sampled on January 22, 2020.

A total of nine groundwater grab samples (DP-3W to DP-11W) from the temporary groundwater sampling points were submitted to a state-certified laboratory and analyzed for VOCs. During two rounds of sampling a total of sixteen groundwater samples were collected from the Suggar Property monitoring wells and from MW-8 associated with the Mueller's Auto site. Monitoring well MW-9 was sampled once. The groundwater monitoring well samples were analyzed for PVOCs and naphthalene. The groundwater grab sample analytical results are summarized on Table 4. The groundwater monitoring well sample analytical results are summarized on Table 5. The groundwater sample analytical results for nine rounds of sampling at MW-8 are summarized on Table 6.

Groundwater sampling results revealed that the groundwater contamination exceeding groundwater quality standards extends from within the source area on site between the former pump island and former used oil tank locations and to down-gradient areas offsite beneath the 33<sup>rd</sup> Avenue right-of-way (ROW) and beyond to monitoring wells MW-6 and MW-7 in the middle of the 3200 block of 60<sup>th</sup> Street. Down-gradient monitoring MW-9 exhibited no contaminant

concentrations above method detection limits (MDLs), thus providing definition of the extent of the groundwater plume.

PCE was present in one on-site soil sample collected from soil boring DP-6 at a concentration exceeding the groundwater protection RCL. However, PCE was not detected in the groundwater sample from DP-6 or in any other groundwater samples collected at the site.

The over-all extent of groundwater quality standard exceedances is illustrated in plan-view on Figure 6, as well as in cross-sectional view on Figures 3 and 4.

Chloromethane was detected in the two groundwater grab samples (DP-1W and DP-2W) collected as part of the phase II ESA at the site at concentrations exceeding the PAL. However, chloromethane has not been detected in groundwater at any of the other groundwater sampling points. Chloromethane is the only non-petroleum related VOC detected in groundwater at the site. Chloromethane can form where chlorine, such as that from municipal water, coincides with decaying organic material.

Two rounds of groundwater sampling at all of the site wells except MW-9 (one round) exhibited concentrations that are stable to decreasing. In addition, nine rounds of groundwater monitoring at MW-8 from 2008 to 2019 exhibit concentrations decreasing from exceeding ESs, to exceeding only PALs. Therefore, the overall groundwater plume is stable to decreasing in extent and concentration.

Based on the low levels of lighter end VOCs, such as benzene and the prevalence of heavier end VOCs, such as naphthalene and the trimethylbenzenes, the petroleum groundwater contamination appears to be highly weathered. Groundwater contamination exceeding ESs has been defined.

Groundwater at the site is present within the sand/silt layer. Apparent saturated conditions were observed in the direct-push soil borings at depths ranging from approximately 9 to 12 feet bls. Water depths in the monitoring wells range from approximately 9.8 to 12.3 feet bls.

Groundwater flow in the vicinity of the Suggar Property is toward the east-northeast and appears to be influenced by deep utility trenches beneath 60<sup>th</sup> Street that are likely acting as preferred conduits for groundwater migration. However, with numerous sites of petroleum contamination in the area, including upgradient from the site, differentiating the sources of such contamination would be exceedingly difficult, expensive and unproductive. The groundwater

flow direction at the site is illustrated on Figure 7. The groundwater elevation data is summarized on Table 7.

### 3.5 Vapor Intrusion Characterization

MEC conducted a vapor intrusion screening for the on-site building in accordance with the January 2018 WDNR guidance document RR800. The assessment determined that the TSSA sampling results for the used oil tank removed from the site in December 2010 revealed a soil benzene concentration in soil sample SS-1 exceeding 700 ug/kg adjacent to the building foundation. This indicated that there was less than five feet of clean, unsaturated soil between the residual petroleum contamination and the building, which precluded elimination of the potential for vapor intrusion, thus triggering the need for a vapor intrusion investigation.

Subsequent to collection of the first sub-slab vapor sample in June 2018, MEC became aware that there is a sub-grade basement area in the southwest corner of the structure below both the shop area and the apartment, leading to the collection of a second sub-slab sample from the basement in June 2019. Samples VP-1 and SPV-1, were analyzed for VOCs using method TO-15.

The VOC concentrations were compared with the WDNR Quick Lookup Table for indoor air vapor action levels and vapor risk screening levels. All of the VOC concentrations exhibited by sample VP-1 were below the small commercial vapor risk screening levels (VRSLs) for those compounds included on the Quick Lookup Table.

One compound (naphthalene) in sample VP-1 exhibited a concentration of 28.6 micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ), slightly above the VRSL of 28  $\text{ug}/\text{m}^3$ . The naphthalene concentration was well below the small commercial VRSL of 120  $\text{ug}/\text{m}^3$ . All other detected parameters were at concentrations well below VRSLs.

Although small commercial VRSLs, which were not exceeded, apply to the service garage, the residential VRSLs apply to the apartment in the building. Therefore, the naphthalene concentration constituted an exceedance of the residential VRSL with respect to the residential apartment. The apartment is located on the second floor at the rear (south end) of the building, away from the source areas. The south end of the shop area is located beneath the apartment and the possibility of vapor intrusion of the apartment was initially screened out based on this

intervening space. However, MEC became aware that there is a sub-grade basement area in the southwest corner of the structure below both the shop area and the apartment.

In light of the naphthalene residential VRSL exceedance below the building and the presence of the subgrade basement with the furnace and utilities as well as the interior access from the basement to the second-floor apartment, MEC determined that sub-slab vapor sampling of the basement was warranted, which was conducted by the collection of sample SPV-1.

The VOC concentrations were compared with the WDNR Quick Lookup Table for indoor air vapor action levels and vapor risk screening levels. All of the VOC concentrations exhibited by sample SPV-1 were below both the residential and small commercial vapor risk screening levels for those compounds included on the Quick Lookup Table. The locations of the vapor sampling probes are illustrated on the attached Figure 2. The vapor sample analytical results are summarized on Table 8.

MEC conducted a survey of the basements of buildings located on the south side of 60<sup>th</sup> Street within the 3200 block of 60<sup>th</sup> Street in Kenosha, Wisconsin. The basement survey was conducted to evaluate the depths of the basements and type of construction, along with the presence of odors, floor and wall cracks, penetrations such as sumps and drains, and for the occurrence of dampness or water seeps to assist in screening for the potential of contaminated vapor or groundwater intrusion into the structures. The nature of the mechanical systems present in the basements and serving the buildings was also assessed.

A PID and four-gas meter was used to screen the atmospheres within the basements as well as any sumps, drains or other foundation penetrations for volatile organic vapors and percent of the lower explosive limits. The layout of the basements is illustrated on Figure 2.

The building basements extend to approximately eight feet bls and generally are used for storage. No elevated meter readings and no odors were observed. No sumps were present and no cracks or water seeps were noted. According to the occupants the basements remains dry.

With depth to groundwater ranging between about 10 and 11 feet bls, the water table does not intersect the foundations, with approximately two to three feet of separation between the floor and the water table. No evidence groundwater or vapor intrusion was noted in any of the basements.



Midwest Environmental Consulting (MEC) completed vapor intrusion screening for buildings in the 3200 block of 60<sup>th</sup> Street, downgradient of the above-referenced site. Existing soil and groundwater data were reviewed to assess the potential for PVOC vapor intrusion of the buildings. No Chlorinated volatile organic compounds (CVOCs) have been detected in groundwater adjacent to the buildings and therefore, CVOCs were eliminated for consideration for potential vapor intrusion downgradient from the site.

The screening was conducted in accordance with the January 2018 WDNR guidance document RR-800. The purpose of the screening was to determine if a vapor intrusion investigation of these buildings, to include sampling and analysis, was necessary. The situations where a vapor investigation is recommended according to the guidance document were evaluated and none were found to be present.

Based on both the offsite basement vapor intrusion assessment and the offsite vapor intrusion screening discussed above, performance of a vapor intrusion investigation was determined to be unwarranted per WDNR guidance.

### **3.6 Contaminant Characterization Summary**

MEC believes the potential for future groundwater contaminant plume expansion is minimal and current site conditions are protective of public health, welfare and the environment. These conclusions are based on the following determinations.

The age and nature of the releases results in reduced potential for mobility and toxicity. The three 500-gallon gasoline USTs were closed in place in 1980. The 275-gallon used oil UST which had not been in use for a significant amount of time was removed in 2010. Upon removal, the tank was found to contain sludge with no liquids. As a consequence, the gasoline contamination is highly weathered, with lighter-end VOCs absent or substantially reduced in concentration and therefore, reduced in both mobility and toxicity. The used oil contamination is by nature lower in both lighter end VOCs and mobility. These conditions are true for both soil and groundwater contamination at the site.

The extent of soil contamination in the unsaturated zone exceeding groundwater protection RCLs that may continue to leach to groundwater is limited to an area approximately 35 feet by 30 feet and 10 feet vertically with an estimated contaminated soil volume of approximately 300 cubic yards (450 tons). The average total VOC soil concentration is 92,217 ug/kg (0.00009



kg/kg or 0.00009 lb/lb) for the soil samples exhibiting RCL exceedances (locations SS-1, DP-2, DP-4, DP-5). Consequently, the total VOC soil contaminant mass exceeding RCLs is approximately 80 pounds, not all of which would be sufficiently mobile to leach to groundwater.

The site and surrounding area are completely covered by buildings and concrete pavement, thus precluding exposure to the naphthalene soil contamination exceeding the direct contact RCL and limiting surface water infiltration that may cause further leaching to groundwater of contaminants in unsaturated soil exceeding groundwater protection RCLs.

Vapor intrusion assessment, screening and sampling have demonstrated that vapor intrusion is not occurring in the source property building and has been screened out for the downgradient buildings above the dissolved contaminant plume.

In light of the above, current site conditions are deemed to be protective of public health, welfare and the environment. With proper maintenance, site conditions will continue to be protective in the future.

#### **4.0 REMEDIAL OPTIONS EVALUATION**

MEC evaluated a range of remedial options potentially applicable to the site to determine the most feasible and cost-effective means of addressing the contamination. MEC evaluated the presence of environmental factors per the requirements Wisconsin Administrative Code Chapter NR 747 as follows:

- Documented expansion of plume margin;
- The presence of a contaminant concentration in a public or private well exceeding a PAL;
- Contamination within bedrock or within 1 meter of bedrock;
- Petroleum product that is not in the dissolved phase with a thickness of 0.01 feet or more, verified by more than one sampling event; and
- Documented contamination discharges to a surface water or wetland.

No environmental factors are present at the site. As a consequence, only non-active treatment approaches were considered, as required by NR 747. The options evaluated are discussed below.



#### 4.1 Remedial Design Criteria

Remedial options were evaluated for both technical and economic feasibility. Technical feasibility involves the following criteria:

- Long-term effectiveness, including the degree to which the toxicity, mobility and volume of contamination will be reduced, as well as the degree to which public health, safety, welfare and the environment will be protected over time;
- Short-term effectiveness, including adverse impacts to public health, safety, welfare or the environment that may be posed during the construction and/or implementation period;
- Implementability, such as site constraints, availability of services and materials, disposal or recycling options, permitting requirements, monitoring requirements and redevelopment potential; and
- Restoration time frame and magnitude, mobility and toxicity of the contamination, as well as geological conditions, the proximity to and sensitivity of receptors, the biodegradation potential and continuing obligations.

Economic feasibility involves the following criteria:

- Capital costs, including both direct and indirect costs;
- Initial costs, including design and testing costs;
- Annual operation and maintenance costs; and
- Costs associated with potential future liability.

In addition to technical and economic feasibility, the remedial options were also evaluated with respect to the implementation of engineering controls, such as site cover systems and continuing obligations, such as inspection and maintenance requirements.

#### 4.2 Contaminant Mass Removal/Reduction

This option would involve the excavation and disposal of contaminated soil exceeding RCLs to remove the potential for direct contact exposure and limit the potential for additional leaching of contaminants to groundwater.

Site constraints significantly limit the technical feasibility of this option. The three gasoline USTs were closed in place by filling them with concrete due to their close proximity to the north side of

the on-site building. These concrete-filled tanks present an impediment and disposal and reduce the volume of contaminated soil that would be removed.

In addition, the used oil UST was located between the east side of the on-site building and the public right-of-way sidewalk, approximately 6 feet to the east of the building. A significant portion of the soil contamination exceeding RCLs is located beneath the on-site building and the adjacent 33<sup>rd</sup> Avenue ROW. As a consequence, the amount of contaminated soil that can be removed without damaging the building or removing and replacing pavement in the public ROW is severely constrained.

Conducting excavation and restoration activities within the public ROW would entail significant time, permitting and cost constraints with respect to obtaining permission from the City of Kenosha.

In light of the above, while technically and economically feasible, this option provides limited improvement of site conditions for the cost, disruption and time required.

#### **4.3 Engineering Controls**

This option would entail the maintenance of the concrete site cap that currently exists above the area of soil contamination exceeding RCLs. The concrete cap would prevent exposure to the naphthalene soil contamination exceeding the direct contact exposure RCL. In addition, the cap would limit surface water infiltration that could lead to leaching of contaminants to groundwater from unsaturated soil exceeding groundwater protection RCLs.

The application of this option is expected to bring the site into full compliance with applicable regulatory requirements, and is therefore, technically feasible. Because contamination would remain at the site, institutional controls would also need to be applied to the site and affected off-site properties.

This option is deemed to be both technically and economically feasible.

#### 4.4 Institutional Controls

This option would apply institutional controls, such as listing of the site on the WDNR Geographic Information System (GIS) of sites with residual soil and groundwater contamination and applying use restrictions and continuing obligations on the source property.

The City of Kenosha would need to be notified of the presence of soil and groundwater contamination within the 33<sup>rd</sup> Avenue R.O.W. and continuing obligations that apply. This application of notifications and continuing obligations for off-site also applies to three properties in the 3200 block of 60<sup>th</sup> Street where contamination over groundwater quality standards is present.

This option is deemed to be both technically and economically feasible.

#### 4.5 Natural Attenuation

This option would use natural attenuation, such as biodegradation, to restore soil and groundwater to compliance with regulatory standards. Based on the age and highly weathered nature of the contamination, it is believed that natural attenuation has been occurring for some time. It is believed that the groundwater plume is stable to receding and therefore, the contaminant loading from unsaturated soil is in equilibrium with the groundwater plume and is not causing plume expansion.

This option is deemed to be both technically and economically feasible.

#### 4.6 Proposed Remedial Options

MEC proposes to address contamination at the site through a combination of natural attenuation, engineering controls and institutional controls as the most technically and economically feasible option.

It is MEC's opinion that the nine rounds of sampling at monitoring well MW-8, as well as the two rounds of sampling at Suggar Property wells MW-1 through MW-7 and one round at MW-9

demonstrate that the highly weathered groundwater plume is stable to receding. As a consequence, it is believed that further groundwater monitoring is unwarranted.

Engineering controls in the form of a Cap Maintenance Plan will be developed and implemented to ensure that the concrete pavement that is present above the area of soil contamination that exceeds RCLs remains intact. The concrete cap would prevent exposure to the naphthalene soil contamination exceeding the direct contact exposure RCL. In addition, the cap would limit surface water infiltration that could lead to leaching of contaminants to groundwater from unsaturated soil exceeding groundwater protection RCLs.

Institutional controls would be applied, such as listing of the site on the WDNR GIS registry of sites with residual soil and groundwater contamination and applying use restrictions and continuing obligations on the source property.

The City of Kenosha would need to be notified of the presence of soil and groundwater contamination within the 33<sup>rd</sup> Avenue R.O.W. and continuing obligations that apply. This application of notifications and continuing obligations also applies to three properties in the 3200 block of 60<sup>th</sup> Street where contamination over groundwater quality standards is present.

This option has the advantage of minimizing solid waste generation, energy usage and air emissions, including particulate matter and greenhouse gases and is therefore a sustainable remedial option.

#### **4.7 Estimated Remedial Options Cost**

The estimated costs through closure include preparation of the Closure Request Packet, with development of a Cap Maintenance Plan and notifications of continuing obligations for the source property, the 33<sup>rd</sup> Avenue Row and three affected downgradient properties in the 3200 block of 60<sup>th</sup> Street. The costs are also included for the proper abandonment of the nine groundwater monitoring wells associated with the site, which now includes MW-8 for which responsibility was accepted by Jose Ochoa Martinez, the responsible party for the Suggar Property site.

The total estimated costs of \$5,871.23 are provided on the Usual & customary spreadsheet included in Appendix A.

## 5.0 CERTIFICATION

This Remedial Action Options Report has been prepared in accordance with generally accepted engineering and hydrogeologic principles and practices of this time and location. The evaluations and recommendations presented in this report were developed from a consideration of the project characteristics and an interpretation of available geologic, hydrogeologic, boring and analytical data generated by Midwest Environmental Consulting, LLC and by others. Midwest's description of the subsurface conditions is based on interpretation of the soil boring and monitoring well data using normally accepted geologic/hydrogeologic practices and reasonable professional judgment. Although boring and monitoring well data are considered to be representative of the subsurface conditions at the precise locations on the dates shown, they are not necessarily indicative of the subsurface conditions at other locations and/or at other periods of time.

Hydrogeologic representations and chemical distribution contours are approximate. They were generalized from and interpolated between the sampling locations. Information on actual hydrogeologic conditions and chemical concentrations exists only at the specific sampling locations, and it is possible that conditions between sampling locations may vary from those indicated. Variations in soil and groundwater conditions typically exist at most sites between sampling locations and at different times, the extent of which may not become evident without further exploration or excavation. If variations are noted in the future, MEC should be informed. It may be necessary to conduct additional exploration activities to determine the characteristics of these variations and provide an opportunity to make a re-evaluation of the conclusions in this report.

Midwest's professional services have been performed, findings obtained, and recommendations prepared in accordance with generally accepted engineering and hydrogeologic principles and practices. This warranty is in lieu of all other warranties either implied or expressed. Midwest Environmental Consulting assumes no responsibility for data or interpretations made by others. Midwest assumes responsibility for the accuracy of the reports contents subject to what is stated elsewhere in this section but recommends that the report be used only for the purpose intended by the client and MEC when the report was prepared. The report may be unsuitable for other uses, and reliance on its contents by anyone other than the client is done at the sole risk of the user. Midwest accepts no responsibility for application or interpretation of the results by anyone other than the client.



Remedial Action Options Report  
Sugarc Property



The conclusions presented herein have been developed from consideration of the project characteristics and interpretation of available information. Because only limited information is available, Midwest reserves the right to modify future site activities based on subsequent findings. The conclusions contained in this Site Investigation Report represent MEC's professional opinion.

This Remedial Action Options Report was prepared by Midwest Environmental Consulting, LLC

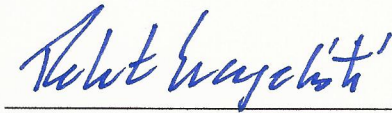
I, Sean Cranley, hereby certify that I am a hydrogeologist as that term is defined in chapter NR 712.03(1), Wis. Adm. Code, am registered in accordance with the requirements of Ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Chapters NR 700 to 726, Wis. Adm. Code.

Signature 

Title Professional Geologist

Date: 3/19/2020

I Robert Evangelisti, hereby certify that I am a registered 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.

Signature 

3/19/20

P.E. #

22105-06

Title Professional Engineer

P.E. Stamp

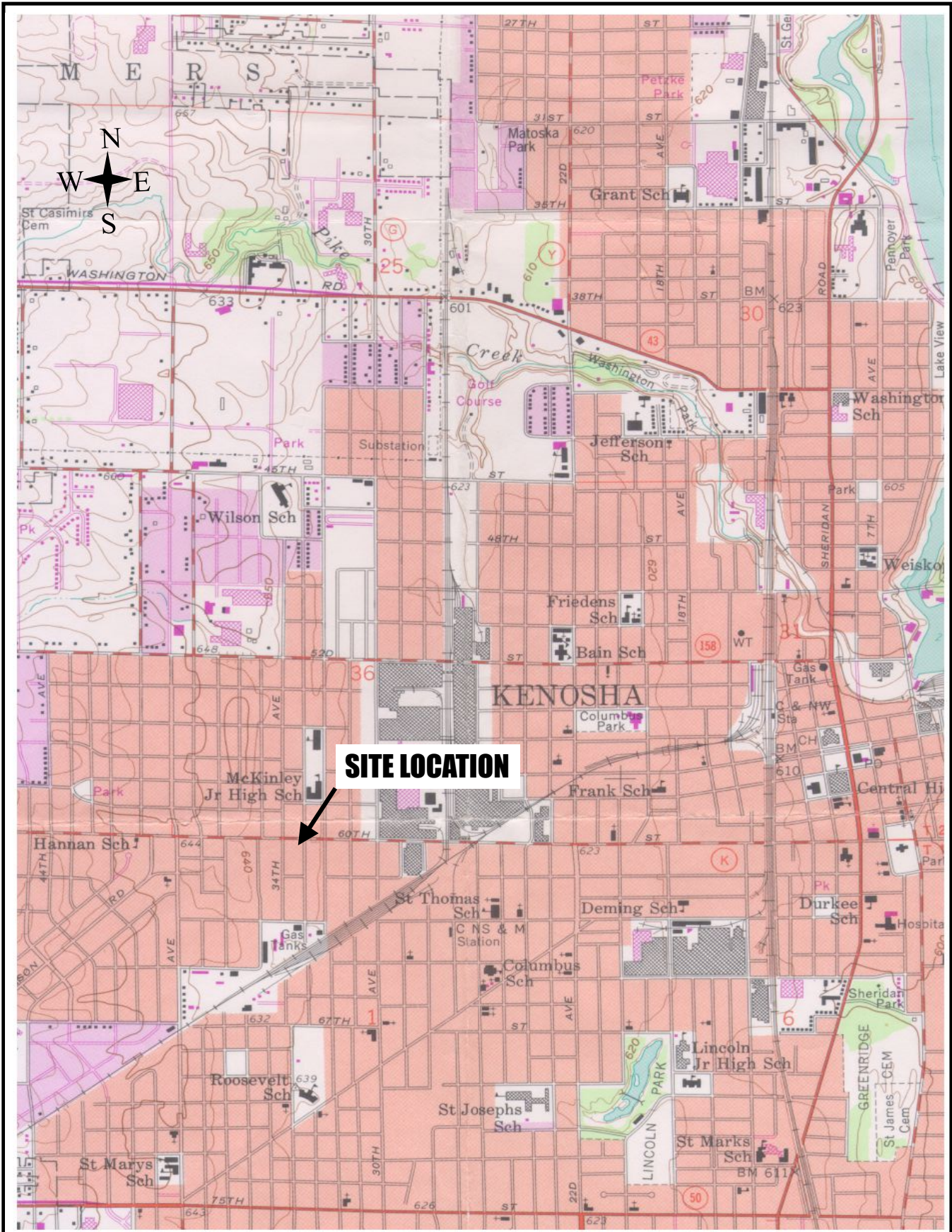


# Remedial Action Options Report Suggar Property



## FIGURES





Site Location Map	
Date Approved:	Figure
Date Drawn: 3/5/20	<b>1</b>
Scale: 3/5/20	<b>1</b> of <b>7</b>
Drawn By: Not Scaled	
S. Cranley	

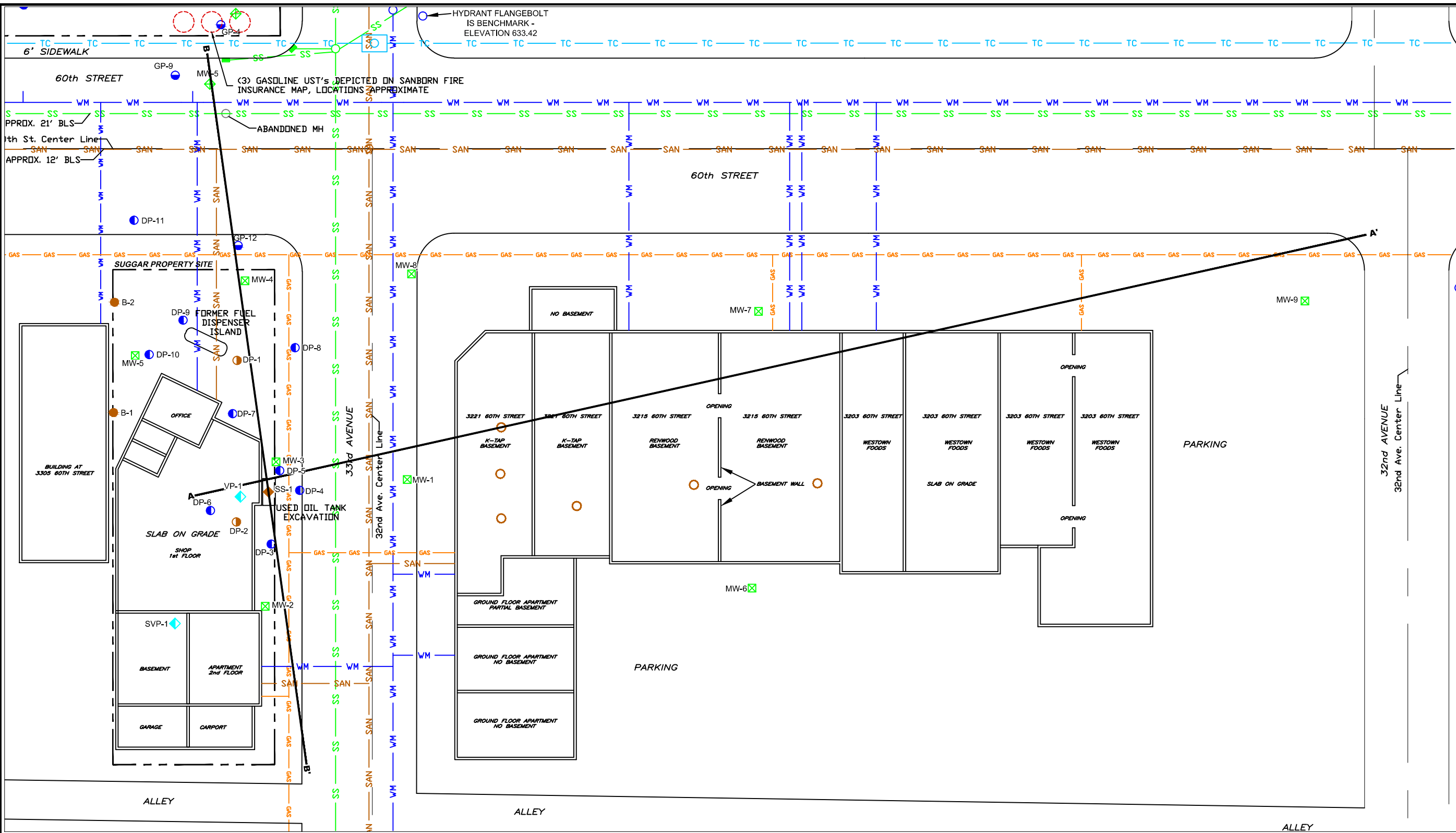
Project Title and Address

**FIGURE 1**  
**SITE LOCATION MAP**

Suggar Property  
 3301 60th Street  
 Kenosha, WI 53144








**FIGURE 2**  
**SITE SAMPLING LOCATIONS**  
**SUGGAR PROPERTY**  
 3301 60TH STREET  
 KENOSHA, WISCONSIN

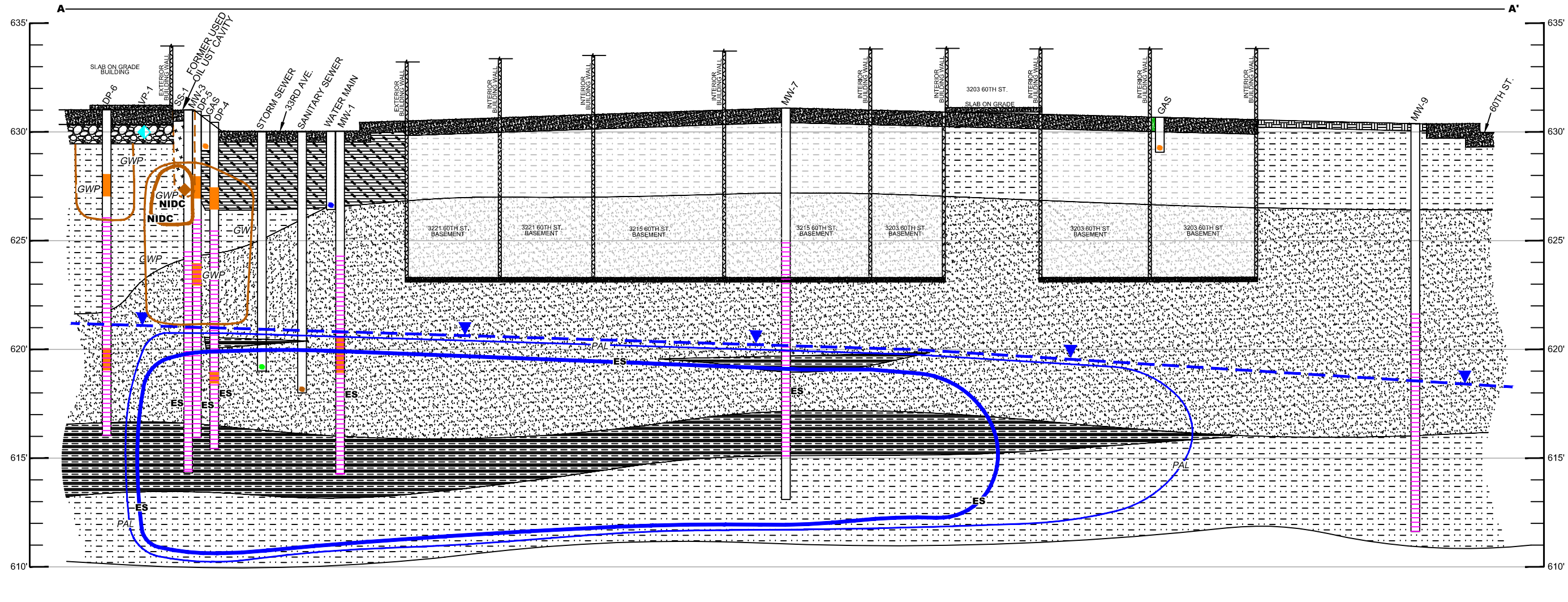
**LEGEND**

-  - SUGGAR GROUNDWATER MONITORING WELL LOCATION
-  - MUELLERS GROUNDWATER MONITORING WELL LOCATION
-  - SUGGAR DIRECT-PUSH SOIL BORING LOCATION
-  - SUGGAR DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
-  - MUELLERS DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
-  - SUGGAR SUB-SLAB VAPOR SAMPLING LOCATION
-  - TANK CLOSURE SOIL SAMPLE LOCATION
-  - 3305 60th STREET PHASE II SOIL BORING LOCATION
-  - FLOOR DRAIN
-  - GAS
-  - ELEC
-  - WM
-  - SAN
-  - SS
-  - TC
- GAS
- ELECTRICAL
- WATER
- SANITARY SEWER
- STORM SEWER
- TELECOM



Approved By: <b>S. Cranley</b>	Figure <b>2</b>
Date Approved: <b>3/18/2020</b>	<b>2 of 7</b>
Date Drawn: <b>3/18/2020</b>	
Drawn by: <b>R. Schwartz</b>	

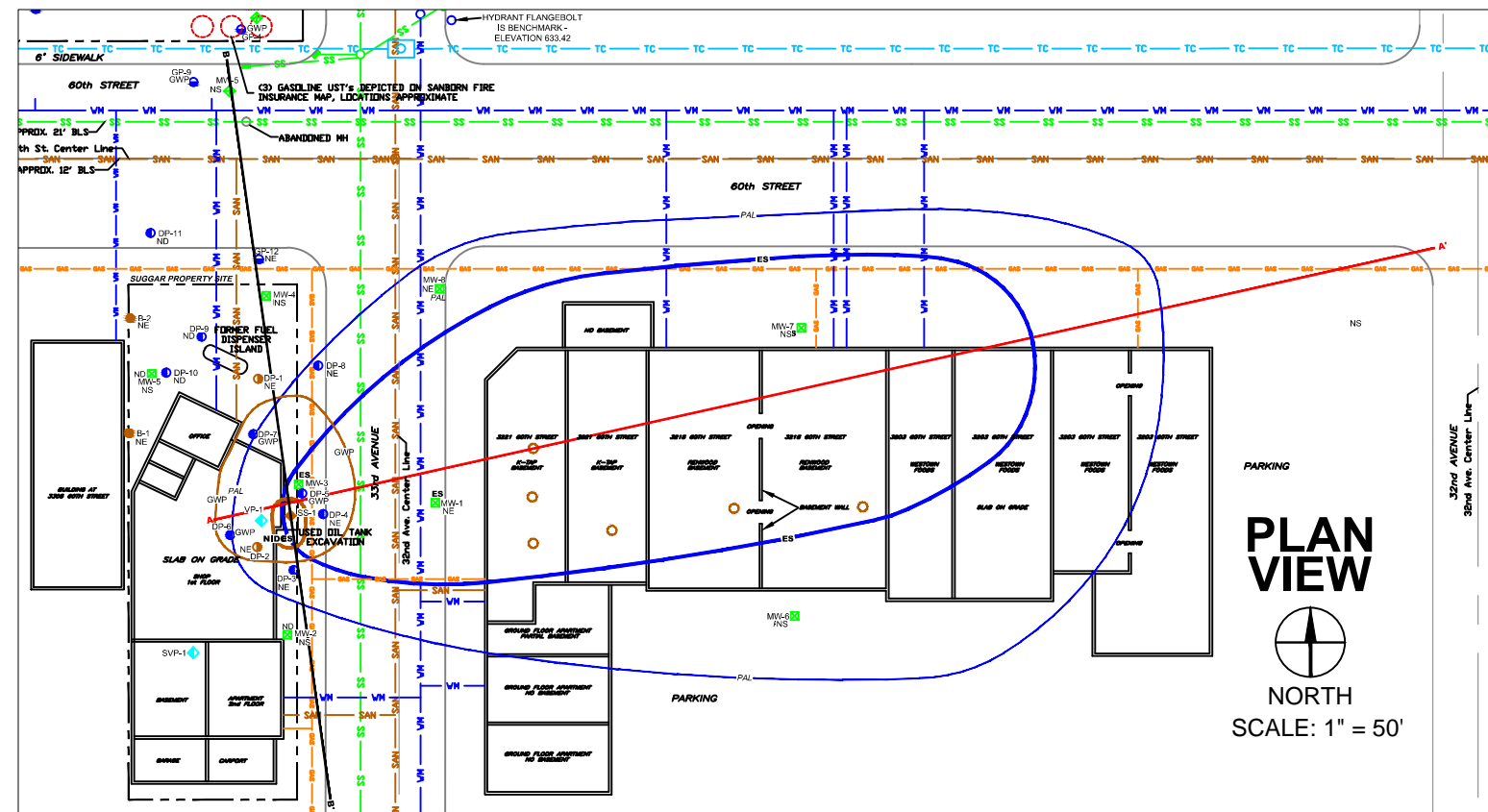
# FIGURE 3 GEOLOGICAL CROSS-SECTION A-A' SUGGAR PROPERTY 3301 60TH STREET KENOSHA, WISCONSIN



HORIZONTAL SCALE: 1" = 25'  
VERTICAL SCALE: 1" = 5'

### LEGEND

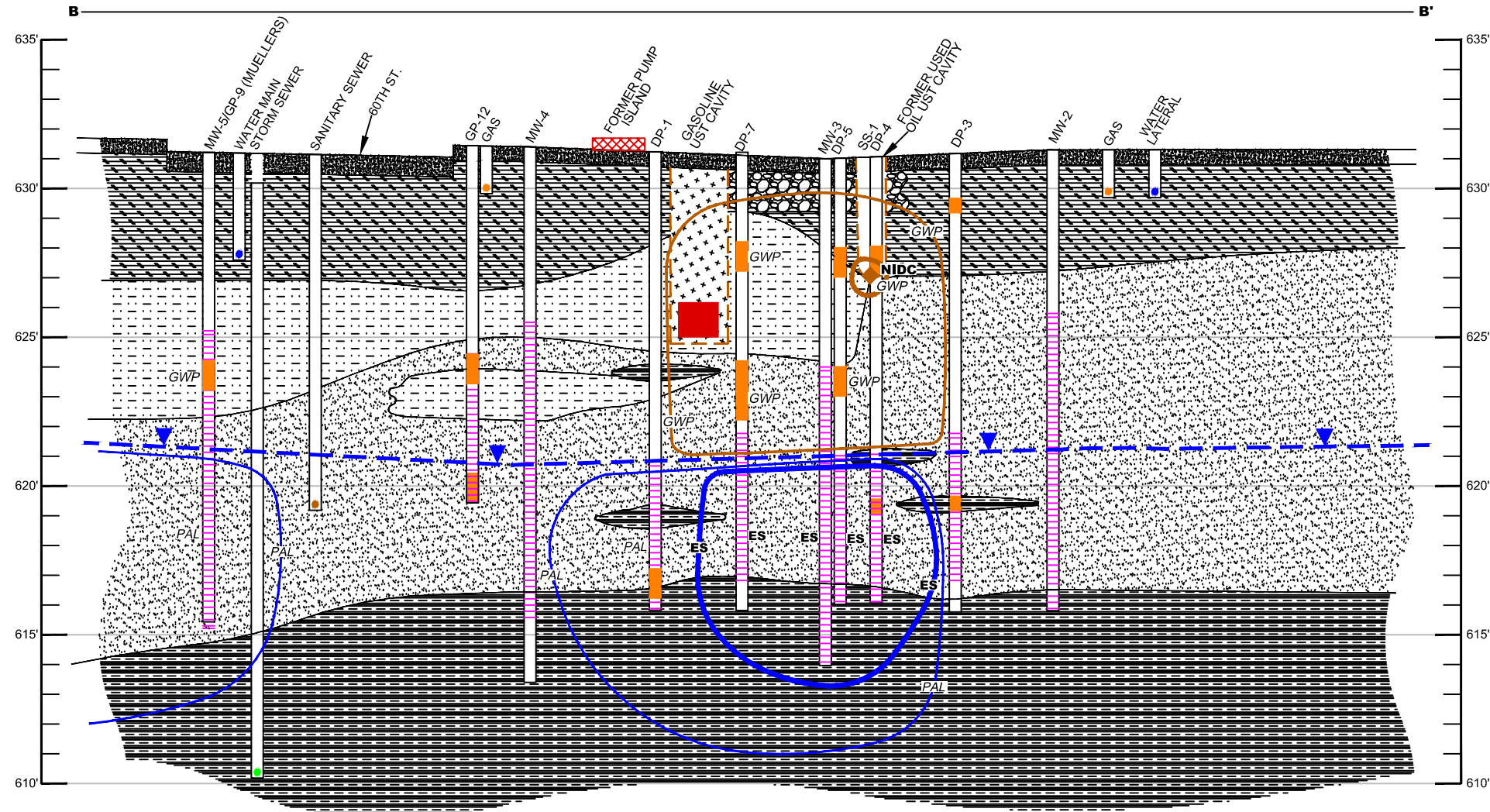
- |  |   |      |   |  |   |
|--|---|------|---|--|---|
|  | CONCRETE PAVEMENT                       |      | WELL SCREEN INTERVAL  |  | SUGGAR SUB-SLAB VAPOR SAMPLING LOCATION |
|  | ASPHALT PAVEMENT                        |      | LABORATORY SOIL SAMPLE INTERVAL   |  | TANK CLOSURE SOIL SAMPLE LOCATION       |
|  | COURSE SAND AND GRAVEL TANK CAVITY FILL |      | BURIED UTILITY TRENCH (APPROXIMATE)   |  | WATER TABLE 6/13/2019                   |
|  | AGGREGATE BASE COURSE                   | ES   | - ONE OR MORE GROUNDWATER CONTAMINANTS EXCEED ENFORCEMENT STANDARDS   |  |   |
|  | VERY FINE TO COURSE SAND                | PAL  | - ONE OR MORE GROUNDWATER CONTAMINANTS EXCEED PREVENTIVE ACTION LIMITS  |  |   |
|  | CLAY                                    | ES   | - INFERRED EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING ENFORCEMENT STANDARDS                                |  |   |
|  | SILT                                    | PAL  | - INFERRED EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING PREVENTIVE ACTION LIMITS                             |  |   |
|  | CLAY, SAND, GRAVEL FILL                 | NIDC | - ONE OR MORE CONTAMINANTS EXCEED NON-INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINATION LEVELS                 |  |   |
|  |   | GWP  | - ONE OR MORE CONTAMINANTS EXCEED GROUNDWATER PROTECTION RESIDUAL CONTAMINATION LEVELS                        |  |   |
|  |   | NIDC | - INFERRED EXTENT OF SOIL CONTAMINATION EXCEEDING NON-INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINATION LEVELS |  |   |
|  |   | GWP  | - INFERRED EXTENT OF SOIL CONTAMINATION EXCEEDING GROUNDWATER PROTECTION RESIDUAL CONTAMINATION LEVELS        |  |   |



Approved By: <b>S. Cranley</b>	Figure <b>3</b>
Date Approved: <b>3/18/2020</b>	3 of 7
Date Drawn: <b>3/18/2020</b>	
Drawn by: <b>R. Schwartz</b>	



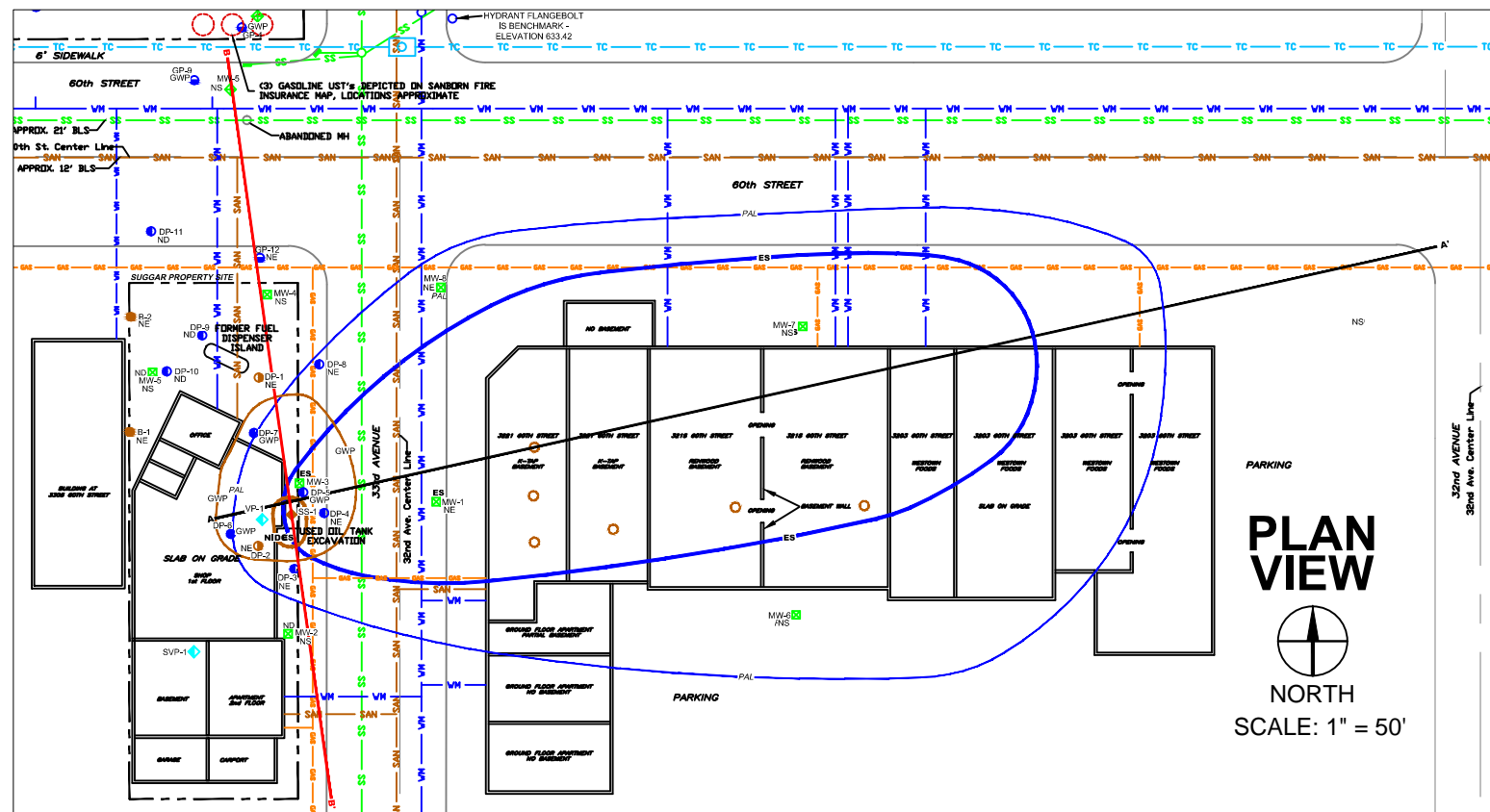
# FIGURE 4 GEOLOGICAL CROSS-SECTION B-B' SUGGAR PROPERTY 3301 60TH STREET KENOSHA, WISCONSIN



HORIZONTAL SCALE: 1" = 25'  
VERTICAL SCALE: 1" = 5'

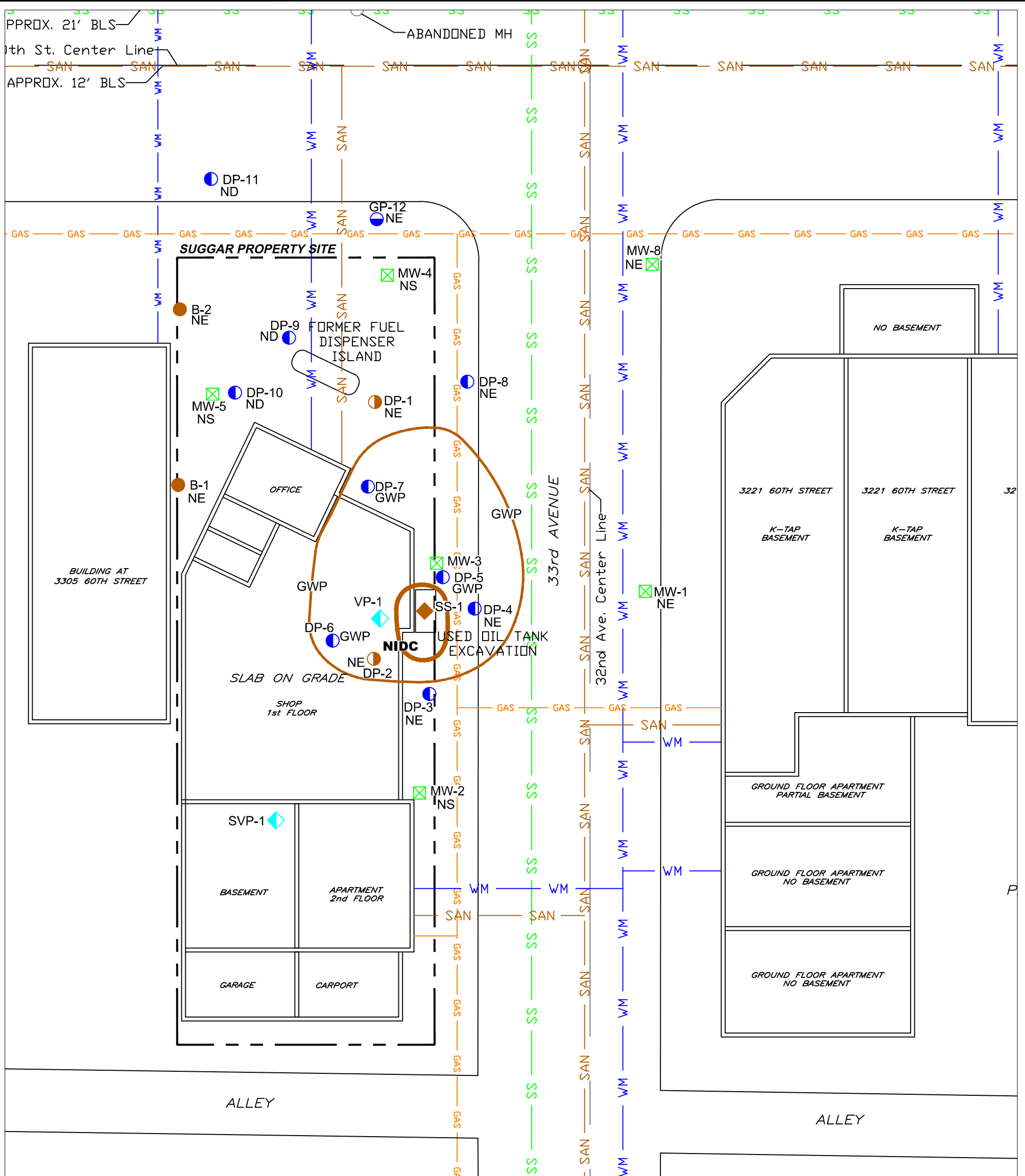
### LEGEND

- |  |   |  |  |  |   |
|--|---|--|--|--|---|
|  | CONCRETE PAVEMENT                       |  | WELL SCREEN INTERVAL   |  | SUGGAR SUB-SLAB VAPOR SAMPLING LOCATION |
|  | COURSE SAND AND GRAVEL TANK CAVITY FILL |  | LABORATORY SOIL SAMPLE INTERVAL  |  | TANK CLOSURE SOIL SAMPLE LOCATION       |
|  | AGGREGATE BASE COURSE                   |  | BURIED UTILITY TRENCH (APPROXIMATE)  |  | WATER TABLE 6/13/2019                   |
|  | VERY FINE TO COURSE SAND                |  | THREE GASOLINE USTs CLOSED IN PLACE  |  |   |
|  | CLAY                                    |  | ES - ONE OR MORE GROUNDWATER CONTAMINANTS EXCEED ENFORCEMENT STANDARDS   |  |   |
|  | SILT                                    |  | PAL - ONE OR MORE GROUNDWATER CONTAMINANTS EXCEED PREVENTIVE ACTION LIMITS   |  |   |
|  | CLAY, SAND, GRAVEL FILL                 |  | ES - INFERRED EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING ENFORCEMENT STANDARDS                                  |  |   |
|  |   |  | PAL - INFERRED EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING PREVENTIVE ACTION LIMITS                              |  |   |
|  |   |  | NIDC - ONE OR MORE CONTAMINANTS EXCEED NON-INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINATION LEVELS                 |  |   |
|  |   |  | GWP - ONE OR MORE CONTAMINANTS EXCEED GROUNDWATER PROTECTION RESIDUAL CONTAMINATION LEVELS                         |  |   |
|  |   |  | NIDC - INFERRED EXTENT OF SOIL CONTAMINATION EXCEEDING NON-INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINATION LEVELS |  |   |
|  |   |  | GWP - INFERRED EXTENT OF SOIL CONTAMINATION EXCEEDING GROUNDWATER PROTECTION RESIDUAL CONTAMINATION LEVELS         |  |   |



**PLAN VIEW**  
NORTH  
SCALE: 1" = 50'

Approved By: <b>S. Cranley</b>	Figure <b>4</b>
Date Approved: <b>3/18/2020</b>	4 of 7
Date Drawn: <b>3/18/2020</b>	
Drawn by: <b>R. Schwartz</b>	

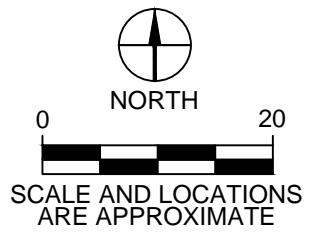


**LEGEND**

- SUGGAR GROUNDWATER MONITORING WELL LOCATION
- SUGGAR DIRECT-PUSH SOIL BORING LOCATION
- SUGGAR DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
- SUGGAR SUB-SLAB VAPOR SAMPLING LOCATION
- TANK CLOSURE SOIL SAMPLE LOCATION
- 3305 60th STREET PHASE II SOIL BORING LOCATION

- GAS - GAS
- ELEC - ELECTRICAL
- WM - WATER
- SAN - SANITARY SEWER
- SS - STORM SEWER
- TC - TELECOM

- NS - NO SAMPLE
- NE - NO EXCEEDANCE
- ND - NO DETECTS
- NIDC - ONE OR MORE CONTAMINANTS EXCEED NON-INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINATION LEVELS
- GWP - ONE OR MORE CONTAMINANTS EXCEED GROUNDWATER PROTECTION RESIDUAL CONTAMINATION LEVELS
- NIDC - INFERRED EXTENT OF SOIL CONTAMINATION EXCEEDING NON-INDUSTRIAL DIRECT CONTACT RESIDUAL CONTAMINATION LEVELS
- GWP - INFERRED EXTENT OF SOIL CONTAMINATION EXCEEDING GROUNDWATER PROTECTION RESIDUAL CONTAMINATION LEVELS





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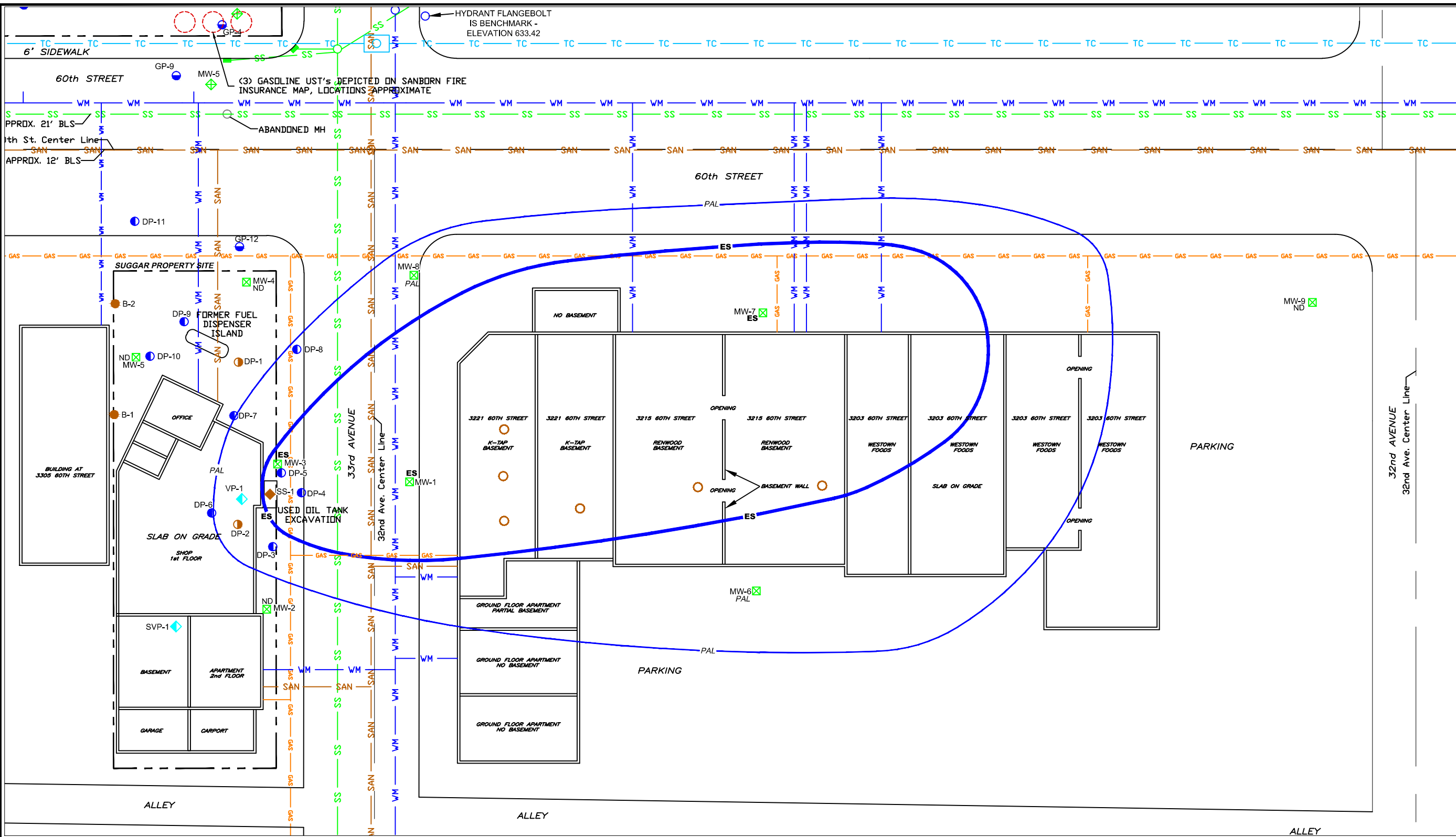
Approved By: <b>S. Cranley</b>	Figure <b>5</b>
Date Approved: 3/18/2020	<b>5 of 7</b>
Date Drawn: 3/18/2020	
Drawn by: <b>R. Schwartz</b>	

## FIGURE 5

### SOIL CONTAMINATION CLOSEUP SUGGAR PROPERTY

3300 & 3301 60TH STREET  
Kenosha, WI 53142

# FIGURE 6 GROUNDWATER CONTAMINATION SUGGAR PROPERTY 3301 60TH STREET KENOSHA, WISCONSIN



**LEGEND**

- ☒ - SUGGAR GROUNDWATER MONITORING WELL LOCATION
- ◇ - SUGGAR SUB-SLAB VAPOR SAMPLING LOCATION
- ◇ - MUELLERS GROUNDWATER MONITORING WELL LOCATION
- - SUGGAR DIRECT-PUSH SOIL BORING LOCATION
- - SUGGAR DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
- - MUELLERS DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
- ◆ - TANK CLOSURE SOIL SAMPLE LOCATION
- - 3305 60th STREET PHASE II SOIL BORING LOCATION
- - FLOOR DRAIN
- GAS - GAS
- ELEC - ELECTRICAL
- WM - WATER
- SAN - SANITARY SEWER
- SS - STORM SEWER
- TC - TELECOM
- ND - NO DETECTS
- ES - ONE OR MORE GROUNDWATER CONTAMINANTS EXCEED ENFORCEMENT STANDARDS
- PAL - ONE OR MORE GROUNDWATER CONTAMINANTS EXCEED PREVENTIVE ACTION LIMITS
- ES - INFERRED EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING ENFORCEMENT STANDARDS
- PAL - INFERRED EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING PREVENTIVE ACTION LIMITS



Approved By: <b>S. Cranley</b>	Figure <b>6</b>
Date Approved: <b>3/18/2020</b>	<b>6</b> of 7
Date Drawn: <b>3/18/2020</b>	
Drawn by: <b>R. Schwartz</b>	

**LEGEND**

- - MUELLERS DIRECT-PUSH SOIL BORING LOCATION
- - MUELLERS DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
- ◆ - MUELLERS SUB-SLAB VAPOR SAMPLING LOCATION
- ◆ - MUELLERS GROUNDWATER MONITORING WELL LOCATION
- ◆ - TANK CLOSURE SOIL SAMPLE LOCATION
- - SUGGAR DIRECT-PUSH SOIL BORING LOCATION
- - SUGGAR DIRECT-PUSH SOIL BORING / GROUNDWATER SAMPLING LOCATION
- ◆ - SUGGAR SUB-SLAB VAPOR SAMPLING LOCATION
- ◆ - SUGGAR GROUNDWATER MONITORING WELL LOCATION
- - 3305 60th STREET PHASE II SOIL BORING LOCATION

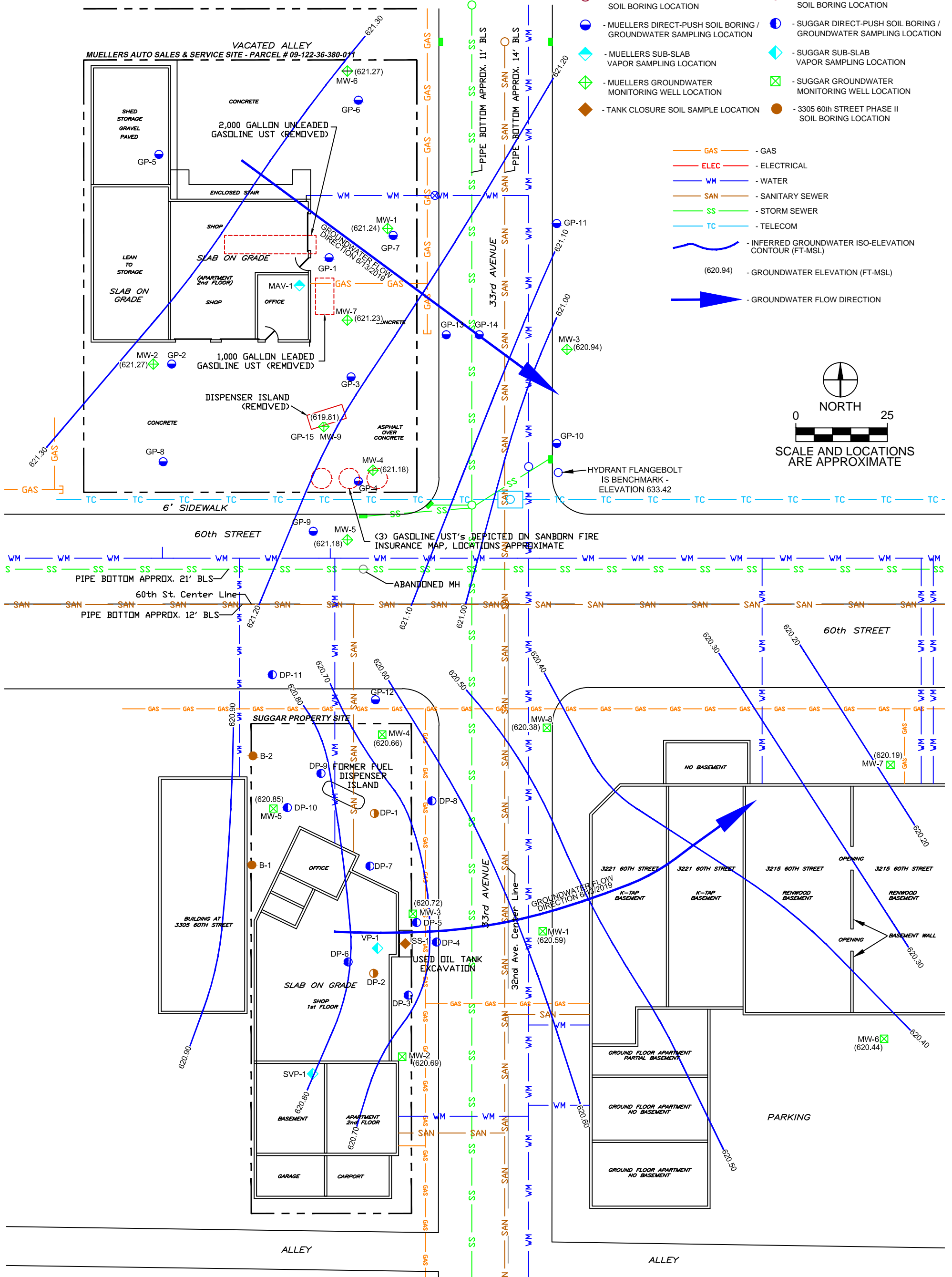
- - GAS
- - ELEC
- - WM
- - SAN
- - SS
- - TC
- - INFERRED GROUNDWATER ISO-ELEVATION CONTOUR (FT-MSL)
- (620.94) - GROUNDWATER ELEVATION (FT-MSL)
- ➔ - GROUNDWATER FLOW DIRECTION




NORTH



SCALE AND LOCATIONS ARE APPROXIMATE





262-237-4351

Approved By: S. Cranley	Figure <b>7</b>
Date Approved: 3/18/2020	
Date Drawn: 3/18/2020	7 of 7
Drawn by: R. Schwartz	

**FIGURE 7**  
**GROUNDWATER FLOW DIRECTION 6/13/2019**  
**SUGGAR PROPERTY, MUELLERS AUTO SALES & SERVICE**  
 3300 & 3301 60TH STREET  
 Kenosha, WI 53142

# Remedial Action Options Report Suggar Property



## TABLES



**Table 1 (Page 1 of 2)**  
**Historical Soil Analytical Summary**  
**Suggar Property**  
**3100 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results				Residual Contaminant Levels	
Sample ID	B-1	B-2	GP-12	GP-12		
Sample Depth (ft/bls)	9-11	11-13	7-8	11-12	Groundwater	Not to Exceed
Saturation Depth (ft/bls)	14	14	11.5	11.5	Protection	Non-Industrial
Saturated / Unsaturated	Unsaturated	Unsaturated	Unsaturated	Unsaturated		Direct Contact
Sample Date	04/13/95	04/13/95	04/25/06	04/25/06		
PID Reading (PPM)	2	3	0	100		
<b>VOCs/PVOCs (ug/kg)</b>					ug/kg	ug/kg
Benzene	NA	NA	<25.0	<25.0	5.1	1,600
Ethylbenzene	NA	NA	114	33.8	1,570	8,020
Naphthalene	NA	NA	NA	NA	658.2	5,520
Toluene	NA	NA	29.7	<25.0	1,107.2	818,000
1,2,4-Trimethylbenzene	NA	NA	145	<25.0	1,378.7 (1)	219,000
1,3,5-Trimethylbenzene	NA	NA	58.4	<25.0	1,378.7 (1)	182,000
Xylenes	NA	NA	229	49.1	3,960	260,000
n-Butylbenzene	NA	NA	NA	NA	NS	108,000
n-Propylbenzene	NA	NA	NA	NA	NS	264,000
sec-Butylbenzene	NA	NA	NA	NA	NS	145,000
Isopropylbenzene	NA	NA	NA	NA	NS	268,000
p-Isopropyltoluene	NA	NA	NA	NA	NS	162,000
<b>GRO/DRO (mg/kg)</b>						
GRO	3.5	22	43.4	109	NS	NS
DRO	NA	NA	NA	NA	NS	NS

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

**Bold type** indicates concentration within the upper 4 feet of the subsurface exceeds the non-industrial direct contact RCL and, if applicable, the background level, thus constituting a soil standard exceedance.

*Italic type* indicates a concentration exceeds the groundwater protection RCL and, if applicable the background level, thus constituting a soil standard exceedance.

**PID** - Photoionization Detector

**RCL** - Residual Contaminant Level

**VOCs** - Volatile Organic Compounds

**PVOCs** - Petroleum Volatile Organic Compounds

**GRO** = Gasoline Range Organics

**DRO** = Diesel Range Organics

**NA** = Not Analyzed

**NS** = No Standard

(1) The groundwater protection RCL applies to combined trimethylbenzenes.



**Table 1 (Page 2 of 2)**  
**Historical Soil Analytical Summary**  
**Suggar Property**  
**3100 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results					Residual Contaminant Levels	
Sample ID	MW-8	MW-8	DP-1	DP-2	SS-1		
Sample Depth (ft/bls)	8.5-10	16-17.5	14-15	13-14	4	Groundwater	Not to Exceed
Saturation Depth (ft/bls)	11	11	12.5	12.5	14.5	Protection	Non-Industrial
Saturated / Unsaturated	Unsaturated	Saturated	Saturated	Saturated	Unsaturated		Direct Contact
Sample Date	04/03/08	04/03/08	08/05/10	08/05/10	11/09/10		
PID Reading (PPM)	78	3.2	350	751	NA		
<b>VOCs/PVOCs (ug/kg)</b>						ug/kg	ug/kg
Benzene	<29	<30	<500	<1000	<u>743</u>	5.1	1,600
Ethylbenzene	<29	<30	<500	<1000	<u>3860</u>	1,570	8,020
Naphthalene	190	<61	<500	<1000	<u>7370</u>	658.2	5,520
Toluene	<29	<30	<500	<1000	<u>7860</u>	1,107.2	818,000
1,2,4-Trimethylbenzene	<29	42	<500	<1000	<u>16300</u>	1,378.7 (1)	219,000
1,3,5-Trimethylbenzene	<29	<30	<500	59600	<u>5210</u>	1,378.7 (1)	182,000
Xylenes	120	<91	<500	12300	<u>20780</u>	3,960	260,000
n-Butylbenzene	NA	NA	3700	<1620	NA	NS	108,000
n-Propylbenzene	NA	NA	2040	28000	NA	NS	264,000
sec-Butylbenzene	NA	NA	3150	7690	NA	NS	145,000
Isopropylbenzene	NA	NA	<500	4310	NA	NS	268,000
p-Isopropyltoluene	NA	NA	<500	4560	NA	NS	162,000
<b>GRO/DRO (mg/kg)</b>							
GRO	120	<6.1	NA	NA	188	NS	NS
DRO	9.0	<4.6	NA	NA	2,130	NS	NS

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

**Bold type** indicates concentration within the upper 4 feet of the subsurface exceeds the non-industrial direct contact RCL and, if applicable, the background level, thus constituting a soil standard exceedance.

*Italic type* indicates a concentration exceeds the groundwater protection RCL and, if applicable the background level, thus constituting a soil standard exceedance.

**PID** - Photoionization Detector

**RCL** - Residual Contaminant Level

**VOCs** - Volatile Organic Compounds

**PVOCs** - Petroleum Volatile Organic Compounds

**GRO** = Gasoline Range Organics

**DRO** = Diesel Range Organics

**NA** = Not Analyzed

**NS** = No Standard

(1) The groundwater protection RCL applies to combined trimethylbenzenes.

**Table 2 (Page 1 of 1)**  
**Historical Groundwater Sample Analytical Results Summary**  
**Suggar Property**  
**3100 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results				Groundwater Quality Standards	
Sample ID Sample Date	GP-12W 4/25/06	DP-1W 8/5/10	DP-2W 8/5/10	MW-8 7/14/10	PAL	ES
VOCs (ug/l)					ug/l	ug/l
n-Butylbenzene	NA	3.5	1.4	42.4	NS	NS
sec-Butylbenzene	NA	7.1	1.0	17.2	NS	NS
tert-Butylbenzene	NA	<0.97	<0.97	<9.7	NS	NS
Chloromethane	NA	<u>0.37</u>	<u>0.54</u>	<2.4	0.3	3
Ethylbenzene	<5.00	<0.54	<0.54	<b>774</b>	140	700
Isopropylbenzene (Cumene)	NA	4.5	1.1	149	NS	NS
p-Isopropyltoluene	NA	<0.67	<0.67	8.8	NS	NS
n-Propylbenzene	NA	4.9	4.7	480	NS	NS
1,2,4-Trimethylbenzene	<5.00	1.7	15.4	<b>1,140</b>	96 (1)	480 (1)
1,3,5-Trimethylbenzene	<5.00	<0.83	1.4	<8.3	96 (1)	480 (1)
Xylenes	<5.00	<1.63	<1.63	<u>473.5</u>	400	2000

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

*Italic type* indicates concentration exceeds PAL.

**Bold type** indicates concentration exceeds ES.

**VOCs** - Volatile Organic Compounds

**PAL** - NR 140 Preventive Action Limit

**ES** - NR 140 Enforcement Standard

**NA** - Not analyzed or not applicable

(1) - The groundwater quality stanadards are applied to the combined concentrations of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

**Table 3 (Page 1 of 3)**  
**Soil Analytical Summary**  
**Suggar Property**  
**3100 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results						Residual Contaminant Levels		
Sample ID	DP-3	DP-3	DP-4	DP-4	DP-5	DP-5	Groundwater Protection	Not to Exceed Non-Industrial Direct Contact	Not to Exceed Industrial Direct Contact Protection
Sample Depth (ft/bls)	1.5-2	11.5-12	3-4	11.5-12	3-4	7-8			
Saturation Depth (ft/bls)	12	12	12	12	14.5	14.5			
Saturated / Unsaturated	Unsaturated	Saturated	Unsaturated	Saturated	Unsaturated	Unsaturated			
Sample Date	12/12/16	12/12/16	12/12/16	12/12/16	01/10/17	01/10/17			
PID Reading (PPM)	0	0	0	40	0	50			
<b>VOCs/PVOCs (ug/kg)</b>							ug/kg	ug/kg	ug/kg
1,2,4-Trimethylbenzene	105	<25.0	<25.0	14900	<25.0	<b>21500</b>	1,378.7 (1)	219,000	219,000
1,3,5-Trimethylbenzene	50.1	<25.0	<25.0	<125.0	<25.0	<b>6060</b>	1,378.7 (1)	182,000	182,000
Ethylbenzene	<25.0	<25.0	<25.0	521	<25.0	290	1,570	8,020	35,400
Isopropylbenzene (Cumene)	<25.0	<25.0	<25.0	1,940	<25.0	514	NS	268,000	268,000
Naphthalene	<40.0	<40.0	<40.0	<200.0	<40.0	<b>8520</b>	658.2	5,520	24,100
Tetrachloroethene	<25.0	<25.0	<25.0	<125.0	<25.0	<100	4.5	33,000	145,000
Toluene	<25.0	<25.0	<25.0	<125.0	<25.0	<100	1,107.2	818,000	818,000
Xylenes	<b>260.3</b>	<75.0	<75.0	513	<75.0	<b>17820</b>	3,960	260,000	260,000
n-Butylbenzene	<25.0	<25.0	<25.0	7040	<25.0	<100	NS	108,000	108,000
n-Propylbenzene	<25.0	<25.0	<25.0	11600	<25.0	2270	NS	264,000	264,000
p-Isopropyltoluene	<25.0	<25.0	<25.0	1340	<25.0	230	NS	162,000	162,000
sec-Butylbenzene	<25.0	<25.0	<25.0	2210	<25.0	402	NS	145,000	145,000
tert-Butylbenzene	<25.0	<25.0	<25.0	<125.0	<25.0	<100	NS	183,000	183,000
<b>PAHs (ug/kg)</b>							ug/kg	ug/kg	ug/kg
Acenaphthene	<4.8	<4.4	<4.5	<36.2	<4.8	18.1	NS	3,590,000	45,200,000
Acenaphthylene	<4.1	<3.7	<3.8	<30.7	<4.0	<14.7	NS	NS	NS
Anthracene	<7.1	<6.5	<6.6	<53.2	<7.0	<25.5	196,949.2	17,900,000	100,000,000
Benzo(a)anthracene	<4.0	<3.6	<3.7	<29.6	<3.9	34.6	NS	1,140	20,800
Benzo(a)pyrene	<3.1	<2.9	<2.9	<23.4	<3.1	<11.2	470	115	211
Benzo(b)fluoranthene	<b>5.3</b>	<3.2	<3.3	<26.3	<3.5	13.1	478.1	1,150	21,100
Benzo(g,h,i)perylene	<2.5	<2.3	<2.4	<18.9	<2.5	11.5	NS	NS	NS
Chrysene	<4.2	<3.8	<3.9	<31.4	<4.1	22.4	144.2	115,000	211,000
Dibenz(a,h)anthracene	<2.8	<2.5	<2.6	<20.8	<2.7	<10	NS	115	2,110
Fluoranthene	<6.5	<5.9	<6.1	<48.6	<6.4	<23.3	88,877.8	2,390,000	30,100,000
Fluorene	<5.2	<4.7	<4.8	<38.6	<5.1	22.4	14,829.9	2,390,000	30,100,000
Indeno(1,2,3-cd)pyrene	<2.7	<2.5	<2.6	<20.5	<2.7	<9.8	NS	1,150	21,100
1-Methylnaphthalene	<5.0	<4.6	<4.7	3020	<4.9	675	NS	17,600	72,700
2-Methylnaphthalene	<6.2	<5.7	<5.8	<46.6	<6.1	1310	NS	229,000	2,200,000
Naphthalene	<10.5	<9.6	<9.8	462	<10.3	<b>1100</b>	658.2	5,520	24,100
Phenanthrene	<14.5	<13.2	<13.5	<109	<14.3	58.0	NS	NS	NS
Pyrene	<5.6	<5.1	<5.2	<42.1	<5.5	41.1	54,545.5	1,790,000	22,600,000
<b>RCRA Metals (mg/kg)</b>							mg/kg	mg/kg	mg/kg
Cadmium	<0.15	<0.15	<0.14	<0.28	<0.15	<0.15	0.752	71.1	985
Lead	28.3	7.5	8.3	3.8	13.8	21.9	27	400	800

**Notes:**

Table includes detected analytes only.

**Bold type** indicates concentration within the upper 4 feet of the subsurface exceeds the non-industrial direct contact RCL and, if applicable, the background level, thus constituting a soil standard exceedance.

**Italic type** indicates a concentration exceeds the groundwater protection RCL and, if applicable the background level, thus constituting a soil standard exceedance.

**PID** - Photoionization Detector

**RCL** - Residual Contaminant Level

**VOCs** - Volatile Organic Compounds

**PAHs** - Polynuclear Aromatic Hydrocarbons

**RCRA** - Resource Conservation & Recovery Act

**NS** - No Standard

**NA** - Not Applicable/Not Analyzed

(1) The groundwater protection RCL applies to combined trimethylbenzenes.

The background Threshold Values for cadmium and lead are 1 mg/kg and 58 mg/kg, respectively.

**Table 3 (Page 2 of 3)  
Soil Analytical Summary  
Suggar Property  
3100 60th Street  
Kenosha, WI**

Parameters	Sample Information / Results							Residual Contaminant Levels		
Sample ID	DP-6	DP-6	DP-7	DP-7	DP-7	DP-8	DP-8	Groundwater Protection	Not to Exceed Non-Industrial Direct Contact	Not to Exceed Industrial Direct Contact Protection
Sample Depth (ft/bls)	3-4	11-12	3-4	7-8	8-9	1.5-2	11.5-12			
Saturation Depth (ft/bls)	14.5	14.5	12	12	12	14.5	4.5			
Saturated / Unsaturated	Unsaturated	Saturated	Unsaturated	Unsaturated	Unsaturated	Unsaturated	Unsaturated			
Sample Date	01/10/17	01/10/17	12/12/16 & 01/10/17*	01/10/17*	12/12/16*	01/10/17	01/10/17			
<b>PID Reading (PPM)</b>	0	0	0	65	65	0	35			
<b>VOCs (ug/kg)</b>								ug/kg	ug/kg	ug/kg
1,2,4-Trimethylbenzene	<25.0	49.0	52.0	<u>62600</u>	NA	<25.0	399	1,378.7 (1)	219,000	219,000
1,3,5-Trimethylbenzene	<25.0	47.7	<25.0	<u>17500</u>	NA	<25.0	44.2	1,378.7 (1)	182,000	182,000
Ethylbenzene	<25.0	<25.0	<25.0	<u>11800</u>	NA	<25.0	<25.0	1,570	8,020	35,400
Isopropylbenzene (Cumene)	<25.0	<25.0	<25.0	3260	NA	<25.0	443	NS	268,000	268,000
Naphthalene	<40.0	<40.0	<40.0	<u>17200</u>	NA	<40.0	<40.0	658.2	5,520	24,100
Tetrachloroethene	<u>50.5</u>	<25.0	<25.0	<312	NA	<25.0	<25.0	4.5	33,000	145,000
Toluene	<25.0	<25.0	<25.0	<u>1140</u>	NA	<25.0	<25.0	1,107.2	818,000	818,000
Xylenes	<75.0	<75.0	64.5	<u>45400</u>	NA	<75.0	<75.0	3,960	260,000	260,000
n-Butylbenzene	<25.0	56.6	<25.0	10100	NA	<25.0	438	NS	108,000	108,000
n-Propylbenzene	<25.0	<25.0	<25.0	12300	NA	<25.0	403	NS	264,000	264,000
p-Isopropyltoluene	<25.0	<25.0	<25.0	1480	NA	<25.0	<25.0	NS	162,000	162,000
sec-Butylbenzene	<25.0	<25.0	<25.0	2050	NA	<25.0	533	NS	145,000	145,000
tert-Butylbenzene	<25.0	<25.0	<25.0	<312	NA	<25.0	39.6	NS	183,000	183,000
<b>PAHs (ug/kg)</b>								ug/kg	ug/kg	ug/kg
Acenaphthene	<5.2	<4.1	<4.7	NA	<23.3	NA	NA	NS	3,590,000	45,200,000
Acenaphthylene	5.3	<3.5	<4.0	NA	<19.8	NA	NA	NS	NS	NS
Anthracene	57.8	<6.0	<6.9	NA	<34.2	NA	NA	196,949.2	17,900,000	100,000,000
Benzo(a)anthracene	23.1	<3.3	<3.8	NA	<19.0	NA	NA	NS	1,140	20,800
Benzo(a)pyrene	4.7	<2.7	<3.0	NA	<15.1	NA	NA	470	115	211
Benzo(b)fluoranthene	11.4	<3.0	<3.4	NA	<16.9	NA	NA	478.1	1,150	21,100
Benzo(g,h,i)perylene	4.8	4.1	<2.5	NA	<12.2	NA	NA	NS	NS	NS
Chrysene	25.5	5.8	<4.1	NA	<20.2	NA	NA	144.2	115,000	211,000
Dibenz(a,h)anthracene	3.0	<2.4	<2.7	NA	<13.4	NA	NA	NS	115	2,110
Fluoranthene	26.1	<5.5	<6.3	NA	<31.2	NA	NA	88,877.8	2,390,000	30,100,000
Fluorene	<5.5	<4.4	<5.0	NA	<24.8	NA	NA	14,829.9	2,390,000	30,100,000
Indeno(1,2,3-cd)pyrene	3.1	<2.3	<2.7	NA	<13.2	NA	NA	NS	1,150	21,100
1-Methylnaphthalene	221	<4.2	7.7	NA	613	NA	NA	NS	17,600	72,700
2-Methylnaphthalene	278	<5.3	10.8	NA	1360	NA	NA	NS	229,000	2,200,000
Naphthalene	54.2	<8.9	17.7	NA	<u>2040</u>	NA	NA	658.2	5,520	24,100
Phenanthrene	68.7	<12.3	<14.1	NA	<69.8	NA	NA	NS	NS	NS
Pyrene	50.8	<4.8	<5.5	NA	<27.0	NA	NA	54,545.5	1,790,000	22,600,000
<b>RCRA Metals (mg/kg)</b>								mg/kg	mg/kg	mg/kg
Cadmium	<0.17	0.64	<0.13	NA	<0.16	NA	NA	0.752	71.1	985
Lead	19.4	7.4	23.8	NA	2.9	28.5	17.7	27	400	800

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

**Bold type** indicates concentration within the upper 4 feet of the subsurface exceeds the non-industrial direct contact RCL and, if applicable, the background level, thus constituting a soil standard exceedance.

**Italic type** indicates a concentration exceeds the groundwater protection RCL and, if applicable the background level, thus constituting a soil standard exceedance.

**PID** - Photoionization Detector

**RCL** - Residual Contaminant Level

**VOCs** - Volatile Organic Compounds

**PAHs** - Polynuclear Aromatic Hydrocarbons

**RCRA** - Resource Conservation & Recovery Act

**NS** - No Standard

**NA** - Not Applicable/Not Analyzed

(1) The groundwater protection RCL applies to combined trimethylbenzenes.

The VOC aliquotes for DP-7 collected on 12/12/16 broke and additional samples were collected on 01/10/17

The background Threshold Values for cadmium and lead are 1 mg/kg and 58 mg/kg, respectively.

**Table 3 (Page 3 of 3)  
Soil Analytical Summary  
Suggar Property  
3100 60th Street  
Kenosha, WI**

Parameters	Sample Information / Results							Residual Contaminant Levels		
Sample ID	DP-9	DP-9	DP-10	DP-10	DP-11	DP-11	SB-1	Groundwater Protection	Not to Exceed Non-Industrial Direct Contact	Not to Exceed Industrial Direct Contact Protection
Sample Depth (ft/bls)	3-4	12-13	3-4	11.5-12	3-4	11.5-12	9.5-11			
Saturation Depth (ft/bls)	14.5	14.5	12	12	14	14	11			
Saturated / Unsaturated	Unsaturated	Unsaturated	Unsaturated	Unsaturated	Unsaturated	Unsaturated	Saturated			
Sample Date	12/12/16	12/12/16	12/12/16	12/12/16	01/10/17	01/10/17	05/14/18			
PID Reading (PPM)	0	5	0	5	0	0	0			
<b>VOCs (ug/kg)</b>								ug/kg	ug/kg	ug/kg
1,2,4-Trimethylbenzene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	29	1,378.7 (1)	219,000	219,000
1,3,5-Trimethylbenzene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	1,378.7 (1)	182,000	182,000
Ethylbenzene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	1,570	8,020	35,400
Isopropylbenzene (Cumene)	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	NS	268,000	268,000
Naphthalene	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<25.0	658.2	5,520	24,100
Tetrachloroethene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	4.5	33,000	145,000
Toluene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	1,107.2	818,000	818,000
Xylenes	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	3,960	260,000	260,000
n-Butylbenzene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	NS	108,000	108,000
n-Propylbenzene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	NS	264,000	264,000
p-Isopropyltoluene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	NS	162,000	162,000
sec-Butylbenzene	<25.0	<25.0	<25.0	<b>39.7</b>	<25.0	<25.0	NA	NS	145,000	145,000
tert-Butylbenzene	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	NA	NS	183,000	183,000
<b>PAHs (ug/kg)</b>								ug/kg	ug/kg	ug/kg
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NS	3,590,000	45,200,000
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS
Anthracene	NA	NA	NA	NA	NA	NA	NA	196,949.2	17,900,000	100,000,000
Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NS	1,140	20,800
Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	470	115	211
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	478.1	1,150	21,100
Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS
Chrysene	NA	NA	NA	NA	NA	NA	NA	144.2	115,000	211,000
Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NS	115	2,110
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	88,877.8	2,390,000	30,100,000
Fluorene	NA	NA	NA	NA	NA	NA	NA	14,829.9	2,390,000	30,100,000
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NS	1,150	21,100
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NS	17,600	72,700
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NS	229,000	2,200,000
Naphthalene	NA	NA	NA	NA	NA	NA	NA	658.2	5,520	24,100
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS
Pyrene	NA	NA	NA	NA	NA	NA	NA	54,545.5	1,790,000	22,600,000
<b>RCRA Metals (mg/kg)</b>								mg/kg	mg/kg	mg/kg
Cadmium	NA	NA	NA	NA	NA	NA	NA	0.752	71.1	985
Lead	6.8	8.0	10.7	5.0	3.1	7.7	NA	27	400	800

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

**Bold type** indicates concentration within the upper 4 feet of the subsurface exceeds the non-industrial direct contact RCL and, if applicable, the background level, thus constituting a soil standard exceedance.

*Italic type* indicates a concentration exceeds the groundwater protection RCL and, if applicable the background level, thus constituting a soil standard exceedance.

**PID** - Photoionization Detector

**RCL** - Residual Contaminant Level

**VOCs** - Volatile Organic Compounds

**PAHs** - Polynuclear Aromatic Hydrocarbons

**RCRA** - Resource Conservation & Recovery Act

**NS** - No Standard

**NA** - Not Applicable/Not Analyzed

(1) The groundwater protection RCL applies to combined trimethylbenzenes.

The background Threshold Values for cadmium and lead are 1 mg/kg and 58 mg/kg, respectively.

**Table 4 (Page 1 of 2)**  
**Groundwater Grab Sample Analytical Results Summary**  
**Suggar Property**  
**3301 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results					Groundwater Quality Standards	
Sample ID Sample Date	DP-3W 12/12/16	DP-4W 12/12/16	DP-5W 1/10/17	DP-6W 1/10/17	DP-7W 12/12/16	PAL	ES
VOCs (ug/l)						ug/l	ug/l
n-Butylbenzene	<0.50	183	387	<0.50	57.2	NS	NS
sec-Butylbenzene	<2.2	<273	<219	<2.2	<43.7	NS	NS
tert-Butylbenzene	<0.18	<22.5	<18.0	<0.18	<3.6	NS	NS
Chloromethane	<0.50	<62.5	<0.50	<0.50	<10.0	0.3	3
Ethylbenzene	<0.50	<b>5,000</b>	<b>1,130</b>	<0.50	23.5	140	700
Isopropylbenzene (Cumene)	<0.14	219	326	<0.14	75.5	NS	NS
p-Isopropyltoluene	<0.50	102	63.4	<0.50	24.7	NS	NS
n-Propylbenzene	<0.50	785	1,350	<0.50	282	NS	NS
1,2,4-Trimethylbenzene	<0.50	<b>5.110</b>	<b>6.860</b>	<0.50	<b>1.310</b>	96 (1)	480 (1)
1,3,5-Trimethylbenzene	<0.50	<62.5	<b>65.4</b>	<0.50	<10.0	96 (1)	480 (1)
Xylenes	<1.50	<b>4,062.5</b>	<b>1,250</b>	<1.50	27.4	400	2000

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

*Italic type* indicates concentration exceeds PAL.

**Bold type** indicates concentration exceeds ES.

**VOCs** - Volatile Organic Compounds

**PAL** - NR 140 Preventive Action Limit

**ES** - NR 140 Enforcement Standard

**NA** - Not analyzed or not applicable

(1) - The groundwater quality stanadards are applied to the combined concentrations of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

**Table 4 (Page 2 of 2)**  
**Groundwater Grab Sample Analytical Results Summary**  
**Suggar Property**  
**3301 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results				Groundwater Quality Standards	
Sample ID	DP-8W	DP-9W	DP-10W	DP-11W	PAL	ES
Sample Date	1/10/17	12/12/16	12/12/16	1/10/17		
VOCs (ug/l)					ug/l	ug/l
n-Butylbenzene	42.1	<0.50	<0.50	<0.50	NS	NS
sec-Butylbenzene	22.7	<2.2	<2.2	<2.2	NS	NS
tert-Butylbenzene	3.1	<0.18	<0.18	<0.18	NS	NS
Chloromethane	<5.0	<0.50	<0.50	<0.50	0.3	3
Ethylbenzene	16.4	<0.50	<0.50	<0.50	140	700
Isopropylbenzene (Cumene)	62.1	<0.14	<0.14	<0.14	NS	NS
p-Isopropyltoluene	9.0	<0.50	<0.50	<0.50	NS	NS
n-Propylbenzene	182	<0.50	<0.50	<0.50	NS	NS
1,2,4-Trimethylbenzene	<b><u>520</u></b>	<0.50	<0.50	<0.50	96 (1)	480 (1)
1,3,5-Trimethylbenzene	<b><u>21.2</u></b>	<0.50	<0.50	<0.50	96 (1)	480 (1)
Xylenes	20.6	<1.50	<1.50	<1.50	400	2000

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

*Italic type* indicates concentration exceeds PAL.

**Bold type** indicates concentration exceeds ES.

**VOCs** - Volatile Organic Compounds

**PAL** - NR 140 Preventive Action Limit

**ES** - NR 140 Enforcement Standard

**NA** - Not analyzed or not applicable

(1) - The groundwater quality standards are applied to the combined concentrations of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

**Table 5 (Page 1 of 2)**  
**Groundwater Sample Analytical Results Summary**  
**Suggar Property**  
**3301 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results								Groundwater Quality Standards	
Sample ID	MW-1		MW-2		MW-3		MW-4		PAL	ES
Sample Date	6/6/18	6/13/19	6/6/18	6/13/19	6/6/18	6/13/19	12/20/18	6/13/19		
PVOCs (ug/l)									ug/l	ug/l
Benzene	<u>3.9</u>	<u>1.9</u>	<0.31	<0.31	<0.31	<b>1.8</b>	<0.31	<0.31	0.5	5
Ethylbenzene	<b>2800</b>	<b>1680</b>	<0.33	<0.33	<b>1250</b>	<b>1170</b>	<0.33	<0.33	140	700
Methyl-tert-butyl-ether	9.6	6.1	<0.32	<0.32	5.7	6.2	<0.32	<0.32	12	60
Naphthalene	<u>17.9</u>	4.9	<0.51	<0.51	7.9	4.8	<0.51	<0.51	10	100
Toluene	14.6	5.5	<0.49	<0.49	5.1	4.6	<0.49	<0.49	160	800
1,2,4-Trimethylbenzene	<u>231</u>	84.6	<0.34	<0.34	<b>1080</b>	<b>809</b>	<0.34	<0.34	96 (1)	480 (1)
1,3,5-Trimethylbenzene	<u>5.4</u>	1.5	<0.33	<0.33	<b>76.2</b>	<b>15.2</b>	<0.33	<0.33	96 (1)	480 (1)
Xylenes	<u>988.7</u>	365.1	<0.98	<0.98	<u>936.9</u>	<u>830.1</u>	<0.98	<0.98	400	2000

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

*Italic type* indicates concentration exceeds PAL.

**Bold type** indicates concentration exceeds ES.

**PVOCs** - Petroleum Volatile Organic Compounds

**PAL** - NR 140 Preventive Action Limit

**ES** - NR 140 Enforcement Standard

**NA** - Not analyzed or not applicable

(1) - The groundwater quality stanadards are applied to the combined concentrations of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.



**Table 5 (Page 2 of 2)**  
**Groundwater Sample Analytical Results Summary**  
**3301 60th Street**  
**Suggar Property**  
**Kenosha, WI**

Parameters	Sample Information / Results									Groundwater Quality Standards			
	Sample ID	MW-5		MW-6		MW-7		MW-8		MW-9	PAL	ES	
Sample Date	6/6/18	6/13/19	12/20/18	6/13/19	12/20/18	6/13/19	12/20/18	6/13/19	12/20/18	6/13/19	1/27/20		
<b>PVOCs (ug/l)</b>												ug/l	ug/l
Benzene	<0.31	<0.31	<b>5.2</b>	<i>1.7</i>	<b>79.2</b>	<b>42.6</b>	<i>2.4</i>	<i>2.1</i>	<0.25		0.5	5	
Ethylbenzene	<0.33	<0.33	<b>552</b>	<i>153</i>	<b>2690</b>	<b>1440</b>	<i>455</i>	<i>584</i>	<0.22		140	700	
Methyl-tert-butyl-ether	<0.32	<0.32	<i>20.7</i>	5.2	<i>51.2</i>	<i>21.2</i>	6.6	6.7	<1.2		12	60	
Naphthalene	<0.51	<0.51	<b>80.5</b>	<i>19.6</i>	<b>277</b>	<b>127</b>	3.1	2.9	<1.2		10	100	
Toluene	<0.49	<0.49	12.7	4.8	<i>648</i>	<i>475</i>	2.7	4.5	<0.17		160	800	
1,2,4-Trimethylbenzene	<0.34	<0.34	10.9	2.3	<b>1250</b>	<b>663</b>	<i>99.9</i>	<i>162</i>	<0.84		96 (1)	480 (1)	
1,3,5-Trimethylbenzene	<0.33	<0.33	45.0	16.0	<b>304</b>	<b>166</b>	<i>&lt;0.66</i>	<i>&lt;1.3</i>	<0.87		96 (1)	480 (1)	
Xylenes	<0.98	<0.98	34.8	9.8	<b>2565</b>	<i>1405</i>	47.4	63.3	<1.5		400	2000	

**Notes:**

Table includes detected analytes only, which are right justified in the columns.

*Italic type* indicates concentration exceeds PAL.

**Bold type** indicates concentration exceeds ES.

**PVOCs** - Petroleum Volatile Organic Compounds

**PAL** - NR 140 Preventive Action Limit

**ES** - NR 140 Enforcement Standard

**NA** - Not analyzed or not applicable

(1) - The groundwater quality stanadards are applied to the combined concentrations of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

**Table 6 (Page 1 of 1)**  
**Groundwater Sample Analytical Results Summary - Monitoring Well MW-8**  
**3301 60th Street**  
**Suggar Property**  
**Kenosha, WI**

Sample ID	MW-8										NR 140 Standards	
	Sample Collection Date	07/09/08	10/17/08	10/19/09	01/13/10	04/28/10	07/14/10	11/09/10	04/13/11	06/06/18	06/13/19	PAL
Analyte												
PVOCs/Naphthalene (ug/l)												
Benzene	<2.5	<2.5	<b>6.6</b>	NA	<u>4.0</u>	<1.9	<3.9	<2.5	<u>2.4</u>	<u>2.1</u>	0.5	5
Ethylbenzene	<i>410</i>	<i>440</i>	<b>997</b>	NA	<b>785</b>	<i>669</i>	<b>816</b>	<i>560</i>	<i>455</i>	<i>584</i>	140	700
Methyl tert-butyl ether	<2.3	<2.3	10.2	NA	7.6	9.5	6.9	<2.3	6.6	6.7	12	60
Napthalene	<5.0	<5.0	6.8	NA	5.5	7.7	<u>15.9</u>	<u>26</u>	3.1	2.9	10	100
Toluene	4.8	3.7	6.3	NA	7.9	8.8	10.3	<2.5	2.7	4.5	160	800
1,2,4 -Trimethyl benzene	<b>740</b>	<b>720</b>	<b>1210</b>	NA	<b>986</b>	<b>913</b>	<b>1090</b>	<b>780</b>	<b>99.9</b>	<b>162</b>	96(1)	480(1)
1,3,5-Trimethylbenzene	<2.8	<1.9	<4.0	NA	<4.0	<2.0	<4.0	<1.9	<0.66	<1.3	96(1)	480(1)
Total Xylenes	230	280	<u>661.1</u>	NA	<u>508.8</u>	<u>414.9</u>	<u>504.8</u>	280	47.4	63.3	400	2,000

**Notes:**

Table includes detected analytes only.

*Italic type* indicates concentration exceeds PAL.

**Bold type** indicates concentration exceeds ES.

**PVOCs** - Petroleum Volatile Organic Compounds

**PAL** - NR 140 Preventive Action Limit

**ES** - NR 140 Enforcement Standard

**NA** - Well Inaccessible Due to Ice

(1) - The groundwater quality stanadards are applied to the combined concentrations of 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

**Table 7A (Page 1 of 3)  
Monitoring Well Data  
Suggar Property  
3301 60th Street  
Kenosha, WI**

Measurement	Well ID, Survey Date								
	MW-1 7/11/2018	MW-2 7/11/2018	MW-3 7/11/2018	MW-4 7/11/2018	MW-5 7/11/2018	MW-6 2/1/2019	MW-7 2/1/2019	MW-8 7/11/2018	MW-9 2/17/2020
TOC Elevation (ft)	629.85	630.81	630.57	630.86	631.52	631.74	630.84	630.09	629.87
Ground Surface Elevation (ft)	630.40	631.30	631.00	631.40	632.00	632.00	631.10	630.60	630.37
TOS Elevation (ft)	624.4	625.8	624.0	625.5	624.8	624.7	624.3	622.4	621.4
Screened Length (ft)	10	10	10	10	10	10	10	10	10
Total Well Depth (ft)	15.5	15.0	16.6	15.4	16.7	17.0	16.5	17.7	18.5

**Notes:**

The reference point is the northeast flange bolt on the fire hydrant located on the northeast corner of the intersection of 60th Street and 33rd Avenue with an elevation of 633.42 feet MSL.

TOC = Top of casing

TOS = Top of screen

NA = Not Applicable

MSL = Mean sea level

**Table 7B (Page 2 of 3)  
Groundwater Elevation Data  
Suggar Property  
3301 60th Street  
Kenosha, WI**

Measurement	Well ID, Date																									
	MW-1						MW-2						MW-3						MW-4							
	5/23/18	6/6/18	7/11/18	12/20/18	6/13/19	1/22/20	5/23/18	6/6/18	7/11/18	12/13/18	12/20/18	2/1/19	6/13/19	5/23/18	6/6/18	7/11/18	12/13/18	12/20/18	6/13/19	5/23/18	6/6/18	7/11/18	12/13/18	12/20/18	6/13/19	1/22/20
Depth to Groundwater Below TOC (ft)	9.24	9.36	9.26	9.49	9.26	9.56	10.09	10.25	10.14	10.24	10.37	10.63	10.12	9.80	9.98	9.90	10.00	10.08	9.85	10.12	10.25	10.22	10.34	10.38	10.20	10.40
Groundwater Elevation (ft)	620.61	620.49	620.59	620.36	620.59	620.29	620.72	620.56	620.67	620.57	620.44	620.18	620.69	620.77	620.59	620.67	620.57	620.49	620.72	620.74	620.61	620.64	620.52	620.48	620.66	620.46
Groundwater Depth Below Ground Surface (ft)	9.8	9.9	9.8	10.0	9.8	10.1	10.6	10.7	10.6	10.7	10.9	11.1	10.6	10.2	10.4	10.3	10.4	10.5	10.3	10.7	10.8	10.8	10.9	10.9	10.7	10.9
Water Column Height (ft)	6.3	6.1	6.2	6.0	6.2	5.9	4.9	4.8	4.9	4.8	4.6	4.4	4.9	6.8	6.6	6.7	6.6	6.5	6.8	5.3	5.2	5.2	5.1	5.0	5.2	5.0
Well Volume (gal)	5.8	5.7	NA	NA	4.7	4.7	4.5	4.3	NA	NA	NA	NA	4.3	6.1	6.0	NA	NA	NA	5.1	4.8	4.7	NA	NA	NA	4.7	4.7
Volume Removed (gal)	48	17	NA	NA	15	15	45	15	NA	NA	NA	NA	13	35	18	NA	NA	NA	16	20	14	NA	NA	NA	15	15

**Notes:**  
(1) = Well was purged dry  
NA = Not Applicable  
MW-1 inaccessible on 12/13/18 due to parked car  
MW-2, MW-3, MW-7 and MW-8 frozen on 1/22/20

**Table 7B (Page 3 of 3)**  
**Groundwater Elevation Measurements**  
**Suggar Property**  
**3301 60th Street**  
**Kenosha, WI**

Measurement	Well ID, Date																						
	5/23/18	6/6/18	7/11/18	MW-5				12/13/18	12/20/18	MW-6			12/13/18	12/20/18	MW-7			6/6/18	7/11/18	MW-8			MW-9
				12/13/18	12/20/18	6/13/19	1/22/20	12/13/18	12/20/18	02/01/19	06/13/19	1/22/20	12/13/18	12/20/18	2/1/19	6/13/19	6/6/18	7/11/18	12/13/18	12/20/18	6/13/19	1/14/20	1/22/20
Depth to Groundwater Below TOC (ft)	10.61	10.79	10.68	10.80	10.92	10.67	10.67	11.70	11.65	11.99	11.30	11.72	10.97	10.90	11.25	10.65	9.97	9.70	9.82	9.87	9.71	11.52	11.51
Groundwater Elevation (ft)	620.91	620.73	620.84	620.72	620.60	620.85	620.85	620.04	620.09	619.75	620.44	620.02	619.87	619.94	619.59	620.19	620.12	620.39	620.27	620.22	620.38	618.35	618.36
Groundwater Depth Below Ground Surface (ft)	11.1	11.3	11.2	11.3	11.4	11.2	11.2	12.0	11.9	12.3	11.6	12.0	11.2	11.2	11.5	10.9	10.5	10.2	10.3	10.4	10.2	12.0	12.0
Water Column Height (ft)	6.1	5.9	6.0	5.9	5.8	6.0	6.0	5.3	4.9	5.0	5.7	5.3	5.5	5.6	5.3	5.9	7.7	8.0	7.9	7.8	8.0	7.0	7.0
Well Volume (gal)	5.6	5.4	NA	NA	NA	4.4	4.4	4.0	4.1	NA	4.3	4.3	4.2	4.3	NA	4.4	7.3	NA	NA	NA	5.9	5.3	5.3
Volume Removed (gal)	20	16	NA	NA	NA	14	14	18	12	NA	13	13	9 (1)	9 (1)	NA	9 (1)	8 (1)	NA	NA	NA	8 (1)	23	16

**Notes:**

(1) = Well was purged dry  
 NA = Not Applicable  
 MW-1 inaccessible on 12/13/18 due to parked car  
 MW-2, MW-3, MW-7 and MW-8 frozen on 1/22/20

**Table 8 (Page 1 of 1)**  
**Sub-Slab Vapor Sample Analytical Summary**  
**Suggar Property**  
**3301 - 60th Street**  
**Kenosha, WI**

Parameters	Sample Information / Results		Vapor Risk Screening Levels		
Sample ID	VP-1	SPV-1	Residential	Small Commercial	Large Commercial / Industrial
Sample Date	6/6/18	6/5/19			
VOCs (ug/m3)			ug/m3	ug/m3	ug/m3
Benzene	3.7	1.1	120	530	1,600
Carbon tetrachloride	0.96	<0.79	160	670	2,000
Chloroform	5.1	<0.36	40	180	530
Chloromethane	1.1	<0.29	3,100	13,000	39,000
Dichlorodifluoromethane	2.7	2.6	3,300	15,000	44,000
Ethylbenzene	3.8	1.2	370	1,600	4,900
Methylene Chloride	3.1	5.2	21,000	87,000	260,000
Naphthalene	<b><i>28.6</i></b>	<2.4	28	120	360
Tetrachloroethene	918	3.5	1,400	6,000	18,000
Toluene	28.3	3.9	170,000	730,000	2,200,000
Trichloroethene	1.1	<0.47	70	290	880
1,2,4-Trimethylbenzene	10.9	3.6	2,100	8,700	26,000
1,3,5-Trimethylbenzene	7.3	0.87	2,100	8,700	26,000
Xylenes	24.4	4.8	3,300	15,000	44,000

**Notes:**

Table includes detected analytes with vapor risk screening levels listed on the Wisconsin Vapor Quick Look-up Table only.

**Bold type** indicates concentration exceeds a commercial or industrial vapor risk screening level.

***Italic type*** indicates a concentration exceeds the residential vapor risk screening level.

**VOCs** - Volatile Organic Compounds

**Remedial Action Options Report  
Suggar Property**



**APPENDIX A  
Usual & Customary Costs Spreadsheet**

# Usual and Customary Standardized Invoice #27

## January 2020 - June 2020



RR-113a-E

PECFA #: 53144-4143-05  
 BRRTS #: 03-30-004964  
 Site Name: Suggar Property  
 Site Address: 3301 - 60th St. Kenosha

Vendor Name: Midwest Environmental Consulting  
 Invoice #: NA  
 Invoice Date: 2020 02  
 Check #: NA

U&C Total \$ 5,871.23  
 Variance to U&C Total \$ -  
 Grand Total \$ 5,871.23

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAX UNIT COST	UNITS	TOTAL MAX
5	Closure Request		CR15	Continuing Obligation Packet Submittal (For Source Property	Packet	\$ 522.58	1	\$ 522.58
5	Closure Request		CR20	Continuing Obligation Packet Submittal (For off-site Propertie	Per Additional Property	\$ 229.39	4	\$ 917.56
5	Closure Request		CR25	Closure Request Following SIR	Submittal	\$ 1,287.50	1	\$ 1,287.50
5	Closure Request		CR30	PE review and certification of closure packet	Site	\$ 1,129.60	1	\$ 1,129.60
8	Well Abandonment	Consultant	WAB05	Coordination	Site	\$ 162.86	1	\$ 162.86
8	Well Abandonment	Commodity	WAB35	Well Abandonment Mob/Demob	Site	\$ 453.81	1	\$ 453.81
8	Well Abandonment	Commodity	WAB40	Well Abandonment (2 inch)	Ft	\$ 5.74	117.5	\$ 674.45
35	Cap Maintenance Plan		CMP05	Cap Maintenance Plan	Plan	\$ 329.64	1	\$ 329.64
36	Change Order Request		COR05	Change Order Request (cost cap exceedance requests)	Change Order	\$ 393.23	1	\$ 393.23