

2019-0153.02
Phase III Environmental
Site Assessment Work Plan

For Property Located at:
4301 North Richards Street
Milwaukee, WI 53212

December 2021

Prepared for
Former Spic & Span
4301 North Richards Street
Milwaukee, WI 53212

Prepared by: BWS/egd



One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53214-1470
(414) 259-1500
(414) 259-0037

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 Proposed Project Description	1
1.2 Background.....	1
2 PHYSICAL SITE SETTING AND INVESTIGATION SCOPING	4
2.1 Size and Shape of Parcel.....	4
2.2 Surface Elevation and Topography.....	4
2.3 Soils, and Geology	4
2.4 Hydrology and Hydrogeology	4
2.5 Site History.....	5
2.6 Type of Contamination	5
2.7 Environmental Media Affected.....	5
2.8 Proximity of the Site to Other Sources of Contamination	6
2.9 Permission from Property Owners.....	6
2.10 Impacts to Receptors.....	6
2.11 Potential Impacts to Sensitive Receptors.....	6
3. SITE ASSESSMENT WORK PLAN.....	6
3.1 Site Ownership and Location.....	6
3.2 Consultants and Contractors	6
3.3 Site Investigation Work Plan.....	7

FIGURES

Figure 5.....	Proposed SB-20 and MW-1
Figure 6	Soil Contamination Iso-concentration Map

1. INTRODUCTION

1.1 Proposed Project Description

The Subject Property is 2.142 acres and has a one-story industrial building with an asphalt parking lot on the south side.

1.2 Background

A sub-slab soil gas survey was completed at the site on January 13, 2020 based on requests by real estate brokers that were presenting the property for sale. Six Summa Canisters were used to collect sub-slab samples from the area of the former dry cleaning operations. Two of the samples, SSVS-1 and SSVS-3, exceeded the Indoor Air Vapor Action Levels and Vapor Screening Levels. Twenty soil borings were done to define the extent of soil contamination in three phases.

On October 23, 2019 two interior air vapor samples were collected for analysis for VOCs to determine if VOCs were present in the interior of the former Spic and Span facility at 4301 North Richards Street, Milwaukee, Wisconsin. The samples were collected at the request of real estate brokers who were working on the sale of the property. One sample was collected from the area of the former dry-cleaning machines and one on the eastern side of the building away from the dry cleaning processing area. Both air samples collected had Tetrachloroethylene (PCE) above the WDNR Indoor Air Vapor Action Levels (VALs). It is important to note that the building air handling units were operating prior to the sampling but it was subsequently determined that the vents were closed so that there had been no fresh air intake and circulation.

Drawings were reviewed to determine utility locations under the floor slab to check for possible conduits that would facilitate movement of contamination from the dry-cleaning machine area. Ground Penetrating Radar (GPR) was used to verify the location of the underground utilities and fill in any gaps. This information was then used to locate the sub-slab vapor sample points.

A sub-slab soil gas survey was then completed at the site on January 13, 2020. Six Summa Canisters were used to collect sub-slab vapor samples from the area in and around the former dry-cleaning operations. The samples, SSVS-1 and SSVS-3, exceeded the Sub-Slab Vapor Risk Screening Levels for PCE, and the samples from SSV-1, SSV-3 and SSV-5 exceeded the Sub-Slab Vapor Screening Levels for Trichloroethene (TCE). These samples were collected from along the sewer line that runs south, then east, from the area of PCE use. There were no other exceedances of the Sub-Slab Vapor Screening Levels.

On May 26, 2020 eight soil borings were completed to depths of 8 to 10 feet bgs. Soil samples were collected from the borings for observation and field screening for Volatile Organic Compounds using a Photoionization Detector and based on the field screening, up to two soil samples from each boring were submitted for laboratory analysis for PCE and its breakdown products. Groundwater was not observed during the geo-probe boring investigation. Trimethylbenzene exceeded the Direct Contact RCL in boring B-6 but the sample was located 8.0-10.0 feet

below grade. There were no other exceedances for the Direct Contact RCL. There were exceedances of RCLs for groundwater in soil for PCE in all the borings B-1 thru B-8 and for TCE in B-1, B-2, B-4, B-5, and B-7. There were also exceedances of RCLs for groundwater in soil for cis-1,2-dichloroethene in B-1, B-2, B-4, B-6, and B-7.

Based on these results, the area and depth of the investigation was increased. On July 28, 2020 one shallow hand auger was completed on the north side of the property outside of the building. One sample was submitted for laboratory analysis for VOCs from the 3.0-3.5 feet depth (approximately 4.0 to 4.5 feet below the building floor). PCE was detected just above the detection limit in this sample, at a concentration of 0.071 mg/kg. There were no other compounds detected in this sample.

On August 10, 2020, seven soil borings were completed to depths of 17.5 to 25.0 feet bgs. Soil samples were collected from the borings for observation and field screening for Volatile Organic Compounds using a Photoionization Detector, and based on the field screening, two to three soil samples from each boring were submitted for laboratory analysis for VOCs. Groundwater was not observed during the geo-probe boring investigation. No VOCs above the Direct Contact RCLs were detected in laboratory samples submitted from the seven soil borings completed during this part of the site investigations. PCE was detected above the groundwater RCLs in soil borings B-9 7.5 to 10.0 feet, B-12 12.5 to 15.0 feet, B-13 10.0 to 12.5 feet, and B-14 17.5 to 20.0 feet. However, PCE was not detected deeper in these borings.

In March of 2021, additional soil borings were completed to the east and west to define the degree and extent of contamination. Three borings were completed to further evaluate potential extent of soil contamination to the east and one boring was completed to the west.

In April of 2021, vapor samples were collected for laboratory analysis from the sanitary sewer manhole to the east and storm sewer manhole to the south an additional and an additional sub-slab vapor sample, SSV-7, was collected from along the sanitary sewer line east of SSV-1 to further investigate the extent of sub-slab vapor impacts.

In September of 2021 two additional soil borings, SB-21 and SB-22, were done to depths of 25 feet. SB-22 was completed to the east to further define the extent of soil contamination. B-22 did not have any industrial or non-industrial Direct Contact exceedances or non-industrial groundwater RCL exceedances. B-21 had a groundwater RCL exceedance at 7.5 to 10 feet bgs for Tetrachloroethene and Trichloroethene (TCE). PCE and its breakdown products were not detected in the sample from 20 to 22.5 bgs.

A monitoring well, MW-1, was installed near the source area in SB-21 / MW-1. With the exception of vinyl chloride, PCE and its breakdown products were not detected above the WDNR Enforcement Standards in MW-1/SB-21.

In October of 2021, vapor samples were collected for laboratory analysis

from additional sub-slab vapor points, SSV-11, SSV-12, and SSV-14, was collected to further investigate the extent of sub-slab vapor impacts to the south, east, and west. Sub slab vapor samples SSV-11 and SSV-14 did not exceed any large industrial standards. The sample from SSV-12 located along the sanitary sewer line running to the east exceeded the large industrial standard for Tetrachloroethylene (PCE).

The soil exceedances are generally highest in the source area and the concentrations decrease with distance from the source. Based on the investigative work performed at the site, the vertical extent of the contaminants is limited in depth to above the native clay soils, generally a depth of 20 feet bgs or less, and the horizontal extent is limited to the immediate area around the PCE cleaning room and along utility lines outside of this area. And as noted, the PCE detected in the soil vapor samples also indicate migration along the sanitary sewer line to the east. The contamination is also limited in areal extent to the soils under a portion of the building interior.

A technical review letter was submitted to the WDNR on November 23, 2021 requesting review of GRAEF's recommendation for no further evaluation of groundwater conditions on site. Reasons cited for this recommendation were summarized as follows:

- The original source existed for a limited time and was removed.
- The contaminated soils are limited in area and depth and the contaminants will remain confined by the clay soils, thereby limiting any potential contribution to groundwater contamination.
- Although water bearing seams were encountered in three of the 21 borings, the seams do not produce significant water and do not appear to be interconnected. A well was installed in SB-9 and did not produce water.
- The contamination in the water sample from MW-1 was limited in magnitude, and potential migration would be chemically and physically limited in extent.
- There is not a risk to human health given that water in the area is provided from Lake Michigan and it would be impossible to generate potable water from the perched seams encountered on the site.
- There are no sensitive receptors in the immediate area, and therefore no risk to the environment.

The WDNR responded to this request in the letter dated December 17, 2021 stating that the extent of groundwater impacts would need to be further evaluated without specifically addressing the reasons cited above for not doing further evaluation. The letter also requested further evaluation of PFAS. This work plan addresses the additional groundwater monitoring and additional sub-slab vapor sampling. The PFAS questions will be addressed separately.

2 PHYSICAL SITE SETTING AND INVESTIGATION SCOPING

2.1 Size and Shape of Parcel

The subject property runs along North Richards Street in the 4300 block, and is irregularly shaped. The subject property is 2.142 acres and has a one story industrial building with an asphalt parking lot on the south side.

2.2 Surface Elevation and Topography

The site elevation is roughly 635 feet MSL and is relatively flat, generally sloping to the east. Surface drainage is generally to the east generally sloping toward the Milwaukee River.

2.3 Soils, and Geology

According to the U.S. Department of Agriculture Soil Conservation Service, surficial material on the property is designated as unmapped area. However, the Subject Property and surrounding area is covered mostly by buildings, parking lots, and streets and is a highly transformed and manipulated urban environment.

Based on review of the Evans, T.J., Massie-Ferch, K.M., and Peters, R.M. 2004, preliminary bedrock geology map of Walworth, Racine, Kenosha, Milwaukee, Waukesha, Ozaukee and Washington counties, Wisconsin: Wisconsin Geological and Natural History Survey, the Subject Property is underlain by Racine Formation of Silurian bedrock, consisting of medium to coarse grained dolomite.

2.4 Hydrology and Hydrogeology

There are no surface waters on the Subject Property. Other than storm sewers and local storm drains along the roadsides, the dominant surface water features in the area are the Milwaukee River at approximately 1000 feet to the northeast, and Lake Michigan, approximately 6.5 miles to the east of the Subject Property.

Water level observations were made during the tank removals on the south and west sides of the building. On the south side, water accumulated in the excavation at a depth of approximately 14 feet below ground surface (bgs).

Water depths in monitoring wells on the west side ranged from 5 to 7 feet bgs. In

both cases it is believed that the elevations are indicative of perched water conditions in clay soils.

Based on the location of Lake Michigan and based on the assumption that shallow groundwater flow often mimics local surface topography, the near surface groundwater flow direction at the site is assumed to be toward the east/northeast.

According to the Water Table Map of Milwaukee, Wisconsin, static groundwater around the area of the Subject Property is between 110 and 120 feet below ground surface (bgs).

2.5 Site History

The site was first developed sometime after 1951 by Square-D as a facility for electric motor assembly. Square-D moved out of the facility in 1960 and Spic and Span purchased the facility in 1961. In addition to uniform rental, operations at Spic and Span included shop towel washing conducted in the west addition of the building. Wash waters from this process were discharged under permit to MMSD. Petroleum-based garment cleaning was also performed through the 1970's when the equipment was removed. The area of this operation was investigated and closed under BRRTS #02-41-000033. The petroleum-based cleaning equipment was replaced with tetrachloroethylene based dry cleaning equipment that was in use until 1999 when all of the machines were taken out of service except the smallest machine that was kept for periodic use. Dry cleaning ceased in 2017.

A 6,000 gallon fuel oil storage tank for the boilers was located on the south side of the site and was removed and closed in 2009 without significant residual petroleum contamination.

2.6 Type of Contamination

Contamination is associated with historic dry cleaning operations on site.

2.7 Environmental Media Affected

Soil and potentially groundwater may be affected.

2.8 Proximity of the Site to Other Sources of Contamination

Based on existing information the contamination is inside the building and not proximate to other potential sources.

2.9 Permission from Property Owners

The proposed investigation activities are located within the footprint of the building for soil vapor sampling, on the east side of the property and on the adjacent property to the north for soil borings (2). Permission from the adjacent property owner to the north was requested, but has not been returned by phone or access letter at this time.

2.10 Impacts to Receptors

Water in the area of the site is provided from Lake Michigan. A search of the USGS Groundwater Watch Database and the M.G. Sherrill, J.J.Schiller, and J.R. Erickson, 1978, Water-Table Map of Milwaukee County, Wisconsin: USGS , did not identify wells located within 0.5 miles of the Subject Property.

2.11 Potential Impacts to Sensitive Receptors

Based on the information provided in the National Wetland Inventory, there are no national wetlands located on or adjacent to the Subject Property. There are also no known sensitive habitats, resource waters, or sites of significant historical or archaeological significance in the area.

3. SITE ASSESSMENT WORK PLAN

3.1 Site Ownership and Location

The Spic and Span facility is owned by Robert Miller and is shown on the attached Figures 1 and 2.

3.2 Consultants and Contractors

Environmental Consultant:

GRAEF

One Honey Creek Corporate Center
125 South 84th Street, Suite 401
Milwaukee, WI 53233

Contact: Brian Schneider, P.E.

414-266-9284

brian.schneider@graef-usa.com

Drilling Contractor:

GESTRA Engineering, Inc.
191 W. Edgerton Avenue
Milwaukee, WI 53207

Contact: Timothy R. Winkler
1-414-933-7444 x27
www.gestrainc.com

Laboratory Analysis:

Synergy Environmental Lab, Inc.
1900 Prospect Court
Appleton, WI 54914

Contact: Michael Ricker
1-920-830-2455
mrsynergy@wi.twbc.com

3.3 Site Investigation Work Plan

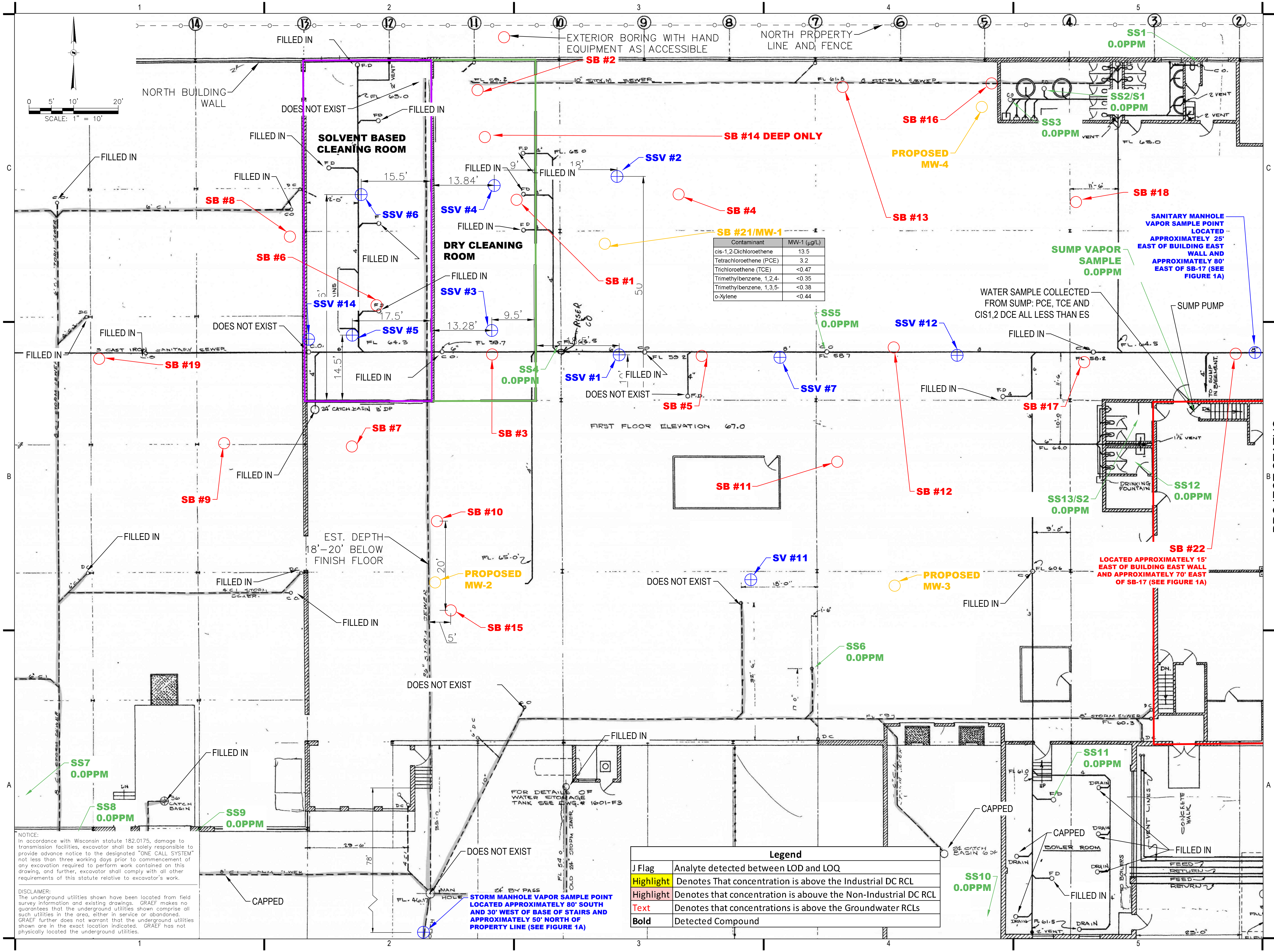
The information presented in Section 1.2 was used to develop the work described in this Work Plan.

Three additional borings are proposed for installation of wells, roughly equidistant from the original well MW-1. Soil samples will be collected from the borings for observation and field screening for Volatile Organic Compounds using a Photoionization Detector. If indicated by staining, odors or PID readings above 0.5 Instrument Units, some of the soil samples may be sent to a laboratory for analysis of PCW and its breakdown products. Three monitoring wells will be installed at a depth of roughly 19 to 24 feet bgs. The wells will be sampled for PCE and its breakdown products if they produce water. The proposed monitoring well locations are shown in Figure 5.

One additional sub-slab soil vapor sampling point will also be positioned east of sub slab vapor point SSV-12 to delineate the extent of soil vapor impacts. One sub slab air sample will be collected and analyzed for PCE and its breakdown products. The location of this sample is shown on the attached Revised Figure 6.

A Site Sampling Quality Control and Assurance Plan was previously submitted for the previous site investigations.

X:\ML\2019\20190153-02\Design\Reports\Phase III Information\Site Assessment Work Plan_Update12-17-21.docx



X:\ML2019\20190153-02\Design\GIS\Map\Figure 5 - Groundwater Monitoring Results and Proposed Monitoring Wells 12/17/2021 1:01 PM

NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. GRAEF makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. GRAEF further does not warrant that the underground utilities shown are in the exact location indicated. GRAEF has not physically located the underground utilities.

PROJECT STATUS

