NR 716 SITE INVESTIGATION WORK PLAN

SCOT INDUSTRIES INC. PROPERTY
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

BRRTS NO. 02-41-587342 (ERP)
FID NO. 241424920

Intended for:
Wisconsin Department of Natural Resources
Milwaukee, Wisconsin

Prepared for:
Scot Industries Inc.

Prepared by:
Ramboll US Consulting, Inc.
Milwaukee, Wisconsin

Date:
June 17, 2021

Revised Date:
September 21, 2021

Project Number:
1690020135

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ENVIRONMENT
& HEALTH

CERTIFICATION

I, Snejana Karakis, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Snejana Karakis, PhD — June 17, 2021

Date

I, Jeanne M. Tarvin, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Jeanne M. Tarvin, PG, CPG — June 17, 2021

License Number 307-13

Date

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TABLE

FIGURES

1. INTRODUCTION

Ramboll US Consulting, Inc. (Ramboll), on behalf of Scot Industries Inc. (Scot), is submitting this Site Investigation Work Plan ("Work Plan") to conduct additional investigation activities to define the nature and extent of impacts identified during a Phase II Environmental Site Assessment (ESA) conducted at the property located at 1532 West Galena Street Milwaukee, Wisconsin (the "property," "facility," or "site"). This Work Plan has been prepared in conformance with Wisconsin Administrative Code (WAC) Chapter NR 716.

The objective of this Work Plan is to supplement the previous investigation work completed by Ramboll at the site on behalf of Scot. This Work Plan presents a summary of site background information, proposed additional investigation approach, and scope of work, including field and laboratory methodologies, reporting, and schedule.

1.1 Site Location

The site is located in Milwaukee County at 1532 West Galena Street in the City of Milwaukee, Wisconsin and is approximately 2.36 acres (Figure 1). According to the Assessor's Office, the assessor's parcel number (APN) and legal description for the site is: 3630066117 - KNEELAND'S ADDN IN SE 1/4 SEC 19-7-22 BLOCK 6 LOTS 7 THRU 18 & S 30' LOT 3 AND S 20' LOT 6 & S 25' LOT 5 AND S 310' OF VAC ALLEY ADJ.

The site is located in the NE ¼ of the SE ¼ of Section 19, T07N, R22E and is immediately bordered to the west by N 16th Street, south by West Galena Street, east by North 15th Street and north by residential properties. The WTM91 coordinates obtained from the WDNR RR Sites Map are as follows: X Coordinate (WTM91) 688413 and Y Coordinate (WTM91) 288649.

1.2 Site Description

The site consists of an approximately 125,000-square-foot building located in the southwestern portion of the site, currently used by Scot for general storage and warehousing of unused machinery and equipment. The facility does not currently maintain any raw materials at the site and does not currently conduct any manufacturing or fabrication at the site.

The primary site access is via West Walnut Street at the northern site boundary via an alley that is centrally located on the site. A loading dock and paved parking area are located northeast of the building. A second entrance gate is located on the south side of the property along West Galena Street. The area north of the building and east of the alley is landscaped with grass and other vegetation. Areas of mature trees are located along the northern property line.

The property is located in a mixed residential and commercial land use area and is connected to municipal water and sanitary sewer services provided by the City of Milwaukee. The historical site layout is depicted on Figure 2A, and the current site layout is depicted on Figure 2B.

1.3 Involved Parties

Responsible Party (RP): Scot Industries Inc.
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Consultant:	Ramboll US Consulting, Inc. 234 W. Florida Street, Fifth Floor Milwaukee, WI 53204 Contact: Jeanne Tarvin, (262) 901-0085, jtarvin@ramboll.com
Agency:	Wisconsin Department of Natural Resources 1027 W. St. Paul Avenue Milwaukee, WI 53233 Contact: Greg Moll, (262) 202-3921, greg.moll@wisconsin.gov.

2. PROJECT BACKGROUND

In October 2020, Ramboll conducted a Phase I ESA of the site on behalf of Scot in accordance with ASTM Standard E1527-13. A copy of the 2020 Phase I ESA Report has been previously submitted to the Wisconsin Department of Natural Resources (WDNR). Based on the Phase I ESA findings, Ramboll completed a Phase II ESA. Based on the Phase II ESA findings, Ramboll submitted a Notification for Hazardous Substance Discharge on March 12, 2021. The following sections present an overview of the site development, ownership history, and site investigation activities to date.

2.1 Site Development and Ownership History

The site was developed by 1894 (and possibly earlier) for residential purposes and was developed with as many as 30 residential structures. Additional historical site use consists of commercial/industrial property use, including a slaughterhouse, horse collar factory, and hat factory building (1890s); coat shop and wagon shop (1910s); gasoline filling station and three gasoline tanks (1940s to 1950s); and car repair business (1950s to late 1960s). Scot began industrial machining operations on the site beginning in 1953 for the redesign and rebuilding of honing tooling and machinery. Scot expanded the original building in 1956 and 1965, and by the late 1970s, had acquired and razed the majority of the surrounding residential buildings on the site and subsequently used this former residential portion of the property for exterior parts and material storage. Scot continued machining operations at the site until the early 1990s, when operations at the site ceased, and the company began using the building for storage, which is the current use of the building. The historical site layout and pertinent site features are depicted on Figure 2A, and the current site layout is depicted on Figure 2B.

2.2 2020 Phase I ESA

In October 2020, Ramboll conducted a Phase I ESA of the site on behalf of Scot and identified the following recognized environmental conditions (RECs): Past Use of the Site as a Gasoline Station and Exterior Metal Parts Storage Area. The following historical RECs (HRECs) related to potential contamination concerns were identified: 1989 Underground Storage Tank (UST) Closure and 1995 UST Closure with No Action Required (NAR) Status. Although not considered RECs, Ramboll identified the following other findings: Long Industrial Use of the Site and Past Residential Use of the Property. Ramboll also identified the following *de minimis* conditions related to the site: Interior Floor Staining and On-Site Area of Thin Spread Petroleum-Based Soils. Based on the Phase I ESA findings, Ramboll completed a Phase II ESA.

2.3 2021 Phase II ESA

In January and February 2021, a Phase II ESA was conducted by Ramboll, on behalf of Scot Industries, to address the findings identified in the 2020 Phase I ESA Report. The 2021 activities included the advancement of 14 soil borings (SB-1 through SB-14) that were converted into small diameter groundwater monitoring wells (MW-1 through MW-14) and the collection of soil and groundwater samples for laboratory analysis.

Based on the Phase II ESA results, soil impacts at the site were determined to consist of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals above their respective WAC NR 720 groundwater pathway Residual Contaminant Levels (RCLs); benzo(a)pyrene above the WAC NR 720 industrial direct contact RCL; and lead above the WAC NR 720 non-industrial direct contact RCL. The PAHs and metals in the soil were determined to likely be associated with historic urban fill. Based on the February 2021 groundwater elevation data, groundwater at the site flows radially outward from the center of the site. The groundwater elevation data collected in March

2021 indicates groundwater flows to the southeast. Groundwater impacts at the site were determined to consist of benzene, trichloroethene (TCE), PAHs, lead, arsenic, and perfluorooctanoic acid (PFOA) above their respective WAC NR 140 Enforcement Standards (ESs) (or proposed WAC NR 140 ESs), and free product (honing oil). The PAHs, arsenic, and lead were determined to likely be the result of suspended sediment in the groundwater samples. The results of the investigation were documented in the Phase II Environmental Site Assessment Report (Ramboll, 2021). Soil boring and monitoring well locations are depicted on Figure 2B.

2.4 Open Environmental Repair Program (ERP)

On March 12, 2021, Ramboll submitted a Notification or Hazardous Substance Discharge for the impacts identified as part of the Phase II ESA. Subsequently, the WDNR opened the ERP Case (Bureau for Remediation and Redevelopment Tracking System [BRRTS] No. 02-41-587342). In a letter dated March 23, 2021, the WDNR indicated that Scot is the responsible party for the identified contamination at the site.

2.5 NR 716 Site Investigation Work Plan

On June 17, 2021 Ramboll submitted a WAC NR 716 Site Investigation Work Plan ("Work Plan") for review to the WDNR, and in a letter dated August 9, 2021, the WDNR provided comments to the prepared Site Investigation Work Plan. Following discussions with the WDNR during a conference call on August 30, 2021, the WDNR requested a revised Site Investigation Work Plan including the following updates to the proposed work:

1. Updated schematics and plans to illustrate the historical and current site layout and use of the building and to depict the relationship of subsurface utility corridors to sumps, drains, and catch basins inside the building and on the property to aid in the evaluation of preferential pathways for contaminant migration.
2. Additional sampling locations to address all areas of concern (particularly locations of former tanks).
3. Evaluation of the electrical equipment inside the building containing polychlorinated biphenyls (PCBs), possible presence of asbestos containing materials, and lead based paint; these matters will be addressed as part of building demolition plans.
4. Additional groundwater evaluation to better understand the direction of groundwater flow (prior to installing proposed monitoring wells).
5. Free product evaluation including an interim action work plan for free product recovery and composition determination.
6. Additional work to understand the utility corridor preferential pathways beneath and adjacent to the onsite building:
    a. additional investigation of soil and groundwater conditions in the northern portion of the building; and
    b. re-evaluate proposed vapor probe locations and consider additional vapor probes in northern portions of the building to evaluate potential preferential pathways and environmental concerns.

Based on the discussions with the WDNR, Ramboll includes the following specific revisions to the Site Investigation Work Plan originally submitted on June 17, 2021:

1. Updated Figure 2A and Figure 2B which illustrate the historical and current site layout and use, respectively, as well as subsurface utilities and connections to the building, storm drains throughout the building and manholes in the vicinity of the site.
2. Four additional soil borings and two temporary monitoring wells proposed to be advanced within the on-site building:
    a. one soil boring/temporary monitoring well to be advanced north of the below grade honing oil tank in the building constructed in 1924;
    b. one soil boring/temporary monitoring well to be advanced south of the vertical hone steel-lined recessed support structure in the northern portion of the building; and
    c. two soil borings to be advanced within the footprint of the 1956 building to address former above grade cutting oil tanks.
3. Potential PCB containing electrical equipment, and the possible presence of asbestos and/or lead based paint will be addressed as part of building demolition plans and are not addressed in this Work Plan given Ramboll did not observe oil staining or releases in the area of electrical equipment, evidence of damaged asbestos containing materials or peeling painted surfaces.
4. Ramboll collected groundwater elevation data on August 20, 2021. An updated potentiometric surface map is included as Figure 3B.
5. Ramboll conducted free product removal at monitoring well MW-12, the only location to exhibit light, non-aqueous phase liquid (LNAPL). Ramboll collected a sample of the LNAPL free product, which was submitted to Alpha Analytical for fingerprint analysis and is awaiting the results. An interim action free product passive recovery work plan is included below in Section 4.6.
6. Public utilities, manholes, and building connections, as well as historical and current building site layout, use, and interior drain locations, are depicted on updated Figure 2A and Figure 2B and a utility corridor assessment is proposed to be included as part of additional utility clearance and mapping activities detailed in Section 4.1.3.
    a. Given that the former site operations were primarily conducted in the southern portion of the building and no subsurface structures are located in the northern portion of the building, the majority of the proposed soil borings/monitoring well locations were selected accordingly. Note the straightening press in the northwestern portion of the building was entirely above the concrete surface. Additional soil borings are proposed as indicated above.
    b. Vapor points proposed as part of the original scope of the Site Investigation Work Plan were targeted for areas of highest VOC contaminant concentrations. Additional vapor points may be necessary based on the results of the investigative work proposed herein and final site redevelopment plans.

3. SITE SETTING

3.1 Geologic Setting

Regionally, the native surficial soils in the vicinity of the site consist of the Ozaukee-Morley-Mequon association, which includes well drained to somewhat poorly drained soils that have a subsoil of silty clay loam and silty clay; formed in thin loess and silty clay loam glacial till, on moraines (United States Department of Agriculture [USDA] Soil Conservation Service, 1971). Glacial till deposits found below the surficial soils in the vicinity of the site are mapped as the Pleistocene Age Oak Creek Formation (Mickelson, 1984). The glacial ice of the Green Bay lobe deposited the till of the Oak Creek Formation, which consists of fine-grained glacial till, lacustrine clay, silt, and sand; and some glaciofluvial sand and gravel. The underlying bedrock formation is the Racine Formation, which is a Silurian dolomite (Mudrey, et al, 1982). The bedrock consists of medium to coarse grained, thin- to thick-bedded, very light to light gray, fossiliferous dolomite, and is expected to be encountered within 100 to 200 feet of the ground surface. The Maquoketa Shale, which is an aquiclude, underlies the Silurian dolomite.

Locally, based on information obtained during previous investigations, surficial deposits at the site consist of fill, including gravel base coarse, fine to coarse sand and silty clay fill soils, overlying native silty clay soils that extend to a maximum depth of approximately 16 feet below ground surface (bgs). The fill soils in the areas of the former USTs extend to a depth of at least 16 feet bgs. The topography of the site is gently graded to the center, with regional topography sloping gently downward to the southeast towards the Milwaukee River, and ultimately Lake Michigan.

3.2 Hydrogeologic Setting

Regional and local topography slopes predominantly to the east, toward Lake Michigan. Fourteen shallow monitoring wells (MW-1 through MW-14) were installed at the site during the 2021 Phase II ESA. The groundwater monitoring wells were utilized to assess the groundwater and hydrogeologic conditions at the site. The shallow groundwater surface at the site was typically encountered between approximately 1 to 7 feet bgs during the Phase II ESA. In February 2021, groundwater flow was radially outward from the center of the site. The groundwater elevation data collected in March 2021 indicates groundwater flows to the southeast (Figure 3A). Based on the most recent groundwater elevation measurements collected on August 20, 2021, the calculated shallow groundwater flow direction is consistent with the February 2021 flow, radially outward from the center of the site as a result of mounding around MW 6 and MW-11 (Figure 3B). The groundwater flow direction will be re-evaluated following installation of the additional wells proposed herein.

3.3 Potential Migration Pathways and Receptors

The subject property is zoned for industrial land use. Storm water from the building roof is conveyed via interior drainpipes that are connected to floor storm water drains dispersed throughout the building and set into the concrete floor. The conveyance pipes are located alongside ceiling support columns, or in one case, along the east interior wall of the original 1924 building. Storm water entering these floor drains is discharged to the City of Milwaukee combined sanitary-storm water sewer system. The network of subsurface conveyance pipes connecting the floor stormwater drains represent a preferential migration pathway. Based on observed storm water flow direction, the path of conveyance of roof collected storm water off the property from the interior open storm water drains is to the southwest, as depicted on Figure 2B. A pipe leads out of the farthest southwest interior storm water drain at approximately 210 degrees, which correlates with the location of the storm water grate in West Galena Street that discharges into the municipal sewer. The groundwater beneath the site is considered to represent a potential contaminant migration pathway, although the City of Milwaukee obtains its municipal potable water supply from Lake Michigan; thus, eliminating the

exposure pathway. The Milwaukee River is located approximately 1.5 miles east of the site. No surface water bodies are located in the immediate vicinity of the site; thus, surface water is not a migration pathway. Subsurface utilities that could represent contaminant migration pathways include nearby municipal water, and sanitary/storm sewer lines. Vapor intrusion is a possible contaminant migration pathway due to the chlorinated volatile organic compounds (CVOCs) previously identified in groundwater at the site.

3.4 Degree and Extent of Contamination

Investigation activities conducted to date have included the assessment of soil and groundwater at the site. The following sections provide a brief summary of the results.

3.4.1 Contaminants of Concern Detected in Soil and Groundwater

Prior investigation activities at the site identified the presence of the following compounds in soils above WAC NR 720 RCLs and/or in groundwater above WAC NR 140 or ESs or Preventative Action Limits (PALs):

- VOCs (soil and groundwater),
- PAHs (soil and groundwater), and
- Metals (soil and groundwater).

Additionally, site impacts also consist of Per- and Polyfluoroalkyl substances (PFAS) (groundwater only - soil not sampled) and free phase oil (likely honing oil) in the southeast corner of the building (MW-12).

Based on the groundwater elevations measured at the site (1 to 7 feet bgs) some soil samples were collected at or below the groundwater surface. Groundwater and soil exceedances are displayed on Figure 4 and Figure 5, respectively. The following sections provide a brief summary of the results.

3.4.2 Contaminant Distribution in Soil and Groundwater

Soil impacts at the site consist of petroleum VOCs above their respective WAC NR 720 groundwater pathway RCLs in the southwest and southeast interior corners of the building (at borings SB-1, SB-2, SB-12, and SB-13) at depths between 1 and 7 feet bgs; and TCE along the east central interior side of the building (at boring SB-11 [saturated soil sample]) at a depth of 4 to 5 feet bgs. The potential source of the petroleum VOCs likely includes the former filling station that was located in the southwest corner of the site. The source of the TCE is unknown and is likely related to historical operations.

Additionally, soil impacts at the site include benzo(a)pyrene above the WAC NR 720 industrial direct contact RCL in the southwest corner of the building and northeast and northwest corners of the site (at borings SB-2, SB-8, and SB-10) at depths of 1 to 2.5 feet bgs. Several PAHs were also detected above WAC NR 720 non-industrial direct contact and groundwater pathway RCLs across the site. The potential source of the PAHs is likely urban fill based on the location of the site in the City of Milwaukee and the field observations made during drilling activities.

Soil impacts at the site also include metals (arsenic, lead, and mercury) above WAC NR 720 groundwater pathway RCLs across the site. Lead was also detected above the WAC NR 720 non-industrial direct contact RCL in the northeast and central portion of the site (at SB-6 and SB-8) at depths of 1 to 2.5 feet bgs. Lead was also detected above the Background Threshold Value (BTV) of 51.6 milligrams per kilogram (mg/kg) at several locations; however, the WAC NR 720 nonindustrial

and industrial direct contact RCLs of 400 and 800 mg/kg, respectively are used for the evaluation of direct contact risk in this case. Arsenic was also detected slightly above the BTV at the SB-12 location and is likely associated with background arsenic values. The potential source of the metals is likely urban fill, as the former gas station was located in the southwest corner of the site, and the highest lead concentrations do not correspond to this area; thus, leaded gasoline is an unlikely source of the lead impacts. Furthermore, lead was not detected in any of the groundwater samples analyzed. Given the sporadic and random distribution of metals concentrations in soil across the site, the likely source is urban fill, and the extent of metals is defined onsite to non-industrial direct contact RCLs.

Groundwater impacts at the site consist of benzene (MW-1 and MW-2) and arsenic (MW-2) above their respective WAC NR 140 ESs in the southwest corner of the site, which is the area of the historical gasoline filling station. The arsenic is likely due to suspended sediment in the groundwater sample. Site groundwater impacts also include TCE (MW-11) above the WAC NR 140 ES in the central portion of the site in the area inside the portion of the building constructed in 1956, which, although the extent of TCE impacts is limited and delineated to the area surrounding MW-11, would require a vapor intrusion evaluation. Several PAHs (benzo(a)pyrene; benzo(b)fluoranthene; and chrysene) and lead are present in groundwater in the northeast corner of the site in the area of historical residences and on-site fill soils (MW-8); however, the PAHs and lead are likely the result of suspended sediment in the groundwater samples. Additionally, groundwater impacts include PFOA above its proposed WAC NR 140 ES in the northwest corner of the site in the area of the former slaughterhouse and on-site fill soils (MW-10). Given the groundwater flow direction and absence of known on-site use of PFAS, the PFOA is likely a result of an off-site PFAS source.

4. SITE INVESTIGATION APPROACH AND STRATEGY

The objective of the site investigation is to determine the magnitude and extent of soil and groundwater impacts previously identified during the Phase II ESA and to evaluate the potential vapor intrusion risk to building occupants. The site investigation strategy consists of field sampling and laboratory analysis of soil, groundwater, and vapor media. Based on the data gathered to date, contaminants of concern that require further evaluation include VOCs, which are primarily related to historical petroleum use as a gasoline station, honing oil, and historical machining operations, as well as PFAS (specifically PFOA), which are presumed to originate off site. PAHs and Resource Conservation and Recovery Act (RCRA) metals are likely related to historic urban fill. Additionally, all identified utilities will be evaluated as potential migration pathways based on the data collected as part of this site investigation.

4.1 WAC NR 716 Site Investigation

4.1.1 Soil Assessment

To determine the magnitude and extent of soil impacts identified during the 2021 Phase II ESA, Ramboll proposes to advance eight soil borings (SB-15 through SB-22) in the southwest corner of the building, in the northern part of the building, and in the northeast and northwest corners of the site, as depicted on Figure 2B, and collect soil samples for laboratory analysis. In addition, per WDNR's previous request, an additional soil boring (SB-18) will be advanced in the vicinity of the former 300-gallon gasoline and 300-gallon diesel USTs to evaluate the soil quality in this area. The precise location of each boring will be based on field observations in the proposed area, subsurface utility clearance, and potential access limitations.

4.1.2 Groundwater Assessment

To determine the magnitude and extent of groundwater impacts identified during the 2021 Phase II ESA, Ramboll proposes to install six additional groundwater monitoring wells (MW-15 through MW-20), as depicted on Figure 2, and collect groundwater samples from the newly installed and existing onsite monitoring wells for laboratory analysis. To determine the magnitude and extent of benzene impacts in groundwater in the southwest corner of the site, two monitoring wells will be installed off site (within the City of Milwaukee right-of-way). To evaluate the groundwater conditions below the building, two monitoring wells will be installed in the central and northern portions of the building. Additionally, given the presence of free product beneath the building in the southcentral area of the site, one monitoring well will be installed south of the small-diameter temporary monitoring well, SB-12/MW-12, immediately outside of the building to define the extent of free product. Furthermore, to determine whether PFAS concentrations are originating off site, one monitoring well will be installed off site (within the City of Milwaukee right-of-way) in the southwest corner of the intersection of West Walnut Street and North 16th Street. To assess the magnitude, extent, and distribution of PFAS concentrations across the site and understand potential migration from an off-site source, based on the lack of PFAS-related historical operations, resampling of the three monitoring wells (MW-6, MW-7, and MW-10) and sampling of all remaining wells for PFAS analysis will be completed as part of the site investigation.

4.1.3 Vapor Assessment

Additionally, to evaluate the potential vapor intrusion risk to future building occupants (building is currently vacant), six sub-slab vapor points will be installed within the building. Depending on the off-site extent of benzene impacts in groundwater, the potential vapor intrusion risk to adjacent residential properties will be evaluated.

The location and associated rationale/justification for each soil boring, monitoring well, and sub-slab vapor point proposed in the site investigation are listed below and defined in Table 1:

- SB-15: West of SB-2 to delineate extent of benzo(a)pyrene in soil above WAC NR 720 industrial direct contact RCL;
- SB-16: Northwest of SB-10 to delineate extent of benzo(a)pyrene in soil above WAC NR 720 industrial direct contact RCL;
- SB-17: Northeast of SB-8 to delineate extent of benzo(a)pyrene in soil above WAC NR 720 industrial direct contact RCL;
- SB-18: Area of former 300-gallon gasoline and 300-gallon diesel USTs to evaluate current soil conditions;
- SB-19/MW-19: Area of historical old hone 4,000-gallon oil tank;
- SB-20/MW-20: Area of former vertical hone steel-lined recessed support structure (18 inches deep) inside building;
- SB-21: Between historical Skiver 2,000-gallon oil tank and bore 100-gallon oil tank;
- SB-22: West of historical bore 6,000-gallon oil tank;
- MW-15: Off-site west of MW-1 and MW-2 area to delineate extent of benzene in groundwater above WAC NR 140 ES;
- MW-16: Off site in the southwest corner of the intersection of West Walnut Street and North 16th Street to determine potential source of PFAS in groundwater;
- MW-17: South of MW-12 area to delineate extent of oily free product;
- MW-18: Off-site south of MW-1 area to delineate extent of benzene in groundwater above WAC NR 140 ES; and
- VP-1 through VP-6: Area of benzene and TCE groundwater impacts below the building footprint to evaluate vapor intrusion risk.

5. SITE INVESTIGATION WORK PLAN

5.1 Pre-Site Investigation Activities

5.1.1 Health and Safety

Prior to on-site activities, the site-specific Health and Safety Plan (HASP) will be updated in accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910 for the proposed field activities. Ramboll will review the HASP with all field personnel prior to commencing the field activities.

5.1.2 City of Milwaukee Right of Way Permitting

Ramboll will contact the Wisconsin Digger's Hotline for the location of public utilities in the area of the investigation and will obtain all permits and approval for off-site access to drill in the City of Milwaukee right-of-way. Additionally, Ramboll will review any available drawings depicting subsurface utilities or structures and retain a private utility locator to clear proposed boring locations for obstructions.

5.1.3 Utility Clearance

Prior to conducting intrusive site investigation activities, utility mark-outs will be coordinated through Diggers Hotline. Ramboll will contract with a private utility locator to complete a geophysical survey (e.g., using ground-penetrating radar) to identify subsurface utilities and confirm their location prior to initiating any intrusive work in the areas where subsurface investigation activities will occur. Proposed sampling locations may be modified to avoid subsurface and overhead utilities or other obstructions, as appropriate.

5.2 Soil Boring Advancement and Screening

The eight proposed soil borings (SB-15 to SB-22) will be advanced utilizing direct push technology (DPT) with a GeoProbe® drill rig with a 2-inch diameter drive rod to a maximum depth of approximately 10 feet bgs. The borings will be advanced at least 2 feet into native soil, or 5 feet below the groundwater table, whichever is encountered first. Soil samples will be continuously collected from the borings for classification and field screening. The soil samples will be described in the field with respect to the soil type, grain size distribution, and color (or discoloration), odor, and moisture content. The soil samples will be screened using a 10.6 electron volt (eV) photoionization detector (PID), following standard procedure. The PID will be calibrated in the field according to manufacturer's instructions, using 100 parts per million (ppm) isobutylene span gas and air (zero gas), and checked between each screening event for proper response. The PID readings and visual/olfactory evidence of contamination will be recorded on the boring logs.

5.3 Soil Sampling and Analysis

Two soil samples will be collected from each soil boring for laboratory analysis. The first sample will be collected from the upper 2 to 2.5 feet to delineate the lateral extent of benzo(a)pyrene impacts identified in the direct contact zone, and a second soil sample will be collected below the observed impacts within the vadose zone to delineate the vertical extent. In the area of the former USTs, the first soil sample will be collected from the 4 to 6-foot depth interval, to coincide with the likely tank depths and a second soil sample will be collected within the vadose zone. A total of eight soil samples will be collected and placed in appropriately preserved, laboratory-supplied containers, which will be sealed, labeled, and placed on ice pending delivery under chain-of-custody procedures to Eurofins Scientific, a Wisconsin-certified laboratory, for analysis. The soil samples from borings SB-15 to SB-17 will be analyzed for PAHs by United States Environmental Protection Agency (USEPA) SW-846 Method 8270. The soil samples from borings SB-18 to SB-22 in the UST areas will be analyzed for

VOCs by USEPA SW-846 Method 8260; PAHs by USEPA SW-846 Method 8270; and RCRA metals by USEPA SW-846 Method 6010/7470. The soil sampling and analysis plan is included in Table 1.

5.4 Groundwater Monitoring Well Installation, Development, and Surveying

The four proposed WAC NR 141-compliant groundwater monitoring wells (MW-15 to MW-20), as depicted on Figure 2, will be installed to depths of approximately 15 feet bgs or 5 feet below the groundwater table, whichever is encountered first. Each monitoring well will be constructed using a 2-inch diameter, flush thread Schedule 40 polyvinyl chloride (PVC) riser pipe, with 10-feet of 2-inch diameter PVC factory cut (0.010-inch) slotted well screen. Coarse silica filter sand packs will be placed from the bottom of the boreholes to 1 to 2 feet above the top of the well screens. Following placement of the coarse sand packs, 1 to 2 feet of fine sand pack followed by bentonite chips or slurry will be placed to ground surface. The monitoring wells will be completed with a flush mount well cover set in concrete.

The newly installed groundwater monitoring wells will be developed in accordance with WAC NR 141 to remove residual materials remaining in the wells after installation and to re-establish the natural hydraulic flow conditions of the formations, which may have been disturbed by the well construction. Following installation, the top of casing elevations of the newly installed monitoring wells (MW-15 through MW-20) will be surveyed to vertical accuracies of 0.01 feet using differential leveling to aid in the determination of groundwater flow direction and assessment of groundwater contaminant movement and distribution. The location survey will be correlated with the existing State Plane Coordinate System, 1983 adjustment, and the vertical survey correlated with the North American Vertical Datum (NAVD) of 1988. Monitoring well construction details and well development forms will be completed for submittal to the WDNR. Following development, groundwater samples will be collected from the newly installed monitoring wells using low-flow groundwater sampling techniques.

5.5 Groundwater Sampling and Analysis

Prior to the groundwater sampling activities, depth to groundwater and depth to free product (if/where present) measurements will be documented at all groundwater monitoring wells (MW-1 through MW-20). Wells with expandable caps will be opened and allowed to equilibrate prior to taking measurements. Measurements will be made using a Heron electronic water level sensor, Model ET-94 (accuracy 0.01 feet) or similar equipment. The depth to groundwater or free product, as well as the total well depth, will be recorded in a bound field notebook.

All monitoring wells (MW-1 through MW-20) will be sampled using low-flow groundwater sampling techniques, which involve utilizing a pump with disposable, high-density polyethylene (HDPE) tubing and a water quality meter with a flow-through cell. If a well does not support low-flow sampling, the well will be sampled with a bailer with a low-flow bottom emptying device. When using either a pump or a bailer, the tubing or bailer will be lowered slowly into the well to limit the amount of disturbance and associated turbidity. For low-flow sampling, the disposable polyethylene tubing will be lowered into the well so that the bottom of the tubing is at the approximate center of the saturated screened interval within the well. The pump will be turned on and purging initiated at a flow rate that allows the water level of the well to remain near its static level to prevent cascading of the water down the well screen so that aeration of the water sample is reduced. The groundwater flow rate during sampling is typically 100 to 500 milliliters per minute (mL/min). Wells with lower transmissivity are purged and sampled at lower flow rates (300 mL/min or less). Field measurements of water quality parameters, including temperature, dissolved oxygen (DO), pH, specific conductivity, oxidation-reduction potential (ORP), and turbidity will be recorded every 3 to 5 minutes during well purging, prior to the collection of groundwater samples. The groundwater samples will be collected upon

stabilization of the groundwater quality parameters, which typically occurs when three consecutive readings do not vary more than ± 10% for turbidity and DO, ± 3% for conductivity and temperature, ± 10 microvolts for ORP, and ± 0.1 for pH. A well will be considered stabilized and ready to be sampled after the field measurements of water quality parameters have stabilized or the well has been purged a minimum of three well volumes.

Reusable groundwater sampling equipment will be thoroughly decontaminated between each sampling location using an Alconox© solution and rinsed in deionized water. New disposable polyethylene tubing or bailers will be utilized for sample collection for each well location. A new pair of nitrile gloves will be used during the collection of each sample to minimize the potential for cross-contamination.

With respect to PFAS sampling, all PFAS protocols for personal protective equipment (PPE), sampling equipment, and sampling procedures will be followed to eliminate potential PFAS cross-contamination concerns. PPE will be modified by eliminating potential PFAS compounds (e.g., select sunscreens and waterproofing materials in boots and clothing) and substituting non-PFAS containing materials (e.g., PVC boots, non-powdered nitrile gloves). Field personal clothing will be laundered at least six times with non-PFAS containing detergents without fabric softener. Personal care products (e.g., deodorant, shaving products, cleansers, etc.) will not be used the day of sampling. Groundwater sampling collection equipment and procedures will be adjusted to exclude potential PFAS containing materials (e.g., low-density polyethylene [LDPE] tubing). Groundwater sampling equipment will be thoroughly decontaminated between each sampling location, and new disposable tubing will be utilized for sample collection for each well location. A new pair of nitrile gloves will be used during the collection of each sample to minimize the potential for cross-contamination.

The samples collected will be containerized in laboratory-provided sample containers, preserved appropriately, and kept on ice, cooling to 4 degrees Celsius. Following sample collection, each sample container will be labeled with the sample location identification, date of sample collection, and intended analysis. The sample containers will then be placed in re-sealable plastic bags and packed in an iced, insulated container.

A total of 21 groundwater samples (including one duplicate groundwater sample) will be submitted for laboratory analysis to Eurofins Scientific, a Wisconsin-certified laboratory for analysis. The groundwater samples collected from all existing and newly installed monitoring wells (MW-1 through MW-20) will be analyzed for PFAS via USEPA Method 537 Modified/screening level method. One field blank per sampling day will be submitted and analyzed for PFAS via USEPA Method 537 Modified/ screening level method. In addition, the groundwater samples collected from newly installed monitoring wells MW-15 and MW-20 will be analyzed for VOCs by USEPA SW-846 Method 8260. The groundwater sampling and analysis plan is displayed on Table 1.

5.6 Interim Action Work Plan for Free Product Recovery

The proposed interim action plan details the activities to remove and monitor LNAPL with the objective to remove the LNAPL mass and prevent LNAPL migration or mobility. LNAPL was observed in one onsite monitoring well, MW-12, and was first identified during the baseline groundwater sampling event in February 2021. Ramboll completed LNAPL recovery activities at MW-12 using a 1-inch bailer during subsequent groundwater gauging events in March 2021 and August 2021. The reported LNAPL apparent thickness during these monitoring events ranged from approximately half of an inch (February 2021) to 12 inches (August 2021). All bailed product was containerized into an 55-gallon steel drum staged on site. The LNAPL was observed to not recover during the time of bailing

activities. On August 20, 2021, Ramboll collected a LNAPL sample that was shipped to Alpha Analytical for fingerprinting analysis; the analytical results are currently pending.

LNAPL at the site was identified only at MW-12, and its extent is defined by MW-11 (approximately 50 feet to the north), MW-13 (approximately 50 feet to the west), and MW-7 (approximately 75 feet to the east). The proposed well (MW-17) to the south/southeast is expected to reasonably define the extent of LNAPL in all directions at the site. Given the limited areal extent and volume, Ramboll has determined that passive LNAPL recovery is a reasonable approach.

Ramboll proposes to further monitor and evaluate the thickness and mobility of the LNAPL by conducting monthly LNAPL bail-down testing in MW-12 following *ASTM E2856-13: Standard Guide for Estimation of LNAPL Transmissivity (ASTM 2013)*. A LNAPL bail-down test will be completed by quickly removing accumulated LNAPL from MW-12 and measuring the flow rate of LNAPL into the well from the surrounding geologic formation. The rate of LNAPL flowing into the well is a function of soil and LNAPL properties and the magnitude of the hydraulic gradient toward the well after LNAPL removal. Results of the LNAPL transmissivity test will be documented and discussed in the final WAC NR 716 Site Investigation Report.

5.7 In-Situ Hydraulic Conductivity Testing

Hydraulic conductivity testing will be conducted to evaluate the flow characteristics of groundwater through the site soil. An *in-situ* hydraulic conductivity test, which is a method of obtaining approximate values of hydraulic conductivities in the immediate vicinity of the well screen through the use of a single well, will be conducted as part of the additional site investigation. Essentially instantaneous lowering of the water level in a well can be achieved by quickly removing water with a bailer or by partially or completely submerging an object in the water, allowing the water level to reach equilibrium, and then quickly removing the object. If the aquifer is very permeable, the water level in the well may rise very rapidly as water levels return to static conditions. Such rapid rises can be measured with pressure transducers. As part of the *in-situ* hydraulic conductivity tests to be conducted at the site, a data logger and a pressure transducer will be utilized to measure and record the changes in water levels.

5.8 Sub-Slab Vapor Point Installation, Sampling, and Analysis

A total of six sub-slab soil vapor samples (VP-1 through VP-6) will be collected through the concrete slab at proposed locations throughout the building, as depicted on Figure 2. Note that the actual vapor sampling locations may vary depending on potential access limitations inside the building. To facilitate collection of sub-slab vapor samples from just beneath the concrete floor, Vapor Pins™ (sub-slab vapor sampling probes supplied by Cox-Colvin & Associates Inc.) will be installed at interior locations below the concrete slab. The flush mount installation of the Vapor Pin™ will be achieved by drilling a 1.5-inch diameter hole at least 1.75 inches into the concrete slab with an electric rotary hammer drill, then drilling a 5/8-inch diameter hole through the slab and approximately 1-inch into the underlying soil to form a void, inserting the lower end of the Vapor Pin™ assembly into the drilled hole, and driving the Vapor Pin™ into the hole. The finished Vapor Pin™ will be flush with the surrounding floor surface and secured in-place. The sampling port will be covered with a protective cap to reduce interferences with building operations.

A sub-slab vapor sample will be collected from each vapor pin using a 6-liter Summa canister fitted with a flow controller regulating the flow to approximately 100 to 200 mL/min, which is recommended for sub-slab sampling; at these flow rates a 6-liter canister would take approximately 30 to 60 minutes to fill. The sub-slab vapor samples will be submitted to Eurofins Scientific, a Wisconsin-

certified laboratory to be analyzed for analysis of VOCs using USEPA Method TO-15 (gas chromatograph [GC]/mass spectrometer). Quality control measures will be implemented during the sub-slab sampling, including vacuum testing of lines and leak detection tracers (helium) for the Vapor Pin™, to ensure the integrity of the sub-slab vapor sample collected. Prior to vapor sample collection, a shut-in test will be conducted on the sample lines extending from the sub-slab Vapor Pin™ to the Summa canister. A vacuum will be placed on the sample train using a hand pump with a vacuum gauge. Ramboll will induce a vacuum in the line of 50 to 100 inches of water, which will remain steady for at least 1 minute if no leaks are present. At locations where bare concrete flooring is exposed, a water dam may be constructed around the sub-slab probe by sealing (with plumbers' putty) a 2-inch PVC flange to the concrete floor surrounding the vapor probe and filling it with water. If no leaks are present, the water level in the dam will remain constant. Alternatively, the Vapor Pin™ can be leak checked with helium. Helium will be injected into a shroud that is sealed (with neoprene weather stripping) to the floor around the sub-slab Vapor Pin™. The helium gas will be introduced to a concentration of 20% to 50% percent by volume into a shroud covering the sub-slab probe. The helium concentration inside the shroud will be measured using a hand-held helium meter. A sub-slab vapor sample is withdrawn and screened with the helium detector. A helium concentration from the probe greater than 5% of the shroud concentration indicates the probe should be resealed and retested. A helium probe concentration less than 5% of the shroud concentration indicates that the probe is sealed, and collection of the vapor sample can proceed. The sampling probes will be established as semi-permanent points that will be capped and remain in place, pending receipt of laboratory results. The probes will remain in place for potential subsequent sampling. Final probe abandonment will consist of the complete removal of the Vapor Pins™ and sealing of the drilled holes in the concrete slab with cement to be flush with the surrounding floor surface.

5.9 Investigation Derived Waste Management

Soil cuttings and purge water generated during site investigation activities will be containerized in individual 55-gallon drums and labeled. The drums will be staged at an approved, accessible location designated by the current site owner or their designated representative. Representative waste characterization samples will be collected from the drums and submitted to a Wisconsin-certified laboratory (or undergoing the certification process and been audited by the WDNR), for Protocol B and PFAS analyses.

Waste profile(s) will be completed and submitted to a waste disposal company for transportation and disposal at a licensed waste facility. Waste disposal documentation will be provided in the Site Investigation Report.

5.10 WAC NR 716 Site Investigation Report

Upon completion of the field activities described above, a WAC NR 716 Site Investigation Report will be prepared in accordance with WAC NR 716.15. The soil and groundwater laboratory analytical results will be compared to the current WAC NR 720 and NR 140 criteria/proposed guidance PFAS WAC NR 140 criteria, respectively. The sub-slab vapor laboratory analytical results will be compared to the Wisconsin Vapor Risk Screening Levels (VRSL) for the large commercial/industrial building category. The report will include the subsurface assessment results, documentation of field activities, soil boring logs, site, and soil boring/monitoring well location figures, geologic cross-sections, tabulated analytical laboratory results, an evaluation of the data, and conclusions and recommendations.

6. IMPLEMENTATION SCHEDULE

The site investigation activities described herein will be initiated within 1 to 3 weeks following receipt of WDNR approval of this Work Plan, depending on driller availability and the schedule for obtaining drilling permits and approval for off-site access to drill in the City of Milwaukee right-of-way. Field work is anticipated to be completed in 10 days (drilling, soil sampling, vapor pin installation and sub-slab vapor sampling, well installation, well development, surveying, groundwater sampling of existing and newly installed groundwater monitoring wells, and hydraulic conductivity testing).

The laboratory analytical results will be available within 10 business days of submittal to the laboratory. Analytical results will be provided to the WDNR and the City of Milwaukee (for the locations within the City right-of-way only) within 10 days of receipt in accordance with the requirements of WAC NR 716.14 (2) for site investigation sample results notification.

The Site Investigation Report will be submitted to the WDNR within 60 days of field work completion and receipt of laboratory results, as required. A data results memorandum will be provided to the WDNR shortly following receipt of the results. As stipulated in WAC NR 716.15, the Site Investigation Report will be completed and submitted to the WDNR within 60 days of the completion of field activities and receipt of laboratory analytical data.

If additional investigation is warranted based on the results, a Work Plan Addendum will be provided to the WDNR and the Site Investigation Report will be prepared following the completion of the site investigation activities. Ramboll will keep the WDNR Project Manager apprised of any delays that are outside of Ramboll and/or Scot's control.

7. REFERENCES

ASTM E2856-13, Standard Guide for Estimation of LNAPL Transmissivity, ASTM International, West Conshohocken, PA, 2013, www.astm.org

United States Department of Agriculture Soil Conservation Service. 1971. Soil Survey of Milwaukee and Waukesha Counties, Wisconsin.

Trotta, L. C. and R. D. Cotter. 1973. Map of Depth to Bedrock in Wisconsin. Madison: University of Wisconsin-Extension Geologic and Natural History Survey, Scale=1:1,000,000.

Mudrey, M.G. Jr., B.A. Brown and J.K. Greenberg. 1982. Bedrock Geologic Map of Wisconsin. Madison: University of Wisconsin-Extension Geological and Natural History Survey, Scale=1:1,000,000.

Mickelson, D.M., Clayton, L. and Baker, R. 1984. Pleistocene Stratigraphic Units of Wisconsin. University of Wisconsin-Extension Geological and Natural History Survey.

TABLE

Table 1: Revised Sampling and Analysis Plan Summary
Scot Industries NR716 Site Investigation
1532 West Galena Street
Milwaukee, WI, 53205
Ramboll Project Number 1690020135-001

Sample Location	Sample Location	Type	Area	Sample Media	Soil Parameters			Groundwater Parameters				Vapor Intrusion Parameters	Rationale/Comment
					VOCs	PAHs	Metals	VOCs	PAHs	Metals	PFAS	VOCs	
SB-1/MW-1[1]	On site	Small Diameter Monitoring Well	Area of historical gasoline filling station	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-2/MW-2[1]	On site	Small Diameter Monitoring Well	Area of historical gasoline filling station	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-3/MW-3[1]	On site	Small Diameter Monitoring Well	Approximate area of former auto repair portion of the former gasoline filling station	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-4/MW-4[1]	On site	Small Diameter Monitoring Well	Inside of loading dock bay (pavement staining)	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-5/MW-5[1]	On site	Small Diameter Monitoring Well	Area adjoining historical auto repair business and on-site fill soils	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-6/MW-6[1]	On site	Small Diameter Monitoring Well	Area of exterior metal parts storage (application of rust inhibitor) and on-site fill soils	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-7/MW-7[1]	On site	Small Diameter Monitoring Well	Area of exterior metal parts storage (application of rust inhibitor) and on-site fill soils	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-8/MW-8[1]	On site	Small Diameter Monitoring Well	Area of historical residences and on-site fill soils	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-9/MW-9[1]	On site	Small Diameter Monitoring Well	Area of historical residences and on-site fill soils	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-10/MW-10[1]	On site	Small Diameter Monitoring Well	Area of former slaughterhouse and on-site fill soils	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-11/MW-11[1]	On site	Small Diameter Monitoring Well	Area inside of 1956 building, near honing oil USTs	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-12/MW-12[1]	On site	Small Diameter Monitoring Well	Area inside of 1956 building, near honing oil USTs	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-13/MW-13[1]	On site	Small Diameter Monitoring Well	Area inside the 1924 building near former 8,000-gallon diesel UST	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-14/MW-14[1]	On site	Small Diameter Monitoring Well	Property's northern parcel	Groundwater							X		Delineate magnitude, extent, and distribution of PFOA concentrations sitewide
SB-15	On site	Soil Boring	Southwestern Property Boundary (West of SB-2)	Soil		X							Delineate extent of benzo(a)pyrene in soil above NR720 industrial direct contact RCL
SB-16	On site	Soil Boring	Northwestern Property Boundary (Northwest of SB-10)	Soil		X							Delineate extent of benzo(a)pyrene in soil above NR720 industrial direct contact RCL
SB-17	On site	Soil Boring	Northeastern Property Boundary (Northeast of SB-8)	Soil		X							Delineate extent of benzo(a)pyrene in soil above NR720 industrial direct contact RCL
SB-18	On site	Soil Boring	Area of former 300-gallon gasoline and diesel USTs	Soil	X	X	X						Evaluate current soil conditions
SB-19/MW-19[2]	On site	Soil Boring/ Monitoring Well	Area of historic old hone 4,000-gallon oil tank	Soil and Groundwater	X	X	X	X	X	X	X		Evaluate current soil and groundwater conditions
SB-20/MW-20[2]	On site	Soil Boring/ Monitoring Well	Area of former vertical honing steel lined recessed support structure (18" deep) inside building	Soil and Groundwater	X	X	X	X	X	X	X		Evaluate current soil and groundwater conditions
SB-21[2]	On site	Soil Boring	Between historic Skiver 2,000-gallon oil tank and bore 100-gallon oil tank	Soil	X	X	X						Evaluate current soil conditions
SB-22[2]	On site	Soil Boring	West of historic bore 6,000-gallon oil tank	Soil	X	X	X						Evaluate current soil conditions

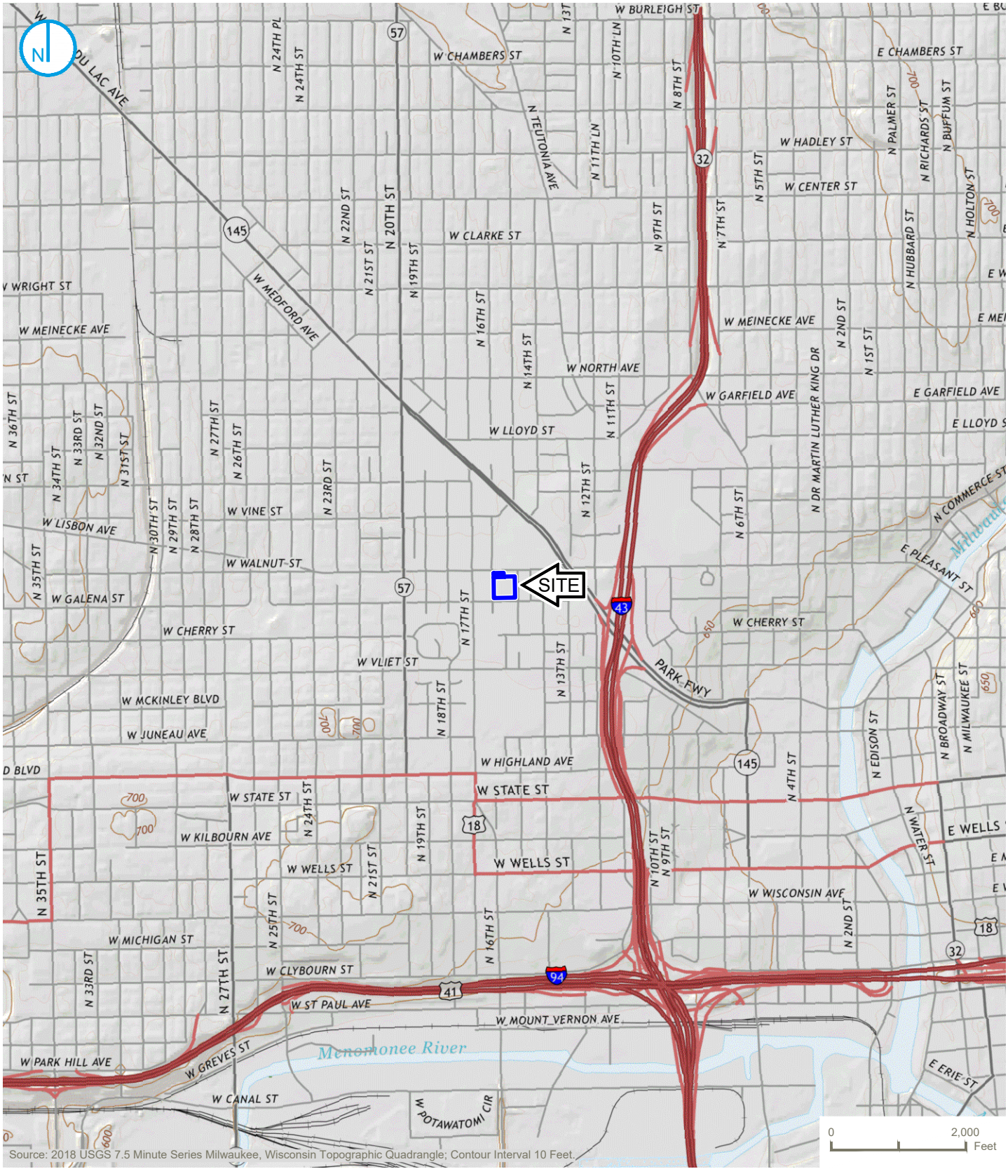
Table 1: Revised Sampling and Analysis Plan Summary
Scot Industries NR716 Site Investigation
1532 West Galena Street
Milwaukee, WI, 53205
Ramboll Project Number 1690020135-001

Sample Location	Sample Location	Type	Area	Sample Media	Soil Parameters			Groundwater Parameters				Vapor Intrusion Parameters	Rationale/Comment
					VOCs	PAHs	Metals	VOCs	PAHs	Metals	PFAS	VOCs	
MW-15	Offsite	Soil Boring/ Monitoring Well	West of MW-1 and MW-2 (west of facility)	Soil and Groundwater	X	X	X	X	X	X	X		Delineate extent of benzene in groundwater above NR 140 ESs
MW-16	Offsite	Soil Boring/ Monitoring Well	Southwest corner of the intersection of W Walnut St and N 16th St	Soil and Groundwater	X	X	X	X	X	X	X		Determine potential source of PFOA in groundwater
MW-17	On site	Soil Boring/ Monitoring Well	South of MW-12 area	Soil and Groundwater	X	X	X	X	X	X	X		Delineate extent of oily free product
MW-18	Offsite	Soil Boring/ Monitoring Well	South of MW-1 area	Soil and Groundwater	X	X	X	X	X	X	X		Delineate extent of benzene in groundwater above NR 140 ES
VP-1	On site	Vapor Pin	Southwestern Building Boundary - Inside of Building	Sub-Slab Vapor								X	Evaluate vapor intrusion risk of benzene and TCE groundwater impacts identified below the building footprint
VP-2	On site	Vapor Pin	South Building Boundary - Area Adjacent to Former Hone Tank	Sub-Slab Vapor								X	Evaluate vapor intrusion risk of benzene and TCE groundwater impacts identified below the building footprint
VP-3	On site	Vapor Pin	South Building Boundary	Sub-Slab Vapor								X	Evaluate vapor intrusion risk of benzene and TCE groundwater impacts identified below the building footprint
VP-4	On site	Vapor Pin	Area North MW-2 and West of MW-3	Sub-Slab Vapor								X	Evaluate vapor intrusion risk of benzene and TCE groundwater impacts identified below the building footprint
VP-5	On site	Vapor Pin	Northern Area of Building	Sub-Slab Vapor								X	Evaluate vapor intrusion risk of benzene and TCE groundwater impacts identified below the building footprint
VP-6	On site	Vapor Pin	Eastern Building Boundary	Sub-Slab Vapor								X	Evaluate vapor intrusion risk of benzene and TCE groundwater impacts identified below the building footprint

Definitions:
ES = Enforcement Standard
MW = monitoring well
PAHs = polycyclic aromatic hydrocarbons
PFAS = per- and polyfluoroalkyl substances
PFOA = perfluorooctanoic acid
RCL = Residual Contaminant Level
SB = soil boring
TCE = trichloroethylene
USEPA = United States Environmental Protection Agency
VOCs = volatile organic compounds
VP = vapor point

Notes:
[1] = Soil boring/temporary monitoring wells SB-1/MW-1 through SB-14/MW-14 were installed during January 18-21, 2021 as part of the Phase II Environmental Site Assessment (ESA) Investigation
[2] = Additional soil borings/monitoring wells proposed following comments received from the Wisconsin Department of Natural Resources (WDNR) on August 9, 2021 regarding the NR 716 Site Investigation Work Plan
- Metals analysis to include the 8 RCRA Metals, Aluminum, Antimony, Copper, Iron, Manganese, and Thallium
- PFAS analysis to include the Wisconsin 33 analyte list recommended by WDNR
- VOCs to be analyzed by USEPA SW-846 Method 8260
- PAHs to be analyzed by USEPA SW-846 Method 8270
- Metals to be analyzed by USEPA SW-846 Method 6010/7470
- PFAS to be analyzed by USEPA Method 537 Modified/screening level method

FIGURES



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PROJECT: 1690020135 DATED: 2/24/2021 DESIGNER: CKL

Map Scale: 1:24,000 | Map Center: 43°3'6.9208", -87°55'55.5047"

SITE LOCATION MAP

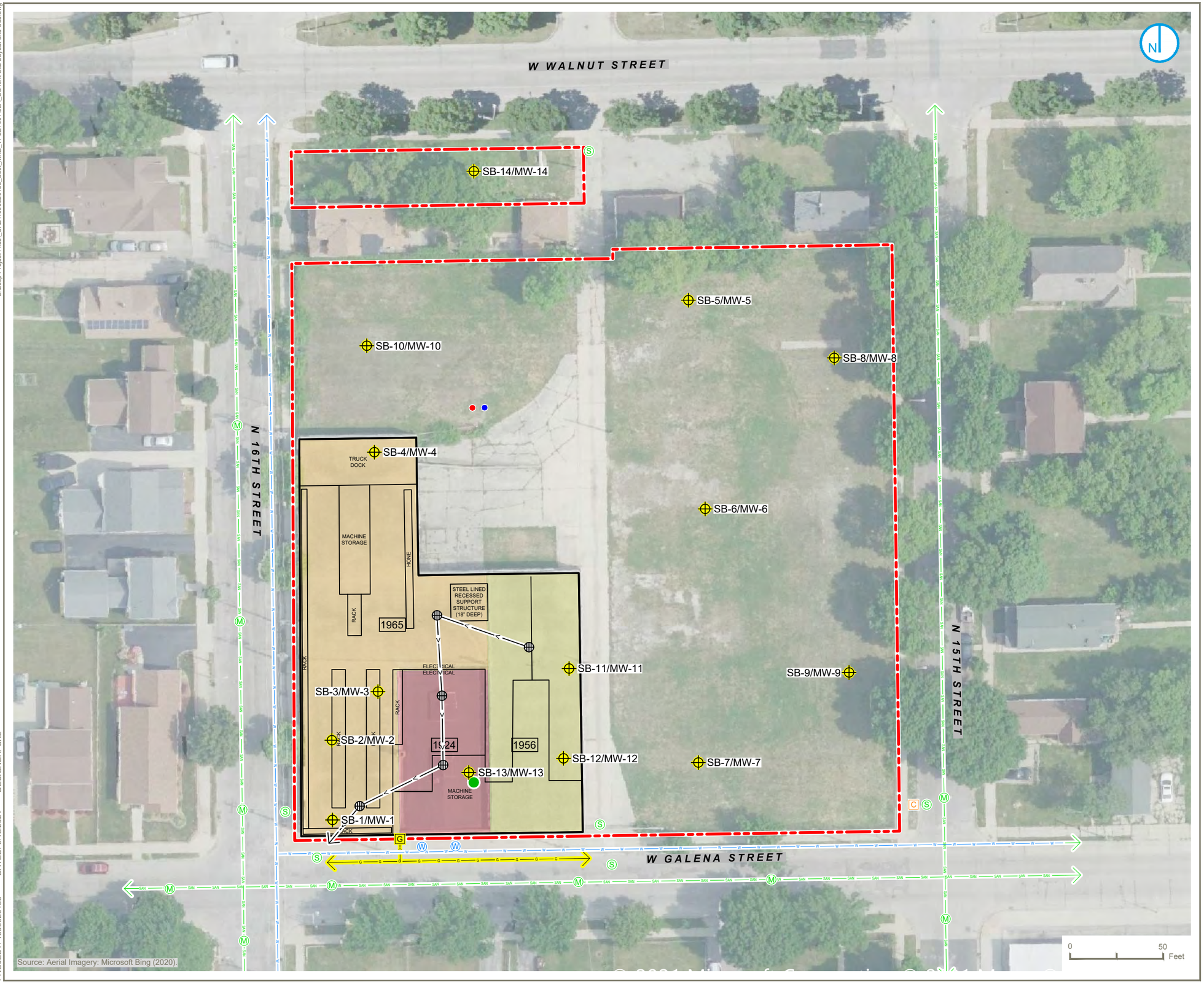
FIGURE 01

KEY MAP

SCOT INDUSTRIES
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL



LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- 1924 APPROXIMATE DATE OF BUILDING CONSTRUCTION
- FORMER 300-GALLON GASOLINE UST
- FORMER 300-GALLON DIESEL UST
- FORMER 8,000-GALLON DIESEL UST
- SOIL BORING/TEMPORARY WELL LOCATION
- STORM DRAIN
- PUBLIC WATER SUPPLY UTILITY
- NATURAL GAS UTILITY
- STORM WATER SEWER DRAIN
- SANITARY SEWER UTILITY MANHOLE
- CABLE/FIBER OPTIC UTILITY
- CONVEYANCE PIPING

CURRENT SITE LAYOUT AND USE

SCOT INDUSTRIES
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

FIGURE 2A

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1690020135 DATED: 9/16/2021 DESIGNER: CKL

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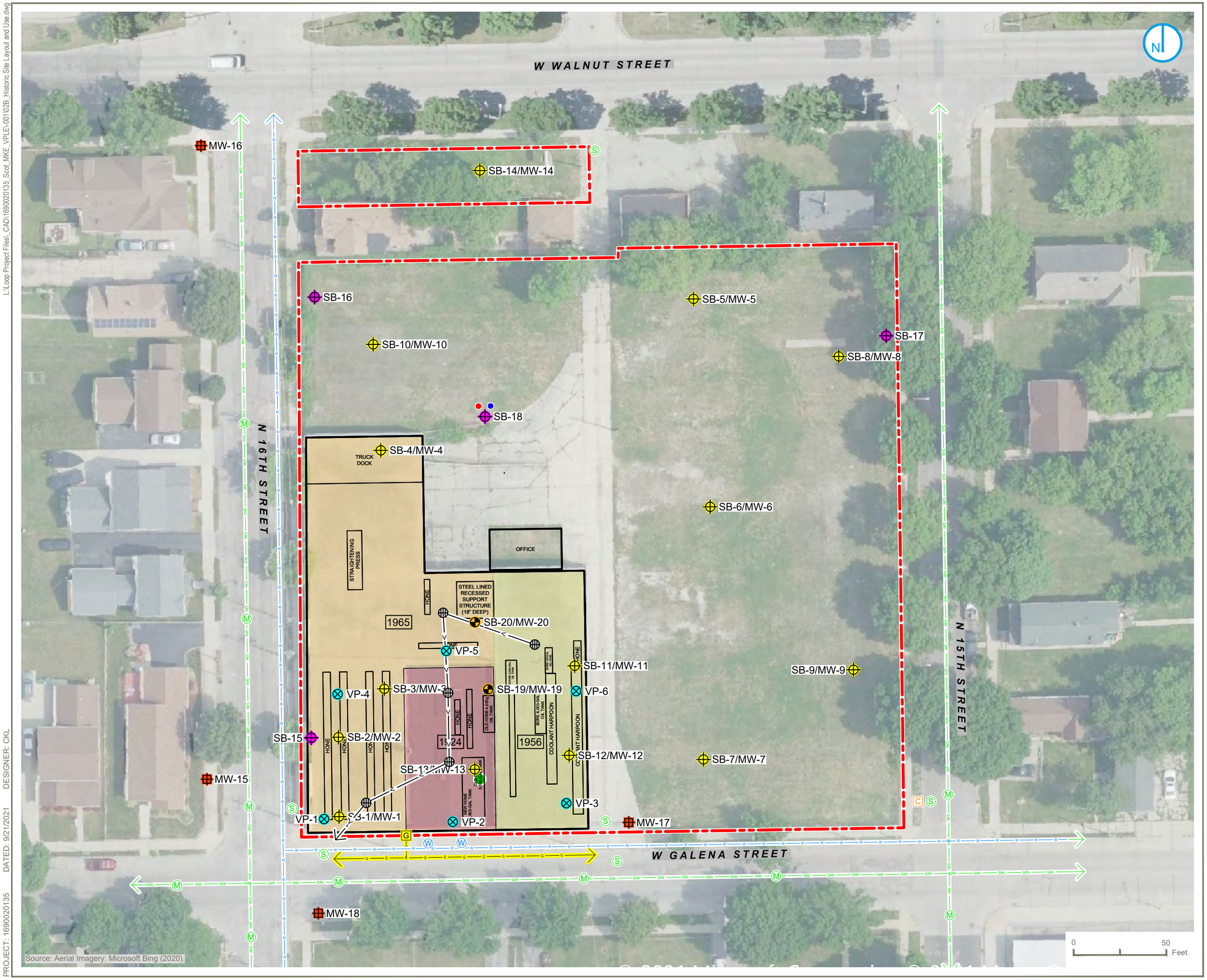

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- 1924 APPROXIMATE DATE OF BUILDING CONSTRUCTION
- FORMER 300-GALLON GASOLINE UST
- FORMER 300-GALLON DIESEL UST
- FORMER 8,000-GALLON DIESEL UST
- SOIL BORING/TEMPORARY WELL LOCATION
- STORM DRAIN
- PUBLIC WATER SUPPLY UTILITY
- NATURAL GAS UTILITY
- STORM WATER SEWER DRAIN
- SANITARY SEWER UTILITY MANHOLE
- CABLE/FIBER OPTIC UTILITY
- CONVEYANCE PIPING
- PROPOSED SOIL BORING
- PROPOSED SOIL BORING/MONITORING WELL - SEPT 2021 SI REVISIONS
- PROPOSED SUB-SLAB VAPOR POINT
- PROPOSED OFF-SITE MONITORING WELLS

HISTORIC SITE LAYOUT AND USE

SCOT INDUSTRIES
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

FIGURE 2B

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1690020135 DATED: 9/21/2021 DESIGNER: CKL

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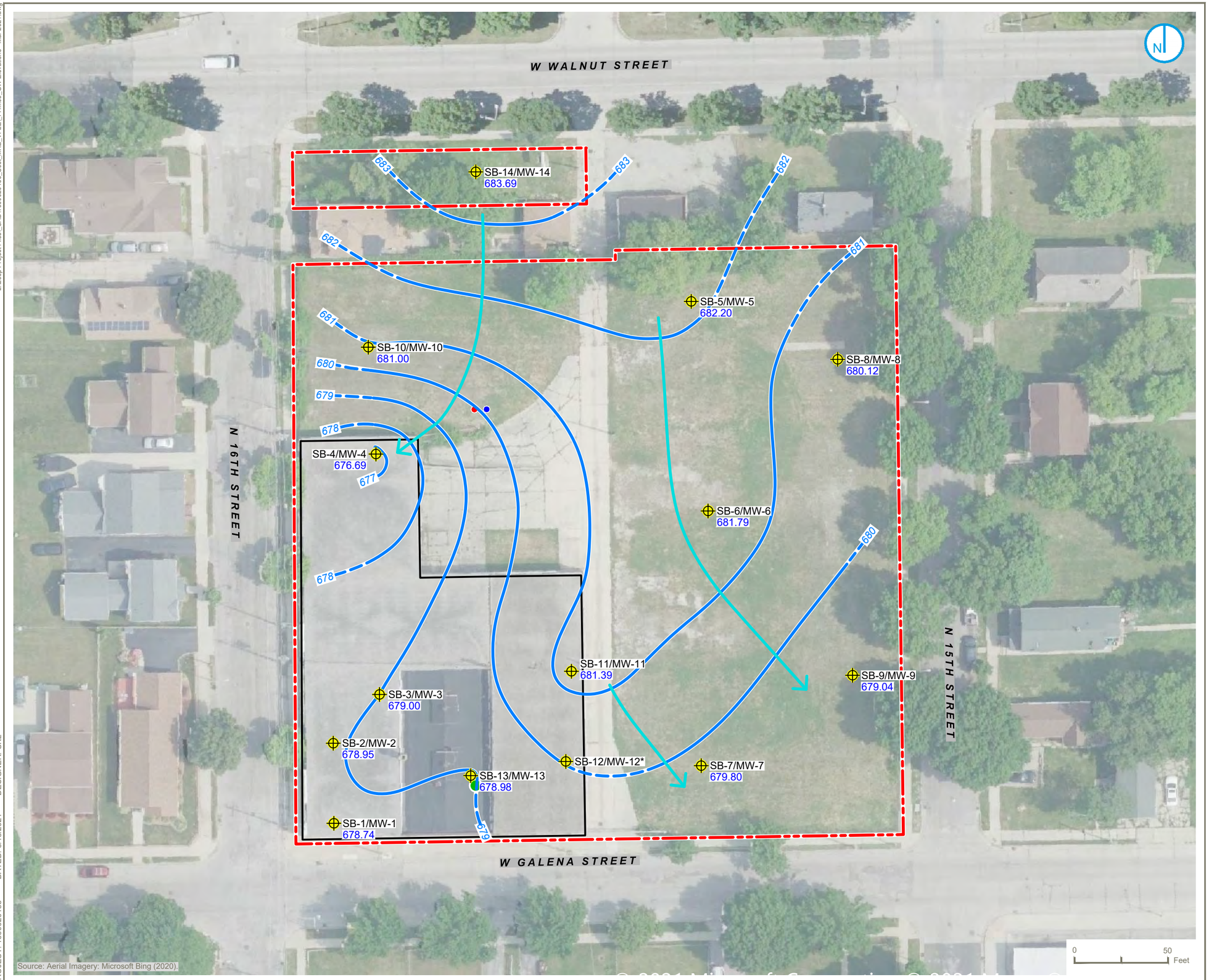

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- FORMER 300-GALLON GASOLINE UST
- FORMER 300-GALLON DIESEL UST
- FORMER 8,000-GALLON DIESEL UST
- SOIL BORING/TEMPORARY WELL
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- 680.12 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER FLOW DIRECTION

Note
* Free product present in monitoring well MW-12.

GROUNDWATER ELEVATIONS MARCH 11, 2021

SCOT INDUSTRIES
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

FIGURE 3A

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1690020135 DATED: 3/18/2021 DESIGNER: CKL

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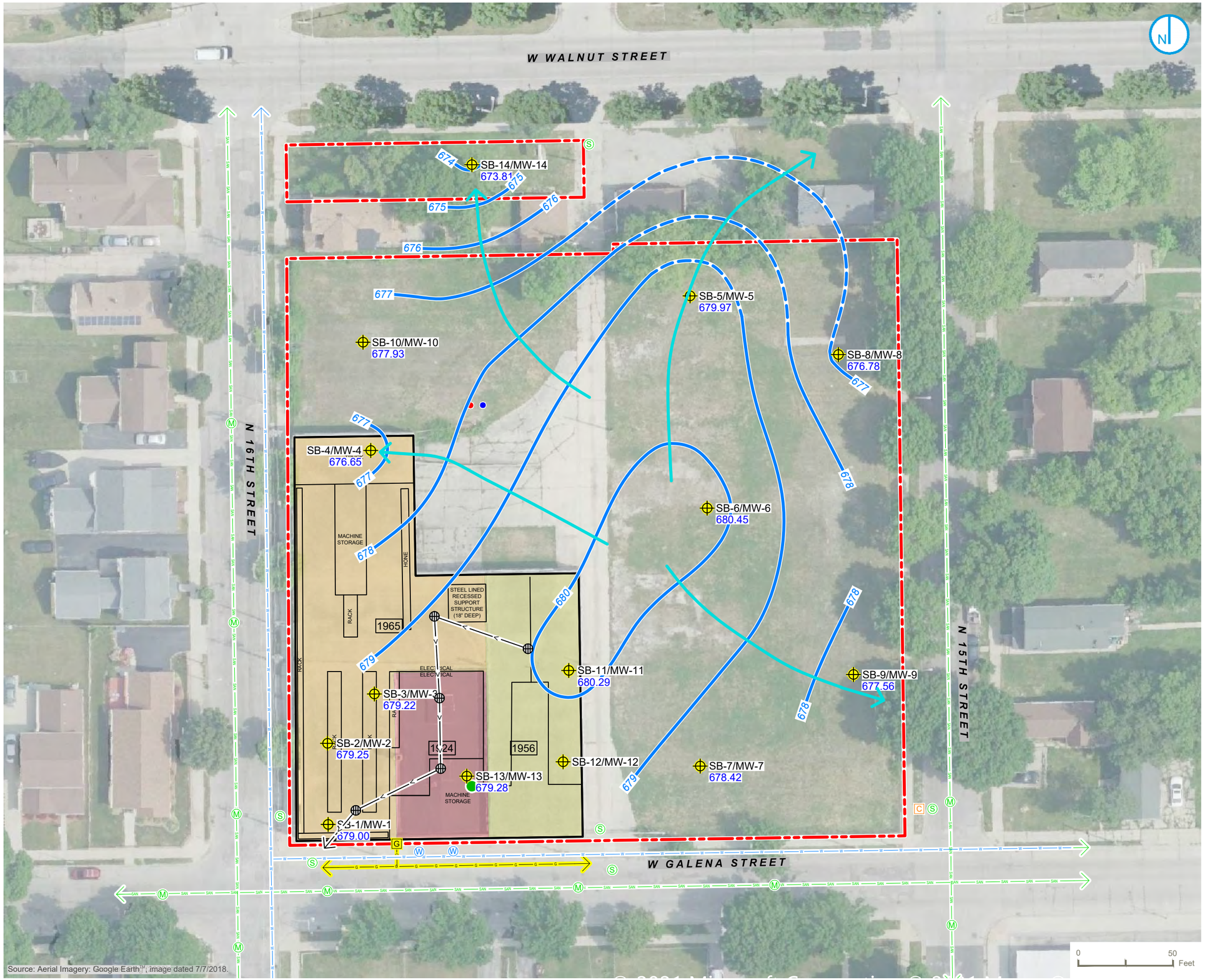
DESIGNER: CKL

DATED: 9/16/2021

PROJECT: 1690020135



LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- 1924 APPROXIMATE DATE OF BUILDING CONSTRUCTION
- FORMER 300-GALLON GASOLINE UST
- FORMER 300-GALLON DIESEL UST
- FORMER 8,000-GALLON DIESEL UST
- SOIL BORING/TEMPORARY WELL LOCATION
- STORM DRAIN
- PUBLIC WATER SUPPLY UTILITY
- NATURAL GAS UTILITY
- STORM WATER SEWER DRAIN
- SANITARY SEWER UTILITY MANHOLE
- CABLE/FIBER OPTIC UTILITY
- CONVEYANCE PIPING
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- 676.78 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER FLOW DIRECTION

Note
* Free product present in monitoring well MW-12.

GROUNDWATER ELEVATIONS AUGUST 20, 2021

SCOT INDUSTRIES
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

FIGURE 3B

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

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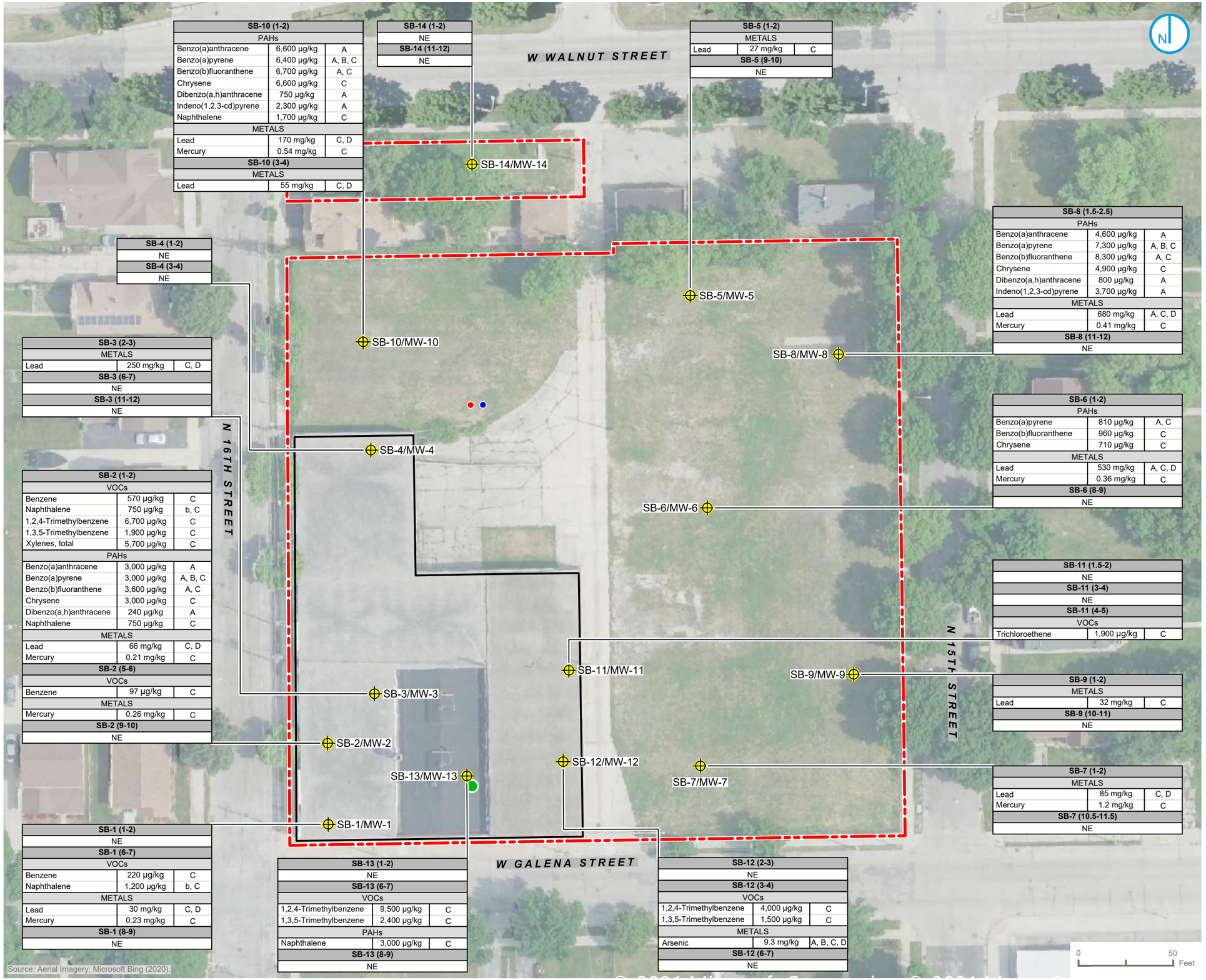

SB-10 (1-2)		
PAHs		
Benzo(a)anthracene	6,600 µg/kg	A
Benzo(a)pyrene	6,400 µg/kg	A, B, C
Benzo(b)fluoranthene	6,700 µg/kg	A, C
Chrysene	6,600 µg/kg	C
Dibenzo(a,h)anthracene	750 µg/kg	A
Indeno(1,2,3-cd)pyrene	2,300 µg/kg	A
Naphthalene	1,700 µg/kg	C
METALS		
Lead	170 mg/kg	C, D
Mercury	0.54 mg/kg	C
SB-10 (3-4)		
METALS		
Lead	55 mg/kg	C, D

SB-14 (1-2)
NE
SB-14 (11-12)
NE

SB-5 (1-2)		
METALS		
Lead	27 mg/kg	C
SB-5 (9-10)		
NE		

SB-4 (1-2)
NE
SB-4 (3-4)
NE

SB-8 (1.5-2.5)		
PAHs		
Benzo(a)anthracene	4,600 µg/kg	A
Benzo(a)pyrene	7,300 µg/kg	A, B, C
Benzo(b)fluoranthene	8,300 µg/kg	A, C
Chrysene	4,900 µg/kg	C
Dibenzo(a,h)anthracene	800 µg/kg	A
Indeno(1,2,3-cd)pyrene	3,700 µg/kg	A
METALS		
Lead	680 mg/kg	A, C, D
Mercury	0.41 mg/kg	C
SB-8 (11-12)		
NE		

SB-3 (2-3)		
METALS		
Lead	250 mg/kg	C, D
SB-3 (6-7)		
NE		
SB-3 (11-12)		
NE		

SB-6 (1-2)		
PAHs		
Benzo(a)pyrene	810 µg/kg	A, C
Benzo(b)fluoranthene	960 µg/kg	C
Chrysene	710 µg/kg	C
METALS		
Lead	530 mg/kg	A, C, D
Mercury	0.36 mg/kg	C
SB-6 (8-9)		
NE		

SB-2 (1-2)		
VOCs		
Benzene	570 µg/kg	C
Naphthalene	750 µg/kg	b, C
1,2,4-Trimethylbenzene	6,700 µg/kg	C
1,3,5-Trimethylbenzene	1,900 µg/kg	C
Xylenes, total	5,700 µg/kg	C
PAHs		
Benzo(a)anthracene	3,000 µg/kg	A
Benzo(a)pyrene	3,000 µg/kg	A, B, C
Benzo(b)fluoranthene	3,600 µg/kg	A, C
Chrysene	3,000 µg/kg	C
Dibenzo(a,h)anthracene	240 µg/kg	A
Naphthalene	750 µg/kg	C
METALS		
Lead	66 mg/kg	C, D
Mercury	0.21 mg/kg	C
SB-2 (5-6)		
VOCs		
Benzene	97 µg/kg	C
METALS		
Mercury	0.26 mg/kg	C
SB-2 (9-10)		
NE		

SB-11 (1.5-2)
NE
SB-11 (3-4)
NE
SB-11 (4-5)
VOCs
Trichloroethene 1,900 µg/kg C

SB-9 (1-2)		
METALS		
Lead	32 mg/kg	C
SB-9 (10-11)		
NE		

SB-7 (1-2)		
METALS		
Lead	85 mg/kg	C, D
Mercury	1.2 mg/kg	C
SB-7 (10.5-11.5)		
NE		

SB-1 (1-2)		
NE		
SB-1 (6-7)		
VOCs		
Benzene	220 µg/kg	C
Naphthalene	1,200 µg/kg	b, C
METALS		
Lead	30 mg/kg	C, D
Mercury	0.23 mg/kg	C
SB-1 (8-9)		
NE		

SB-13 (1-2)		
NE		
SB-13 (6-7)		
VOCs		
1,2,4-Trimethylbenzene	9,500 µg/kg	C
1,3,5-Trimethylbenzene	2,400 µg/kg	C
PAHs		
Naphthalene	3,000 µg/kg	C
SB-13 (8-9)		
NE		

SB-12 (2-3)		
NE		
SB-12 (3-4)		
VOCs		
1,2,4-Trimethylbenzene	4,000 µg/kg	C
1,3,5-Trimethylbenzene	1,500 µg/kg	C
METALS		
Arsenic	9.3 mg/kg	A, B, C, D
SB-12 (6-7)		
NE		

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- FORMER 300-GALLON GASOLINE UST
- FORMER 300-GALLON DIESEL UST
- FORMER 8,000-GALLON DIESEL UST
- SOIL BORING/TEMPORARY WELL LOCATION

Notes

1. Concentrations are compared to the Wisconsin Department of Natural Resources (WDNR) Residual Contaminant Levels (RCLs).

VOCs = Volatile Organic Compounds
PAHs = Polycyclic Aromatic Hydrocarbons
BTV = Background Threshold Value
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
A: Non-Industrial Direct Contact RCL exceedance
B: Industrial Direct Contact RCL exceedance
C: Groundwater Pathway RCL exceedance
D: Background Threshold Value exceedance
NE: No exceedance
b: Compound was found in the blank and sample.

EXCEEDANCES OF NR 720 SOIL RCLs

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1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

FIGURE 04

RAMBOLL US CONSULTING, INC.
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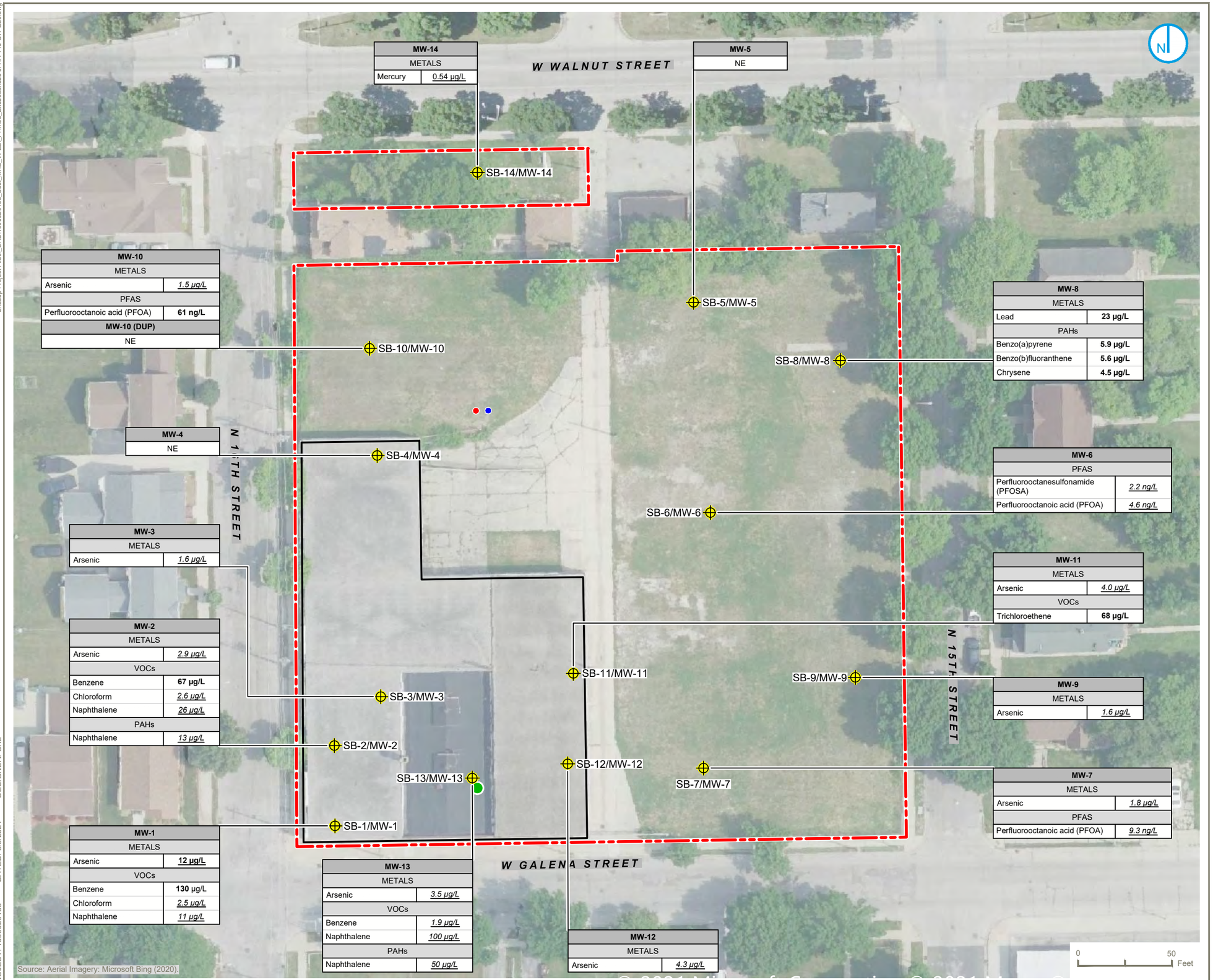

LEGEND

- PROPERTY BOUNDARY (APPROXIMATE)
- FORMER 300-GALLON GASOLINE UST
- FORMER 300-GALLON DIESEL UST
- FORMER 8,000-GALLON DIESEL UST
- SOIL BORING/TEMPORARY WELL LOCATION

Notes

Groundwater analytical results were compared to the WAC NR 140 Enforcement Standard (ES) and Preventative Action Limit (PAL).

Exceedances of the PAL are shown in underlined *italics*, and exceedances of the ES are shown in **bold**. Only exceeded concentrations are displayed.

µg/L = micrograms per liter

ng/L = nanograms per liter

NE = No Exceedances

EXCEEDANCES OF NR 140 CRITERIA IN GROUNDWATER

SCOT INDUSTRIES
1532 WEST GALENA STREET
MILWAUKEE, WISCONSIN

FIGURE 05

RAMBOLL US CONSULTING, INC.
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