

Ms. Margaret Brunette Wisconsin Department of Natural Resources 2300 N. Dr. Martin Luther King, Jr. Drive Milwaukee, WI 53212-3128

PROPOSED UPDATED VPLE INVESTIGATION STRATEGY AT THE FORMER SCOT INDUSTRIES FACILITY IN MILWAUKEE, WISCONSIN

Dear Ms. Brunette:

On behalf of Scot Industries, Inc. (Scot), Ramboll US Consulting, Inc. (Ramboll) prepared this updated investigation strategy for the property located at 1532 West Galena Street in Milwaukee, Wisconsin (the "site" or "property") in anticipation of enrolling the site into the Voluntary Party Liability Exemptions (VPLE) program as part of preparing the property for sale. The site location is depicted in Figure 1.

We previously requested the Wisconsin Department of Natural Resources' (WDNR) review of and concurrence with an investigative approach for the site, which was submitted to the WDNR on October 22, 2020, along with a completed Technical Assistance Form and a \$700 Technical Assistance Fee. We are providing this modified investigation strategy plan to reflect the mutually agreed upon scope of work for the Phase II Environmental Site Assessment (ESA) for WDNR records based on a meeting between Scot representatives and WDNR via conference call on December 18, 2020.

SITE DESCRIPTION

The approximately 2.36-acre site is improved with an approximately 125,000-square-foot building. The site is 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 site layout is depicted on Figure 2.

SITE HISTORY

The site was developed by 1894 (and possibly earlier) for residential purposes and was developed with as many as 30 residential structures. In addition to the residential property use, the site was used for commercial/industrial purposes, including a slaughterhouse, horse collar factory, and hat factory (1890s), a coat shop and wagon shop (1910s), a gasoline filling station and three gasoline tanks (1940s to 1950s), and a car repair business (1950s to late 1960s). Scot began industrial machining operations on the site in 1953 using the site 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 site for exterior parts and material storage.

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Scot continued machining operations at the site until the early 1990s, when the company began using the building for storage.

REGULATORY SITE HISTORY

The site is not currently an open site on WDNR's Bureau for Remediation and Redevelopment Tracking System (BRRTS) website. The site is listed on BRRTS with two closed listings as discussed further below.

BRRTS Number 03-41-00081

Scot Industries is listed on the Leaking Underground Storage Tank (LUST) database due to contamination that was discovered during the removal of one 8,000-gallon diesel fuel tank on February 13, 1989. No Further Action (NFA) approval was granted from the WDNR dated February 23, 1990.

BRRTS Number 09-41-292065

Scot Industries is listed on the BRRTS database with a No Action Required (NAR) listing related to the removal and clean closure of two underground storage tanks (USTs) (300-gallon unleaded gasoline and one 300-gallon diesel) on November 14, 1995. A NAR determination was issued by the WDNR on November 19, 1995.

Scot Industries is listed in the Resource Conservation and Recovery Act (RCRA) database as a non-generator of hazardous waste. The site was formerly listed as a small quantity generator (SQG) of hazardous waste in October 1997. The site was inspected in 1996; no violations were reported.

PHASE I ESA SUMMARY

In October 2020, Ramboll conducted a Phase I ESA of the site on behalf of Scot in accordance with ASTM Standard E1527-13. The 2020 Phase I ESA identified the following recognized environmental conditions (RECs) as summarized below:

- Past Use of the Site as a Gasoline Station: The southwest corner of the site was historically developed as a gasoline station between the 1940s and 1950s. A 1951 Sanborn map depicts three gasoline tanks (GTs) in the southwest corner of the property along with a small commercial building noted as "auto repair." In addition, the site is listed as L&M Filling Station and Mid-Town Auto in the 1952 and 1958 city directories. This area of the site is currently located beneath the portion of the existing site building that was expanded in 1956. There have been no site investigation activities conducted in this area of the site and it is unknown if the historical tanks depicted on the Sanborn maps were removed from the site or if contamination from the historical use of the site as a gasoline station and auto repair business is present on the site.
- Exterior Metal Parts Storage Area: According to available information, the eastern portion of the site was used by Scot as an exterior metal parts storage area where a petroleum-based rust inhibitor was applied to the stored parts to prevent rusting. Although Ramboll did not see evidence of staining on the ground surface in this area of the site, the rust inhibitor was historically directly sprayed onto the metal on bare ground.

The following historical RECs (HRECs) related to potential contamination concerns were identified:

• **1989 UST Closure:** One 8,000-gallon diesel UST was excavated and removed from the site in 1989. According to the 1989 UST Assessment report, there was no obvious indication of a release at the time



of the tank removal and the excavation did not contain any water at that time. However, a few days after the excavation was complete, water with apparent petroleum impacts was observed in the former tank excavation. The release was reported to the WDNR. Six confirmatory soil samples were collected from the base and sidewalls of the excavation and analyzed for benzene, ethylbenzene, toluene and xylene (BTEX) and Total Petroleum Hydrocarbons (TPH) as diesel. In addition, one water sample was collected and analyzed for BETX, TPH, and total sulfur. TPH concentrations in soil ranged between non-detect and 690 milligrams per kilogram (mg/kg). BTEX concentrations in soil ranged between non-detect and 24.7 mg/kg (xylene) with the area of impacted soil located on the south and west excavation walls. The water sample collected from the open excavation contained low concentrations of xylene (1 microgram per liter [µg/L]) and sulfur (14 milligram per liter [mg/L]); however, TPH was not detected in the water sample.

In December 1989, a sump/air venting system was installed in the former tank pit. Approximately 70 cubic yards of soil were excavated from the former tank cavity and stockpiled on site. In addition, a water collection sump was installed in the former tank excavation. Two soil samples were collected from the soil stockpile. The first soil sample did not contain detectable concentrations of BTEX compounds or TPH. The second soil sample contained relatively low concentrations of toluene (0.07 mg/kg), xylene (1 mg/kg), and TPH (19 mg/kg). According to the report, these excavated soils were thin spread on the site. The water sample collected from the sump system indicates the water contained a relatively low concentration of xylene (3 μ g/L) and TPH (4.8 mg/L).

The vent system that was installed in the tank excavation was monitored with a photoionization detector (PID) on January 19, 1990. The passive ventilation system yielded a PID instrument reading of approximately 5 to 6 instrument units over background levels. No discernable odors were found to be emanating from the sump during the screening process. The sump water was checked for floating petroleum products with an interface probe; however, product on the sump water was not detected. Based on these results, the WDNR issued site closure approval on February 23, 1990. Although this matter may have been considered a REC in the past, based on the closed regulatory status, Ramboll characterizes this matter as an HREC.

1995 UST Closure with NFA Status: Two 300-gallon USTs (unleaded gasoline and diesel) were excavated and removed in 1995. According to the 1995 UST Closure Report, the tanks were in good condition upon removal. Groundwater was not encountered in the excavation. A total of two confirmatory soil samples were collected from the base of the excavation below each tank and analyzed for gasoline range organics (GRO) and diesel range organics (DRO). GRO and DRO were not detected in the soil samples above laboratory detection limits. Based on these results, the WDNR issued NAR approval on November 11, 1995. Although this matter may have been considered a REC in the past, based on the NAR status, Ramboll characterizes this matter as an HREC.

Although not considered RECs, Ramboll identified the following other findings:

• Long Industrial Use of the Site: In addition to the residential use, the site has been used for various industrial purposes, including a slaughterhouse, horse collar factory and hat factory building (1890s), and a coat shop and wagon shop (1910s). According to available information, the property was used by a local newspaper for vehicle maintenance purposes prior to Scot's occupancy. Scot began industrial machining operations on the site beginning in 1953 until the mid-1990s. These former industrial operations may have included the use of petroleum products and other chemicals. No subsurface characterization activities are known to have been conducted at the site with the exception of localized



sampling associated with UST removals in 1989 and 1995. Because Ramboll's review did not identify documentation of a release, a suspected release, or a potentially material threat of a release of a hazardous substance or petroleum product related to this matter, the long industrial site use is not considered a REC; however, absent further information regarding the specific nature of historical chemical use, chemical handling practices, and associated wastes, Ramboll cannot rule out the possibility that inadvertent spills or releases of chemicals or petroleum products may have occurred in the past.

• **Past Residential Use of the Property:** The site was developed by 1894 (and possibly earlier) for residential purposes and was developed with as many as 30 residential structures. Facility personnel had no information on the methods used to demolish the structures. Fill soil was placed on the northwest and eastern portions of the site in the areas formerly developed with residential structures. The type and quality of fill placed in these areas is unknown.

Ramboll identified the following *de minimis* conditions related to the site:

- Interior Floor Staining: Ramboll observed multiple areas of interior flooring where oil stains were apparent including staining in the vicinity of the catch basin in the loading dock area of the building. The stains were limited in areal extent, and the underlying flooring appeared to be intact. Ramboll notes that the catch basin in the loading dock area is connected to the municipal sewer system. As such, Ramboll considers this matter to represent a *de minimis* condition.
- On-site Area of Thin Spread Petroleum-Based Soils: Approximately 70 cubic yards of residual petroleum-impacted soil associated with a former 8,000-gallon diesel UST was thin spread on site on the south-central portion of the site in 1989. Two soil samples were collected from the soil prior to thin spreading. The first soil sample did not contain detectable concentrations of BTEX compounds or TPH. The second soil sample contained relatively low concentrations of toluene (0.07 mg/kg), xylene (1 mg/kg), and TPH (19 mg/kg). Based on the low concentrations of petroleum-based constituents detected prior to spreading, the thin spreading was approved by the WDNR, the LUST case received regulatory closure (see above HREC) and the ability of petroleum to naturally attenuate, this matter is considered to represent a *de minimis* condition.

PROPOSED PHASE II ESA STRATEGY

The objective of the proposed investigation is to address the findings identified in the 2020 Phase I ESA and to identify areas of potential environmental concern associated with the past operations and activities conducted on the site. The Phase II investigation strategy consists of an evaluation of these potential areas of environmental concern via visual observation of environmental impact, field sampling of soil and groundwater media, and laboratory analysis of soil and groundwater samples, as well as an evaluation of potential chemicals of concern and emerging contaminants, as further described below. At this time, we have not included vapor intrusion sampling as there is no evidence to suggest vapor intrusion is a concern at the site. We recognize that the collection of Phase II ESA data may drive the need for regulatory reporting including formally entering the site into the VPLE program, and additional sampling and analysis including vapor and other potential pathways of concern such as utilities, etc.

Based on site history and potential chemical use, potential contaminants of concern for scoping this Phase II ESA include volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and RCRA metals mainly related to historical petroleum use, honing and machining operations. Given the recent WDNR concerns over emerging contaminants, particularly per- and polyfluoroalkyl substances (PFAS) and the potential the site may be entered into the VPLE program if a release is documented during this Phase II ESA,



we evaluated the potential for historical discharges of PFAS and other emerging contaminants at the property.

Based on the historical use of the site, there is no evidence to suggest that PFAS compounds or other emerging contaminants were used, handled, or stored at the facility in conjunction with honing and machining operations conducted by Scot from 1953 to when manufacturing ceased in 1990s or site operations conducted by others prior to 1953. Further, the site has been used for warehousing for the past 25 years. Based on our review, the site did not conduct painting operations, plating or other coating operations. The building has no fire suppression system, and there is no history of a foam-fire suppression associated with the building. Potential chemicals of concern at the site are likely limited to the use of petroleum-based compounds; therefore, 1,4-dioxane testing is not included for testing at this time as it is not related to petroleum releases which is the highest potential risk at this site. Future testing for 1,4-dioxane may be required if 1,1,1-trichloroethane (1,1,1-TCA) is documented in soil and/or groundwater as part of the initial VOC testing. However, given that "WDNR has concluded that the risk of a PFAS release cannot be ruled out at a VPLE property without confirmation testing," the Phase II ESA includes testing for PFAS, as required by the WDNR if PFAS are to be included within the scope of the VPLE Certificate of Completion. As such, the Phase II ESA scope of work proposed herein includes sampling and analysis for PFAS at select groundwater monitoring well locations, as further discussed below.

Investigation Activities

Prior to on-site activities, a site-specific Health and Safety Plan (HASP) will be prepared 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. Ramboll will contact the state utilities to locate the public utilities in the area of the investigation. 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.

Subsurface Investigation Strategy

Ramboll proposes to advance 14 soil borings (SB-1 through SB-14) that will be converted into small diameter groundwater monitoring wells (MW-1 through MW-14) at the property and collect soil and groundwater samples for laboratory analysis. The proposed soil boring/groundwater monitoring wells have been positioned in specific potential areas of concern identified in the 2020 Phase I ESA, and have also been distributed across the property for a refined understanding of the overall soil and groundwater quality across the site, given the historical industrial use of the site dating back to the late-1890s.

The proposed boring/monitoring well locations are presented on Figure 2. The precise location of each boring/monitoring well will be based on field observations in the proposed area and subsurface utility clearance. Based on the historical operations and associated chemical use at the site, the laboratory analysis parameters for the proposed soil and groundwater samples collected include the following: VOCs, PAHs, and eight RCRA metals. Although the site history and chemical use do not warrant the need to test for PFAS, Ramboll will complete a PFAS analysis/screening analysis in groundwater at one upgradient and two downgradient locations, which will be selected following determination of onsite groundwater flow direction. The location and associated rationale/justification for each soil boring/monitoring well are listed below:

• SB-1/MW-1 and SB-2/MW-2: Area of the historical gasoline filling station;



- SB-3/MW-3: Approximate area of former auto repair portion of the former gasoline filling station;
- SB-4/MW-4: Inside the loading dock bay (pavement staining);
- SB-5/MW-5: Area adjoining to the historical auto repair business and on-site fill soils;
- SB-6/MW-6 and SB-7/MW-7: Area of historical exterior metal parts storage (application of rust inhibitor) and on-site fill soils;
- SB-8/MW-8 and SB-9/MW-9: Area of historical residences and on-site fill soils;
- SB-10/MW-10: Area of former slaughterhouse and on-site fill soils;
- SB-11/MW-11 and SB-12/MW-12: Area inside the 1956 part of the building, near honing oil USTs;
- SB-13/MW-13: Area inside the 1924 part of building, near former 8,000-gallon diesel UST; and
- SB-14/MW-14: Area on the property's north parcel.

Soil Boring Advancement, Screening, and Sampling

The soil borings will be advanced to a maximum depth of approximately 20 feet below ground surface (bgs), 2 feet into native soil, or 5 feet below the groundwater table, whichever is encountered first, utilizing direct push technology (DPT) with a GeoProbe[®] drill rig with a 2-inch diameter drive rod. 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) 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. One to three soil samples will be collected from each soil boring for laboratory analysis. The first sample will be collected from the upper two feet to assess direct contact risk. If evidence of impacts is observed, a second sample will be collected from the interval at which the most significant impacts are observed, and a third sample will be collected above the soil/water table interface.

Small Diameter Prepacked Groundwater Monitoring Well Installation and Sampling

Following soil sample collection, the soil borings will be converted to small diameter prepacked screen groundwater monitoring wells for potential long-term sampling, and a groundwater sample will be collected from each well for laboratory analysis. The monitoring wells will be installed to depths of approximately 20 feet bgs or 5 feet below the groundwater table, whichever is encountered first. The wells will be constructed using prepacked screens, which consist of a standard, slotted polyvinyl chloride (PVC) well screen pipe surrounded by a stainless-steel mesh, with sand packed between the slotted PVC and the stainless-steel mesh. The wells will be installed with 3.25-inch OD probe rods and 1.0-inch Schedule 40 PVC riser pipe. To install the monitoring wells with the prepacks, probe rods will be driven to depth with a direct push probing machine, and the well assembly will be lowered into the probe rod string with threaded PVC riser pipe. The well assembly is lowered to the bottom of the probe rod string and the probe rods are retracted above the screen to allow installation of a sand barrier directly above the well screen to prevent grout from entering the screen. The barrier can be also be created by natural formation collapse (occurring during the initial probe rod retraction) or by gravity installation of fine-grade sand through the rod annulus. Above the barrier, granular bentonite or bentonite slurry will be installed in the annulus to form a well seal.



As these wells are considered temporary wells, Ramboll previously requested WDNR's approval for the construction of the temporary wells prior to installation in our original investigative strategy submittal.

The monitoring wells will be purged with a peristaltic pump to remove residual sediment 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. Prior to the groundwater sampling activities, depth to groundwater 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, as well as the total well depth, will be recorded in a bound field notebook. The wells will be purged until sediment free water is produced and sampled utilizing a peristaltic pump with disposable tubing.

Following installation, the top of casing elevation of all the monitoring well 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 a well development form 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, which involve utilizing a pump with disposable polyethylene 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 \pm 10% for turbidity and DO, \pm 3% for conductivity and temperature, \pm 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.

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 28 to 42 soil samples and 15 groundwater samples (including one duplicate groundwater sample) will be submitted for laboratory analysis.

Laboratory Analysis

The soil and groundwater samples will be submitted to a Eurofins Scientific, a Wisconsin-certified laboratory to be analyzed for the following parameters: VOCs by United States Environmental Protection Agency (USEPA) SW-846 Method 8260; PAHs by USEPA SW-846 Method 8270; and RCRA metals by USEPA SW-846 Method 6010/7470. In addition, the groundwater will be analyzed for PFAS via USEPA Method 537 Modified/screening level method (36 PFAS) at three monitoring well locations based on groundwater flow direction (one upgradient and two downgradient wells). A chain-of-custody form will be filled out upon sampling completion and will accompany the insulated container of samples to the laboratory. The chain-of-custody forms will include the following information: sample identification; date collected; source of sample (including type of sample and site investigation); and name of sampler. The chain-of-custody form will be signed by the sampler and completed in a legible manner using waterproof ink.

Samples will be transported from the facility to the laboratory via courier or will be dropped off by Ramboll personnel. When transferring samples, the individuals relinquishing and receiving the samples will sign and date the chain-of-custody forms. The original chain-of-custody form will accompany the shipment; a copy will be retained by the field sampler and filed upon return to the office.

Reporting

Upon completion of the field activities described above, a Phase II ESA report will be prepared. The soil and groundwater laboratory analytical results will be compared to the current Wisconsin Administrative Code (WAC) NR 720 and NR 140 criteria, respectively and proposed PFAS NR140 criteria and the USEPA Health Advisory Level. The report will include the subsurface assessment results, documentation of field activities, soil boring logs, site and boring location figures, tabulated analytical laboratory results, an evaluation of the data, and our conclusions and recommendations. If a discharge of a hazardous substance is discovered based on the Phase II ESA, a release notification will be submitted. It is Scot's current intent to then enter the site into the VPLE program, complete the required VPLE Application (Form 4400-178), and submit the required WDNR fees.

Schedule

The field work is planned to commence during the week of January 18, 2021. It is anticipated that field work will take 6 days to complete (drilling, soil sampling, well installation, well development, surveying, and groundwater sampling). A copy of the draft Phase II ESA report will be submitted to the WDNR within 30 to 45 days of receiving the laboratory reports if a release has been documented at the site.

Thank you for your attention to this matter. If you have any questions on the proposed strategy or need further information, please contact us.



Yours sincerely,

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FIGURES

M:\Client Project Files_1690020135_Scot MKE Ph II VPLE\VPLE Investigation Strategy\REVISED Proposed VPLE Investigation Strategy (Ramboll).docx



M:\CAD\1690018685_Scoth_PHI\01_Site Location Map (Miiwaukee WI),dwg

L:\Loop Project Files_CAD\1690018685_Scot_PHII\01_Proposed Sampling Locations.dwg

