

**From:** Richard Mazurkiewicz <RMAZURKIEWICZ@ramboll.com>  
**Sent:** Friday, April 15, 2022 2:15 PM  
**To:** Rice, Caroline M - DNR  
**Cc:** mommamitchell@charter.net; Jeanne Tarvin  
**Subject:** Email Work Plan - 1305 North Johns Street - BRRTS NO. 02-25-587099  
**Attachments:** F1- NAPA Inside Borings.pdf

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Hello Caroline,

Please find the following work plan for the subject site. Refer to the attached **Figure 1** for the proposed sampling locations presented herein.

Ramboll US Consulting, Inc. (Ramboll) submits this additional site investigation work plan for proposed investigation activities at the Trace-Mitchell Real Estate, LLC property located at 1305 North Johns Street, Dodgeville, Iowa County, Wisconsin (the "site").

### **Background**

The site is located on the northeast corner of North Johns Street and Brown Street. The current single-story building was constructed in 1982 on land totaling 0.37 acre. There is one, one-story, building on the site with a storage shed located at the northwest corner. The on-site building is approximately 5,000 square feet and was built as a slab-on-grade foundation. Historically, the building housed dry-cleaning operations from approximately 1982 to 2003. Reportedly, the one dry-cleaning machine was a self-contained/closed-loop system. The building is currently occupied by NAPA Auto Parts, which is a retail store for automotive supplies (parts, tools, paint, etc.).

In June 2020, AEI Consultants, Inc. prepared a Phase I Environmental Site Assessment (ESA; the "2020 Phase I ESA report") for a potential sales transaction. The 2020 Phase I ESA report identified a recognized environmental condition at the site. Based on a review of historical records, a dry-cleaning facility was located on the site from approximately 1982 to 2003. According to the prior owner, Mr. Charlie King, the dry-cleaning operations used solvent-based chemicals in a closed-loop system machine. Ramboll conducted limited investigation activities at the site since July 2020 consisting of two rounds of sub-slab soil vapor sampling inside the slab-on-grade construction building and advancing six borings (three to bedrock).

Ramboll's site investigation concludes:

- The geology consists of fill from 2 to 8 feet below ground surface (bgs) underlain by native soils comprised primarily of silty clay to the top of bedrock. Limestone bedrock was encountered at 5 to 18 feet bgs and slopes to the southwest. According to available regional groundwater data, groundwater in the site area is in bedrock at approximately 51 feet bgs with groundwater flowing to the southeast and deeper groundwater flowing to the southwest. The site is located within an area-wide chlorinated volatile organic compounds (VOC) groundwater plume.

- Six soil borings were advanced at the site to evaluate the soil for potential chlorinated VOC impacts. Boring and soil sampling was biased towards areas in and around the building where historical dry cleaning operations occurred (the dry cleaning machine was formerly located in the northeast portion of the building in the area near a floor drain). Borings were advanced at the floor drain, outside the back door (adjacent to the former dry cleaner operations), near the shed (potential dry cleaner chemical storage area), and adjacent to utility lines (underground gas, sewer, and water) to identify potential preferential pathways for vapor intrusion. Soil samples for VOC analysis were collected from depths ranging from 0.5 to 18 feet bgs. There were no VOC detections above the laboratory method detection limits in any of the borings except for the soil sample collected near the drain in the northeast corner of the building (where there were reported concentrations of ethylbenzene, dichlorodifluoromethane [DCDFM][1], and styrene); however, at concentrations below the applicable Wisconsin Administrative Code Chapter NR 720 Residual Contaminant Levels. There were no chlorinated VOC analytes detected in any of the soil samples collected at the site (including the suspected source area and the drain near the former dry cleaning machine).
- Ramboll performed two rounds of sub-slab vapor testing at the site, one in July 2020 (during the cooling season) and one in March 2021 (during the heating season). The July 2020 sub-slab soil vapor sampling documented tetrachloroethene (PCE) and ethylbenzene concentrations above the residential vapor risk screening levels (VRSLs) in two locations in the northeast portion of the building but these concentrations are well below the small commercial VRSLs across the entire building footprint. The subsequent March 2021 sub-slab soil vapor sampling event documented PCE and ethylbenzene sub-slab soil vapor concentrations well below the residential VRSLs across the entire building footprint. Based on sub-slab vapor testing during both the cooling and heating season, the sub-slab soil vapor concentrations are below the applicable small commercial VRSLs (and below the residential VRSLs during the March 2021 heating season sub-slab sampling event). Therefore, vapor intrusion at the site is not a threat to building occupants based on the commercial site use, and no vapor mitigation or further testing is necessary. Given the low detections of chlorinated VOC soil vapor concentrations below the building and the absence of chlorinated VOC soil concentrations in soil samples along the utility corridors, soil vapor migration along the utility lines is not a pathway concern.

Although Ramboll was not able to identify a source of PCE and ethylbenzene in soil, soil vapor concentrations beneath the slab-on-grade NAPA building are likely the result of de minimis concentrations either related to the historical dry cleaning operation (PCE) or from the current NAPA housekeeping and chemical management practices (PCE and ethylbenzene) of auto parts maintenance products (brake cleaners, degreasers/solvents, auto paint, gasoline and gasoline additives, etc.).

### **Physical Setting**

An evaluation of the physical setting of the site was completed to assess the potential for migration of hazardous substances and/or VOCs onto the site from one or more off-site source(s) and to assess the potential for releases on the site to impact groundwater, soil, and soil gas.

### **Topography**

The surface elevation of the site is approximately 1,240 feet above mean sea level. The site appears relatively level. No surface water bodies are on the site.

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[1] DCDFM was detected at concentrations above the commercial VRSLs; however, it was determined to be related to a building material artifact (observed foam insulation installed below the concrete floor slab) and not to a release or discharge of a hazardous chemical to the environment.

## **Hydrology**

No potable or site investigation wells are currently present on the site. However, according to the 1993 Dodgeville VOC Contamination Investigation Report prepared by STS, the water table is estimated to be about 51 feet bgs in the vicinity of the site. The water table gradient (direction of groundwater flow) was estimated to be generally to the east-southeast, which follows the land surface topography in the area. The depth and gradient of the water table likely vary seasonally with changes in precipitation and may change significantly over time in response to development, including impervious surfaces, stormwater controls, and pumping wells (domestic, industrial, or irrigation).

## **Geology/Soils**

The site lies in the unglaciated part of southwestern Wisconsin. According to the United State Department of Agriculture Web Soil Survey, the surficial geology in the vicinity of the site consists of two units of the loess deposited Dodgeville silt loams. The Dodgeville silt loams consist of moderately eroded silt and silty clay loams at 0-2 percent slopes and 2-6 percent slopes. The silt loam overlies the Galena and Platteville dolomite bedrock formations. The depth of the bedrock in the area likely varies. A well log (8EP556), which is located approximately 600 feet north of the site, was obtained from the WDNR Well Construction reports website and indicates the depth to bedrock was at 3 feet bgs (the log indicated clay from 0-3 feet below ground surface, Galena Dolomite 3-140 feet bgs, and Trenton Limestone 140-142 feet bgs.)

## **Scope of Services**

The technical strategy proposed is based on additional information required by the WDNR project manager, Caroline Rice, on April 8, 2022. As the source of PCE and ethylbenzene in soil vapor concentrations beneath the slab-on-grade NAPA building is likely the result of de minimis concentrations either related to the historical dry cleaning operation or current NAPA operations. Ramboll's scope of services will focus on installing and collecting soil samples from three soil borings. Two borings will be located inside the building, one near the drain in the former dry cleaning machine room and another near the subsurface drain piping. The third boring will be located immediately outside the north side of the building where the subsurface sanitary and water utilities enter the building. Soil samples collected from these borings will be to evaluate the extent and magnitude of potential chlorinated impacts beneath the building that may have impacted the subsurface utilities and/or preferential pathways along the utility piping.

## **Health and Safety**

Before implementation of field activities, Ramboll will prepare a site-specific Health and Safety Plan (HASP) to address health and safety issues related to the proposed field activities. Ramboll will review the HASP with all field personnel before commencing the field activities. Ramboll will also follow the already prepared COVID-19 safety plan that complies with state and Center for Disease Control protocols.

## **Soil Boring Advancement and Screening**

Ramboll proposes to advance three soil borings (SB-7, SB-8, and SB-9) to 20 feet bgs, or to bedrock (whichever is encountered first). The locations of the proposed soil borings are depicted in **Figure 1**. Before mobilization for drilling activities, Diggers Hotline will be contacted to mark out public utility locations on the site. Ramboll will also contract with a private utility locator to clear any on-site

subsurface private utilities, structures, or obstructions within the immediate vicinity of the proposed boring locations.

All three borings will be advanced to evaluate potential chlorinated impacts in the soil near the utility lines and immediately outside the building. The soil borings will be advanced using a direct push drill rig to collect soil samples. Soils will be continuously collected from polyvinyl chloride sleeves inside the direct-push (5 feet long, 2-inch diameter stainless steel) samplers. Soil characteristics will be recorded in the field and screened for total volatile organic compounds (VOCs) using a photoionization detector (PID) equipped with a 10.6 electron volt lamp. The PID will be calibrated and zeroed in the field according to the manufacturer's instructions, using 100 parts per million isobutylene span gas and air (zero gas), and checked between each screening event for proper response. The PID readings and any organoleptic evidence of contamination will be recorded on boring logs. Up to two vadose zone soil samples will be collected from each boring, one from the depth interval showing the greatest evidence of impacts/highest PID reading and one from the soil boring termination depth. If no evidence of impacts is found, soil samples will be collected from the depth of the utilities and one from the soil boring termination depth. All soil samples will be analyzed for VOCs via US EPA Method 8260B.

### **Investigative Waste Management**

Following soil sample collection activities, all soil borings will be properly abandoned with the soil cuttings from each boring. The cuttings will be tamped down with the end of a drilling rod (or similar) and any excess space in the borings filled with 3/8-inch chipped bentonite swelling clay. Each boring will be completed with a surface patch matching the surrounding material (concrete or grass).

### **Data Evaluation And Reporting**

Laboratory results will be provided to the Wisconsin Department of Natural Resources and the property owner within 10 days of receipt of the analytical data. Ramboll will also prepare a brief report following the completion of the additional site investigative activities.

The additional site investigation activities will be initiated upon scheduling the work with the Trace-Mitchell Real Estate, LLC and the subcontractors. Ramboll will continue conducting the required response actions promptly and communicate the findings of those actions to the Trace-Mitchell Real Estate LLC and the WDNR as they occur. We appreciate your assistance in reaching the common goal of case closure for this Site.

Best Regards,

**Richard Mazurkiewicz**

Managing Consultant

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	Approximate Property Boundary
SB-1 ●	Boring Location
SS-3 ▲	Sub-Slab Vapor Pin Location
	Underground Gas Utility
	Sanitary Sewer Utility
	Water Utility
	Underground Communication Utility
	Underground Electric Utility
	Floor Drain
●	Power Pole
SB-7 ●	Proposed Soil Borig Location

<b>Site Layout</b> Former Dry Cleaner 1305 N Johns Street Dodgeville, WI 53533	
	<b>FIGURE 1</b>
DRAFTED BY: rpm	DATE: 04/08/2022

Source: Grant County GIS 06/29/2020

