

October 20, 2023

Mr. M. Andrew Skwierawski, Attorney Halling & Cayo, S.C. 320 E. Buffalo Street, Suite 700 Milwaukee, WI 53202

# RE: Work Scope for Additional Site Investigations Former One Hour Martinizing Cleaners (Site) 1035 Summit Avenue, Oconomowoc, Wisconsin

Dear Mr. Skwierawski:

EnviroForensics, LLC (EnviroForensics) is presenting this work scope for additional site investigations at the above referenced former One Hour Martinizing tenant space within the Whitman Park Shopping Center (Site). The work scope has been developed based on a written response from the Wisconsin Department of Natural Resources (WDNR) dated April 27, 2023. The WDNR communication was in response to our submittal of a Site Investigation Report (SIR). The requested work was further discussed with the WDNR in our meeting of May 18, 2023.

The WDNR has indicated that additional work is required to determine the extent of groundwater impacts which may also lead to additional sampling for per-and poly-fluorinated alkyl substances (PFAS) and possible vapor intrusion sampling of nearby structures dependent on the results of the initial well installation and sampling.

Based on their written response and our subsequent communications with them, it appears that the WDNR are mainly concerned with the following:

- 1. The possibility that groundwater impacts have moved vertically through the permeable site soil to greater depths within the water table at a position downgradient to the direction of groundwater flow.
- 2. That chlorinated volatile organic compounds (CVOCs) in groundwater at concentrations exceeding the groundwater enforcement standard (ES) may have migrated within proximity to habitable buildings which could result in a vapor intrusion threat to those buildings.
- 3. If groundwater impacts extend to off-site properties, then the property owners will need to be notified and there will need to be institutional controls applied to those properties in the form of a groundwater use restriction at the time of the case closure application.

They have indicated in our May 18 meeting that the additional work should include one (1) downgradient water table well and one (1) further downgradient deeper piezometer. The locations of these new monitoring wells are shown on attached **Figures 1** and **Figure 2**.



## WORK SCOPE DEVELOPMENT (COMPLETED)

EnviroForensics has developed this work scope that will serve as the procedures document for the investigation activities. EnviroForensics recognizes and stresses the importance of safe work practices for site workers and the public. Prior to the onset of field activities, EnviroForensics will update the existing Health and Safety Plan (HASP) for this project to include hazards associated with the proposed work.

## ADDITIONAL SITE INVESTIGATION ACTIVITIES

#### Access

The installation of monitoring well MW-7 will require that we gain access to private property, and the installation of well PZ-1 will require that we gain access to City of Oconomowoc right of way.

## **Utility Clearance**

We will contact Diggers Hotline to clear public utilities prior to monitoring well installation. In addition, we will contract a private utility locating service to clear each well location to ensure that there are no private utilities in the way of the drilling activities.

#### Groundwater Monitoring Well Installations and Sampling

Soil drilling at the property has shown to be difficult for direct-push equipment. There are many layers of coarse gravel, cobbles, and occasionally boulders which have disrupted drilling operations in the past. As such, heavier duty hollow-stem auger drilling will be needed for well installation. The extent of soil impacts has been determined and the new wells will not be installed within contaminated soil. Since the geologic assemblage of soils has been extensively logged in all past soil borings and wells, continuous soil sampling will not be performed during these new well installations to save cost. Soil types will be approximately characterized by observing the drill cuttings to ensure that the soil types are typical of previously logged soil assemblages.

#### Well Construction Details

Both wells will be installed using hollow stem augers having an outside diameter of 8.25 inches.

Well MW-7 will be installed as a water table monitoring well. The well will be constructed of 2-inch diameter PVC having a screen length of ten (10) feet and factory-cut 0.010-inch slots. The screen will be approximately centered on the water table at a depth of between 25-35 feet below ground surface (bgs). A sand filter pack will be placed six-inches below the screen to 1-foot above the screen. A filter pack seal will be placed above the filter pack and consisting of 2 feet of fine sand. The remaining annular space will be filled with 3/8-inch diameter bentonite pellets to within 1.5 feet of the surface. They will be hydrated with clean water after placement. The remaining 1.5 feet will be filled with fine sand and fitted with a flush-mounted well protection cover.

Well PZ-1 will be installed as a deeper piezometer. The well will be constructed of 2-inch diameter PVC having a screen length of five (5) feet and factory-cut 0.010-inch slots. The screen will be installed below



the water table at a depth of between 50-55 feet below ground surface (bgs). A sand filter pack will be placed six-inches below the screen to 1-foot above the screen. A filter pack seal will be placed above the filter pack and consisting of 2 feet of fine sand followed by 2-feet of  $\frac{1}{2}$ -inch bentonite pellets. The remaining annular space will be filled with cement/bentonite grout to within 1.5 feet of the surface. The remaining 1.5 feet will be filled with fine sand and fitted with a flush-mounted well protection cover.

The new wells will be surveyed using the Wisconsin State Plane Coordinate system to include top of well casing elevations following installation.

## Well Development

Upon installation, the wells will be developed using a submersible pump to surge and purge the well until the water produced is clear and free from fines.

#### Groundwater Sampling

Three (3) rounds of groundwater sampling will be performed as part of this Work Plan. There is a question whether the past presented direction of groundwater flow is accurate. Prior to final placement of the new wells, a first round of groundwater samples will be collected from all site wells and water level measurements will be taken. (Subsequent sampling events will include taking groundwater level measurements from all site wells prior to collecting groundwater quality samples.) The second round will include collecting groundwater quality samples from just the two (2) new wells. The third round will include collecting groundwater quality samples from all site wells.

Approximately 24 hours after well development, the new wells will be sampled for total volatile organic compounds (VOCs). Sampling will be performed using a submersible bladder pump and low-flow sampling methods. Water will be slowly purged from each well and delivered to a flow-through cell containing multiple probes that will measure temperature, electrical conductivity, pH, specific conductance, oxidation/reduction potential, and dissolved oxygen. When these parameters have stabilized, groundwater samples will be collected in 40-ml vials containing a hydrochloric acid preservative. The samples will be stored in a cooler with ice and sent to a State of Wisconsin Certified Laboratory for analysis of total VOCs by EPA Method 8260.

All site wells will be sampled approximately six (6) months after sampling of the new wells. The sampling procedure and analyses will be the same as described above for all rounds of groundwater sampling.

## **IDM Management**

Investigation derived media (IDM) will consist of the drill cuttings produced during well installation, well development water, and purge water produced during groundwater sampling.

This IDM will be temporarily stored in 55-gallon drums and located in an accessible, but discreet location on the Whitman Park property pending permitting and removal. Four (4) composite samples (two from each borehole) will be collected from the soil cuttings to determine disposal requirements. The laboratory results from groundwater sampling will be used to determine disposal requirements for the purge water.



It is anticipated that up to seven (7) or eight (8) drums of soil will be produced from the drilling operations and between 2-3 drums of development and purge water during the first round of sampling. It is anticipated that one (1) drum of water will be produced during the second round of groundwater sampling. EnviroForensics will work to expedite removal of the drums as soon as possible following each round of sampling.

## REPORTING

Upon our receipt of the analytical laboratory results, EnviroForensics will provide sample results reports to the property owners, the City of Oconomowoc, and Wisconsin Department of Natural Resources within 10 days. The reports will include copies of the laboratory analytical reports, and tables summarizing the soil sampling results, indoor air results, and sub-slab vapor results with comparisons to their applicable Residual Contaminant Levels (RCLs). All results will be highlighted, where concentrations exceed standards. One (1) figure will be prepared having the locations of pertinent past and current groundwater monitoring wells along with associated VOC analytical results. The report will also document observations and/or trends that may be pertinent to the investigation.

Upon completion of the second round of groundwater sampling, and provided that there are no further investigations required, a final report supplemental to the SIR will be prepared and submitted to the WDNR for their approval.

# **PROJECT COORDINATION & MANAGEMENT**

Project management tasks will include budget management and tracking; management of project execution; personnel and scheduling; and meetings and conference calls with regulators and other stakeholders. Project management costs included in this Work Scope assume a work phase duration of seven (7) months.

## SCHEDULE

- The attempts to gain site access for well installation will begin immediately upon notice to proceed.
- The first round of groundwater samples will be collected within 30 days of notice to proceed.
- Drilling and installation of the new wells will begin within 30 days of approved access and should take one (1) day.
- Well development will be completed the same day following well installation and groundwater samples will be collected from the new wells the following day.
- The third round of groundwater samples will be collected approximately six (6) months after collecting samples from the two (2) new wells.
- The final report supplemental to the SIR will be completed within 60 days of receiving the laboratory results of second round sampling.



As stated previously, results reports will be submitted to the property owners, City of Oconomowoc, and the WDNR after each sampling event and within 10-days of our receiving the laboratory analytical results.

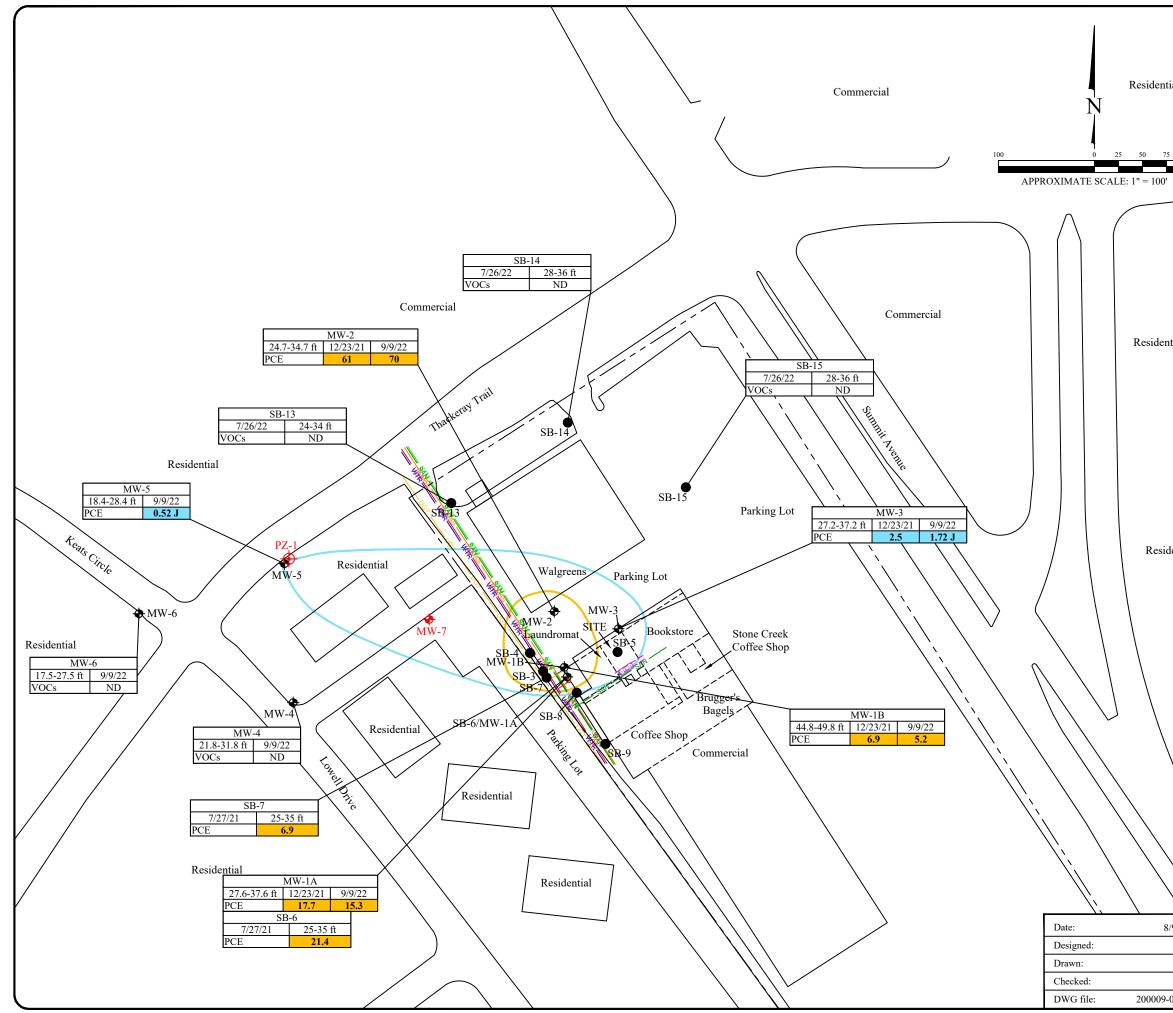
Feel free to contact me with any questions at 262-490-6472.

Sincerely, EnviroForensics, LLC

Daya P. Lashel

Wayne Fassbender, PG Senior Project Manager wfassbender@enviroforensics.com

Attachment: Figure 1: Groundwater Iso-concentration



Legend					
	GAS       Underground gas utility line         WTR       Underground water utility line         SAN       Underground sanitary utility line         STM       Underground storm utility line				
tial					
	Underground communication line				
75 100					
1					
FDCM Area of former dry cleaning machine					
	MW-1A ◆       Monitoring well         SB-1 ●       Soil boring         MW-7 ◆       Proposed water table well         PZ-1 ◆       Proposed piezometer well				
		Public Health	Public I	Health	
	Analyte	Preventive Action	Enforce		
	PCE	0.5	Stand 5		
ntial	Note:				
	1. Bolded and orange shaded values exceed the Public Health				
	<ol> <li>Enforcement Standard</li> <li>Bolded and blue shaded values exceed the Public Health Preventive Action Limit</li> <li>Bolded values are above detection limits</li> <li>Samples analyzed using EPA SW-846 Method 8260</li> <li>All results reported in units of micrograms per liter (μg/L)</li> </ol>				
	6. PCE = Tetrachlo		Bruins p	μβ.Ε)	
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8/9/23				Figure	
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WF	825 North Capitol Avenue		204		
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