

January 25, 2021

Mr. Riley Neumann  
Wisconsin Department of Natural Resources  
2300 North Dr. Martin Luther King, Jr. Drive  
Milwaukee, Wisconsin 53212-3128

**Re: *Emerging Contaminant Evaluation Work Plan***  
***BRRTS #: 02-41-576336 & 02-41-579429***  
***FID #: 241828620***  
***Sunrise Shopping Center***  
***2410-2424 10<sup>th</sup> Avenue & 1009 Marquette Avenue***  
***South Milwaukee, Wisconsin 53172***

Mr. Neumann:

A *Remedial Construction Report* (RCR) dated September 8, 2020, was submitted to Wisconsin Department of Natural Resources (WDNR) for the Sunrise Shopping Center facility located at the above-referenced address in South Milwaukee, Wisconsin (Site). In a response letter dated November 23, 2020, WDNR provided three (3) comments that were required to be addressed prior to providing full approval of the RCR. Two (2) of the comments were to complete a current round of vapor intrusion sampling and to perform a second round of vacuum performance monitoring. The additional sampling and monitoring have already been initiated with reporting of results pending.

The third comment indicated that an evaluation of potential subsurface impact resulting from emerging contaminants must be completed prior to proceeding into Case Close Out. The November 2020 WDNR specified that 1,4-Dioxane and per- and polyfluoroalkyl substances (PFAS) are the contaminants of highest concern. This letter report is provided as an *Emerging Contaminant Evaluation Work Plan* (Work plan) with the proposed methods for assessing potential emerging contaminant impact.

## **1.0 Emerging Contaminant Assessment**

To appropriately complete the required evaluation of emerging contaminants, DAI Environmental, Inc. (DAI) performed an information analysis that included reevaluation of the previously completed Phase I Environmental Site Assessment (Phase I ESA) and a review of the WDNR guidance document RR-101E. A summary of the Phase I findings are provided below.

DAI completed a Phase I ESA in October 2014 in advance of a lending institution taking ownership of the Site and prior to acquisition by the current property owner/Responsible Party. A review of

the Phase I indicates that the property was originally developed prior to 1910 and has a long history of commercial/industrial uses. Information obtained from the Phase I ESA, including review of Sanborn® fire insurance maps, historical aerials, and historical city directories, indicated that the Site was originally utilized as the Caveney & Co. Coal & Wood Yard and was used as such until at least 1950. At some point between 1955 and 1958, the Site transitioned from industrial to commercial use with the construction of the northern-most building, the building addressed as 1009 Marquette Avenue. By 1963, a second commercial building had been constructed on the Site to the adjacent southeast of the 1009 Marquette Avenue building. The second building included what are now tenant spaces addressed as 2410 to 2414B 10<sup>th</sup> Avenue (previously 2410-2416). Between 1969 and 1971, the second building was extended to the southeast, adding the tenant spaces currently addressed as 2418-2422 10<sup>th</sup> Avenue. Various tenants have occupied the multi-tenant space since construction, including Sunbrite Cleaners (2410), Wolf's Dry Cleaners & Launderers (2416), and Caveney Heating Oil/Caveney & Co. (2416). Current tenants include Ace Hardware (1009 Marquette Avenue) and a clothing retail shop (2412 10<sup>th</sup> Avenue). All other tenant spaces are presently vacant.

Recognized Environmental Conditions (RECs) documented in the Phase I ESA included:

- *The potential presence of up to five (5) USTs on the Subject Property, with only one (1) known to be closed or removed*
- *Known petroleum contamination on the Subject Property...*
- *Three (3) former dry cleaners that were located on the Subject Property between 1966 and 1999, that likely used Tetrachloroethene*
- *The former presence of Caveny Oil Company on the Subject Property, which may have stored petroleum on-site.*

The historical uses of the property that are potential sources of contamination include dry cleaning and petroleum storage. Comparison of these sources with Table 1 of the WDNR guidance document indicate the following potential contaminants of concern:

- Volatile Organic Compounds (VOCs)
- VOC (n-nonane)
- VOC (1,4-Dioxane)
- Chlorinated VOCs (CVOCs)
- Petroleum VOCs (PVOCs)
- Polynuclear Aromatic Hydrocarbons (PAHs)
- Polyfluoroalkyl substances (PFAS)

During the course of the previous Site Investigations extensive sampling and analyses were conducted for PAHs and VOCs including CVOCs and PVOCs. The potential contaminants of concern that were not specially analyzed include:

- VOC (n-nonane)
- VOC (1,4-Dioxane)
- PFAS

Sampling and analyses of these contaminants of concern and emerging contaminants of concern will be investigated prior to requesting a Case Close Out determination.

## **2.0 Emerging Contaminant Sampling**

Since the specific location of any potential release of the emerging contaminants is not known, the groundwater sampling is expected to be more representative of a larger area and more effective in identifying the presence of any emerging contaminant. The groundwater samples will be collected from the two (2) existing groundwater monitoring wells that have historically shown the highest levels of contamination. The proposed groundwater sampling work plan are provided in the following sections.

### **2.1 Monitoring Well Development**

The groundwater samples will be collected from two (2) existing monitoring wells, MW-3 and MW-5. The sampling of MW-3 (installed in the southern portion of the property) is intended to evaluate potential emerging contamination from historical petroleum and/or coal storage. The sampling of MW-5 (installed to the rear of the 2410 tenant space) is intended to evaluate potential emerging contamination from historical dry cleaner operations.

Consistent with the protocol followed during quarterly sampling, the monitoring wells will be purged, to the extent practicable, to remove turbidity from the groundwater and allow the collection of a sediment-free sample that is representative of the surrounding groundwater conditions. A stainless steel bailer will be used to sample MW-5. Due to damage incurred during snow removal operations, MW-3 must be sampled using a peristaltic pump. Dedicated tubing of the appropriate size and composition will be used in conjunction with the peristaltic pump.

### **Groundwater Sampling Procedures and Chemical Analysis**

Following well development, groundwater samples will be collected from MW-3 and MW-5. Both monitoring wells will be sampled for 1,4-Dioxane, N-nonane, and PFAS. The laboratory will be consulted to ensure that appropriate sampling methods and protocols are followed, and that appropriate sample jars are obtained. The sample jars will be ordered directly from the laboratory.

New disposable nitrile gloves will be used to collect each sample to limit cross contamination. Samples will be stored on ice immediately after collection until begin transferred to the refrigerator or direct transfer to the laboratory. Samples will be submitted to a commercially independent, Wisconsin certified analytical laboratory following standard chain-of-custody procedures. One (1) trip blank may be submitted consistent to the requirements of NR 716.13(11)(c). A field blank may

also be collected in the event that the laboratory blank analyzed as part of the analytical run cannot be used for quality assurance/quality control purposes.

Upon approval of this Work plan by WDNR, the proposed sampling will be conducted. If you have any questions or require additional information, please contact me at (847) 996-3580. Thank you for your time and assistance.

Sincerely,

**DAI Environmental, Inc.**



Christopher Cailles, P.E.  
Project Engineer