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Mr. Paul Grittner
Wisconsin Department of Natural Resources
2300 North Martin Luther King Jr. Drive
Milwaukee, WI 53212

July 24, 2020

Subject: Work Plan for Additional Investigative Services
Klinke Cleaners Fox Run at 2346 W St. Paul Avenue, Waukesha
DNR BRRTS Activity #: 02-68-535535; FID #: 268188910

Dear Paul:

On May 27, 2020, Endpoint Solutions Corp. (Endpoint) submitted a Comprehensive Site Investigation Report and Remedial Action Plan (CSIR/RAP) on behalf of Fox Run 3, LLC to the Wisconsin Department of Natural Resources (WDNR) for review and comment. On July 17, 2020, the WDNR responded indicating additional investigation and data analysis needs to be completed to more fully define the extent of residual contamination and to determine what measures may be necessary to mitigate the risks posed by it. Specific activities requested by the WDNR are identified in the following sections.

WDNR RESPONSE

SOILS

Additional soil samples are needed to define the extent of residual soil contamination, to ensure that material excavated during construction is properly managed, to determine where a soil cover needs to be maintained, and to identify areas at risk from vapor intrusion. Soil samples should be collected in the following areas to assess the extent of contamination:

- The area east of CS-110 to define the extent of tetrachloroethene (PCE) contamination that exceeds direct contact residual contaminant levels (RCLs).
- Areas north, west and southwest of the former Klinke tenant space to define the extent of PCE that exceeds the protection of groundwater RCL. This includes assessing the areas north of B-28 and the area within the sewer trench backfill along the property boundary to determine the northern extent of contamination.

GROUNDWATER

Shallow groundwater samples are needed in the following area to define the extent of the groundwater plume:

- The area southwest of the former Klinke tenant space between GP-1 and GP-2. Collecting sample(s) in this location should confirm whether contaminated groundwater will be in contact with the nearby proposed building foundation which is necessary for assessing the vapor intrusion risk and for planning potential vapor mitigation methods.

- The area between TW-2 and MW-9 to better define the eastern extent of the groundwater plume and to assess a potential easterly groundwater flow direction.
- Near, or within, if possible, the backfill of the sewer along the property line that is planned to be abandoned, to determine if it is acting as a migration pathway for groundwater contamination and if further assessment may be needed.
- New sampling points must be surveyed relative to existing wells so groundwater elevation data can be obtained.

Evaluate the need for a piezometer in the former Klinke tenant space area by preparing cross sections that illustrate the stratigraphy, hydrogeologic features and the extent of contamination. Preparing a minimum of two (2) figures that cross between the southwest and northeast corners and the southeast and northwest corners of the Site is recommended. These figures can be used to evaluate how the shallow geology and surface conditions influences vertical contaminant migration and whether a piezometer is necessary to assess groundwater contamination at depth.

Unless otherwise approved, groundwater sampling events should include sample collection and water level measurements for all existing monitoring wells.

SOIL VAPOR

Once the extent of soil and groundwater contamination has been defined, the potential for vapor intrusion and the need for mitigation at nearby buildings should be reassessed. The assessment should identify whether contaminated soil or groundwater will be in contact with new or existing building foundations and whether newly installed utility lines will act as migration pathways for contaminants. The concentrations of PCE detected in soil vapor samples collected under the former strip mall suggest that, at a minimum, the two (2) residential buildings proposed to be built near the Klinke cleaners tenant space are potentially at risk for vapor intrusion. Based on further review of the analytical data available, sub-slab soil vapor sampling must be conducted at the new and existing buildings to complete the site investigation and to determine whether a mitigation system will need to be operated as a continuing obligation. The WDNR cannot require the operation of a mitigation system without this data. The WDNR recommends that vapor sampling ports be installed during building construction so they can be easily accessed later.

MISCELLANEOUS ITEMS

The WDNR requests that tables and figures provided with future submittals address the following:

- Sample depths for soil samples collected from 'B' boring locations should be included on tables; see the March 21, 2006 Project Update for these values.
- It appears that soil borings P-1 through P-4 may have later been renamed B-1 through B-4 and that these are not separate sampling locations, please clarify. Groundwater data collected from these locations should be included on the tables, data was provided as part of the 2004 discharge notification.
- Sample location P-3 included on the groundwater analytical table appears to be a duplicate of MW-3P.

- TW-1 is identified in more than one location on site figures.

PROPOSED SCOPE OF WORK

Based on WDNR's requested scope for additional investigation, we have developed the following proposed scope of work.

SOILS

AREA TO THE EAST OF CS-110

We propose to advance three (3) soil borings to the east of the CS-110 sample location; two (2) along the eastern edge of the former 2340 tenant space and one (1) along the east edge of the former 2334 tenant space. The proposed locations of these soil borings are depicted on **Figure B.2.b**. Based on the depth of groundwater encountered in soil borings GP-1 through GP-4 advanced within the 2344 and 2346 tenant spaces, these soil borings will be advanced to a maximum depth of ten (10) feet below the ground surface (ft bgs). Two (2) unsaturated soil samples from each soil boring location will be submitted for volatile organic compound (VOC) analysis. One (1) sample will be submitted from the zero (0) to four (4) ft bgs interval and the second sample will be submitted from below four (4) ft bgs but above the apparent water table.

AREA NORTH OF THE FORMER KLINKE CLEANER TENANT SPACE

An error was discovered on **Figure B.2.a** and **Figure B.2.b** associated with the locations of soil sample locations B-28 and B-29. As shown on Figure 3 from the Saga November 14, 2011 Status Report, soil sample B-29 is actually located to the north of soil sample B-29; therefore, the extent of contamination to the north of the B-28 location has been delineated. A copy of the original Figure 3 from the Saga November 14, 2011 Status Report is attached in **Appendix A** and these two (2) sample locations have been corrected on **Figure B.2.b**, attached. Based on this information, it is our opinion that no further investigation is required to the north of the B-28 location.

AREA NORTH OF KLINKE CLEANERS WITHIN SEWER TRENCH BACKFILL

The alignment of the gravity sanitary sewer located along the north property line onto **Figure B.2.b**. Soil samples B-24, B-25, B-26, B-27 and B-29 appear to have been advanced within the sanitary sewer trench backfill. In this location, the top of the six-inch (6") diameter sanitary sewer is approximately 14 ft bgs. Data could not be obtained regarding the depth of the samples collected; however, all of the results were below or slightly above the method detection limit (MDL) of 0.028 micrograms per liter (µg/L) PCE. Based on these results, it is our opinion further assessment of the sanitary sewer backfill is not necessary.

AREA WEST AND SOUTHWEST OF KLINKE CLEANERS

The northern approximately 60 feet of the 2350 tenant space located immediately west of the Klinke Cleaners tenant space contains a full-depth basement. Based on depth to groundwater measurements, we estimate the static groundwater level is at or within approximately one (1) foot of the basement floor slab; therefore, the collection of unsaturated soil samples immediately west of the northern portion of the Klinke Cleaners space cannot be achieved. However, we propose to

advance two (2) soil borings in the northeast corner of the slab-on-grade in the 2350 tenant space. The proposed locations of these borings are depicted on **Figure B.2.b**. These soil borings will be advanced to a maximum depth of ten (10) feet below the ground surface (ft bgs). Two (2) unsaturated soil samples from each soil boring location will be submitted for VOC analysis. One (1) sample will be submitted from the zero (0) to four (4) ft bgs interval and the second sample will be submitted from below four (4) ft bgs but above the apparent water table.

GROUNDWATER

AREA SOUTHWEST OF KLINKE CLEANERS

We propose to convert the aforementioned two (2) soil borings proposed in the northeast corner of the slab-on-grade portion of the 2350 tenant space to §NR 141 Wis. Admin. Code compliant monitoring wells. The locations of the proposed monitoring wells are depicted on **Figure B.3.b**. We propose a ten-foot (10') section of factory cut No. 010 screen be installed between approximately five (5) and 15 ft bgs. The wells will be completed with stick-up protector pipes. If necessary, the wells can be converted to flush-mount installations during site grading activities. The top of casing and ground surface will be surveyed using the North American Vertical Datum of 1988 (NAVD88). The wells will be properly developed and samples will be collected for VOC analysis. Depth to groundwater measurements and samples will also be collected from the following existing monitoring wells: MW-2, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11 and MW-12 and piezometer P-5 for VOC analysis.

AREA EAST OF KLINKE CLEANERS

We propose to convert the aforementioned soil boring proposed to the east of the Klinke Cleaners location along the eastern edge of the 2334 tenant space to a §NR 141 Wis. Admin. Code compliant monitoring wells. The locations of the proposed monitoring wells are depicted on **Figure B.3.b**. We propose a ten-foot (10') section of factory cut No. 010 screen be installed between approximately five (5) and 15 ft bgs. The wells will be completed with stick-up protector pipes. If necessary, the wells can be converted to flush-mount installations during site grading activities. The top of casing and ground surface will be surveyed using the NAVD88. The wells will be properly developed and samples will be collected for VOC analysis. Depth to groundwater measurements and samples will also be collected from the following existing monitoring wells: MW-2, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11 and MW-12 and piezometer P-5 for VOC analysis.

WITHIN SANITARY SEWER TRENCH BACKFILL

While soil samples were previously collected from the sanitary sewer trench backfill, groundwater samples do not appear to have been collected. We propose to advance two (2) soil borings within the sanitary sewer trench backfill to the north of the 2344 and 2346 tenant spaces to allow for the collection of grab groundwater samples. The locations of the proposed grab groundwater samples are depicted on **Figure B.3.b**.

Based on the cross-section included with the CSIR/RAP (**Figure B.3.a**), groundwater appears to be approximately ten (10) ft bgs while the top of the sanitary sewer pipe appears to be approximately

14 ft bgs. Therefore, we propose to advance these borings to a maximum depth of 12 ft bgs. A temporary small-diameter screen and casing will be installed to allow for limited development and sampling using a peristaltic pump. A grab groundwater sample will be collected from each location for VOC analysis.

Evaluate the Need for a Piezometer

Historically, two (2) piezometers have been installed and sampled within the area of contamination at the Site. Piezometer 3P was nested with monitoring well MW-3 and piezometer P-5 was nested with monitoring well MW-5. Monitoring well MW-3 and piezometer 3P were abandoned during the remedial excavation activities performed to the north of the building; however, monitoring well MW-5 and piezometer P-54 remain and have both been recently sampled.

Monitoring well MW-3 and piezometer 3P were installed directly north of the 2346 tenant space. The concentration of PCE in monitoring well MW-3 was 81.4 µg/L and the concentration of PCE in piezometer 3P was 4.8 µg/L during the final sampling event in November 2008 before both of these sampling points were abandoned. Based on a review of the well construction detail, it does not appear a casing was installed during installation of piezometer 3P. Additionally, RSV indicated in their March 21, 2006 Project Update, "…it is not clear if piezometer 3P is providing an accurate indication of groundwater quality at depth. Shallow groundwater quality data indicates that the area of MW-5 has had greater impacts."

Piezometer P-5 was installed to a depth of 35 ft bgs with a steel casing grouted to 30 ft bgs. The soil profile described on the soil boring log indicated poorly graded sand from the ground surface to approximately 13 ft bgs, underlain by lean clay to the termination depth of the boring. While PCE concentrations in the groundwater collected from MW-5 ranged between 28 µg/L and 55,600 µg/L between 2005 and 2020, besides two (2) estimated concentrations of PCE reported in 2011 which exceeded the PCE preventive action limit (PAL) of 0.5 µg/L, no PCE was detected in samples collected from piezometer P-5 between 2012 and 2019.

Based on the soil profile described at the MW-5/P-5 location, as well as the lack of detectable concentrations of PCE in the samples collected from piezometer P-5 while the samples collected from MW-5 contained significantly elevated concentrations, it is our opinion the previous investigative activities have shown the deep aquifer to not be impacted. Therefore, it is our opinion additional piezometer installation is not necessary and rather, if installed, could be the source of downward migration of contamination should the existing or any newly installed piezometers be compromised during Site redevelopment activities.

Vapors

In order to further evaluate the potential for vapor intrusion in the two (2) proposed residential buildings closest to the known area of contamination, we propose to install two (2) soil gas sample probes: one (1) adjacent to the northeast corner of the proposed western residential building; and, one (1) adjacent to the proposed northwest corner of the east residential building. The proposed locations of the soil gas sample probes are depicted on **Figure B.2.b**.

As each of the buildings will be constructed with a single level of underground parking and the static groundwater table in the vicinity of the buildings is approximately eight (8) to nine (9) ft bgs, we propose to install the soil gas probes to a maximum depth of eight (8) feet bgs with a two (2) ft section of screen placed between approximately six (6) and eight (8) ft bgs. Samples of soil gas will be collected following the requirements outlined in WDNR's Sub-Slab Vapor Sampling Procedures (RR-800) and WDNR's Addressing Vapor Intrusion at Remediation and Redevelopment Sites in Wisconsin (RR-986) using an evacuated Summa canister and a regulator meant to provide a 30-minute time weighted average. The samples will be analyzed for VOCs using method TO-15.

Following construction of the residential buildings, sub-slab vapor sampling probes will be installed in the northeast corner of the west residential building and the northwest corner of the east residential building. Sub-slab vapor samples will be collected from the sample probes using evacuated Summa canisters and regulators that limit flow to no more than 200 milliliters per minute (ml/min). The samples will be analyzed for VOCs.

Based on the proposed inclusion of sub-surface parking in the proposed residential buildings, regardless of the concentration of sub-slab vapors, it is our understanding based on RR-986 that active indoor air controls are allowed as a final mitigation strategy in parking garages. As such, it is also our understanding that a sub-slab depressurization system would not be required. However, if the sub-slab vapor concentrations detected are such that a threat exists, an Operations & Maintenance Plan for the garage ventilation system will need to be prepared as the ventilation system will be considered a Continuing Obligation.

MISCELLANEOUS ITEMS

Several other miscellaneous reporting issues were identified by the WDNR which required resolution. These included:

- Figures will be amended to show non-industrial and industrial direct contact exceedances rather than the site-specific screening level shown.
- A Soil Management Plan will be prepared and submitted for review and approval.
- Two (2) geologic cross-sections (NW to SE and NE to SW) through the area of contamination will be prepared.
- The sample depths for soil samples from the "B" sample locations will be added to the appropriate tables using the RSV March 21, 2006 project update. Please note, sample depths are provided for sample locations B-1 through B-22. No depths are provided for sample points B-23 through B-29. **Table A.2.a** and will be revised as necessary with data for TW-2, TW-3 and TW-4.
- Upon further review, soil sample locations P-1 through P-4 as identified in the Drake Phase II report (March 21, 2005) appear to be the same locations identified as B-1 through B-4 by RSV in their July 27, 2005 letter and their March 21, 2006 Project Update. **Tables A.1.a and A.2.a** will be revised using the results included with the Report of Release and RSV's Project Update (March 21, 2006).

- Sample location P-3 will be deleted from **Table A.1.a**.
- According to the data included in the Report of Release and the Drake Phase II (March 21, 2005), soil sample locations P-2, P-3 and P-4 (also identified as B-2, B-3 and B-4) were the locations of temporary wells TW-2, TW-3 and TW-4. A groundwater sample was not collected from sample location P-1/B-1; therefore, TW-1 was not identified. Both references to a TW-1 sample location to the north of the building will be removed.

CLOSING

We trust the information contained in this Work Plan addressed the issues identified in your July 17, 2020 letter. As we believe some of the issues identified in your July 17, 2020 letter have been previously addressed, we request review and approval of the proposed scope of work described herein prior to commencing with the additional investigation activities. If you have any questions or comments, please feel free to contact me directly at 414-858-1202 or bob@endpointcorporation.com.

Sincerely,

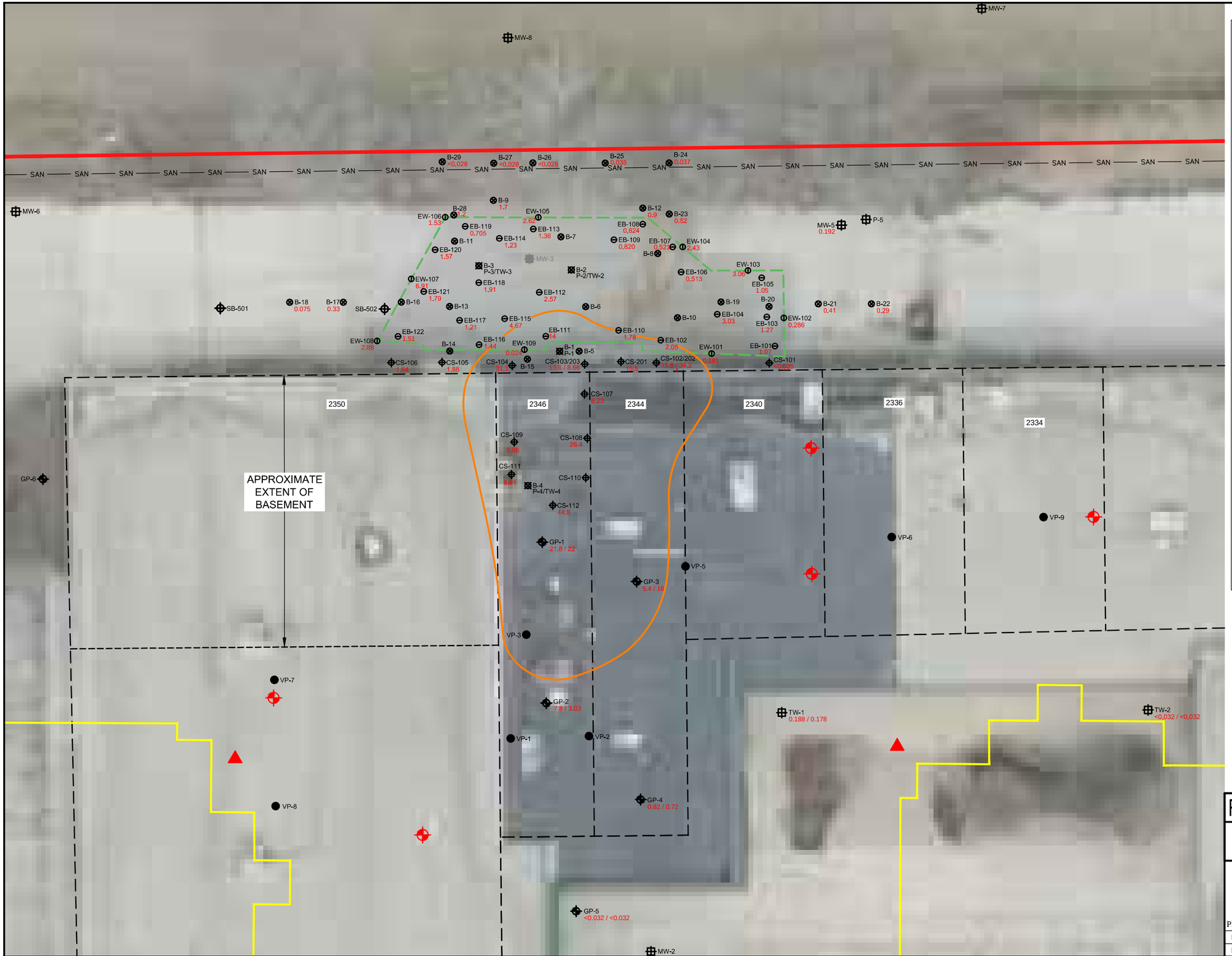
Endpoint Solutions

Robert A. Cigale, P.G.
Principal

cc: Ms. Bailey Copeland – Fox Run 3, LLC

ATTACHMENTS
Figures
Appendix A

FIGURES



SUBJECT PROPERTY

APPROXIMATE LOCATION OF PROPOSED BUILDING (PER VJS PRELIMINARY SITE PLAN SHEET C1.01 REVISED 11/05/19)

BUILDING PERIMETER AND DEMISING WALL

APPROXIMATE LIMITS OF REMEDIAL EXCAVATION

APPROX. EXTENT OF SOILS EXCEEDING SITE-SPECIFIC RESIDUAL CONTAMINANT LEVEL FOR PCE (12.3 ug/kg)

MONITORING WELL LOCATION

ABANDONED MONITORING WELL

HISTORIC SOIL BORING

SOIL GAS SAMPLE LOCATION

SOIL BORING (ENDPOINT 2020)

SOIL BORING (SAGA 2011)

PROBE/TEMPORARY WELL LOCATION (DRAKE 2005)

INJECTION CONFIRMATION SAMPLE (SAGA 2011)

WALL CONFIRMATION SAMPLE (SAGA 2011)

BASE CONFIRMATION SAMPLE (SAGA 2011)

0.29 PCE CONCENTRATIONS IN SOIL (VALUES ARE IN mg/K)

PROPOSED SOIL BORING LOCATION

PROPOSED GAS SAMPLE POINT

NOTE: ALL SAMPLE LOCATIONS SHOWN ARE APPROXIMATE

N

0 20' 40'

RESIDUAL SOIL CONTAMINATION

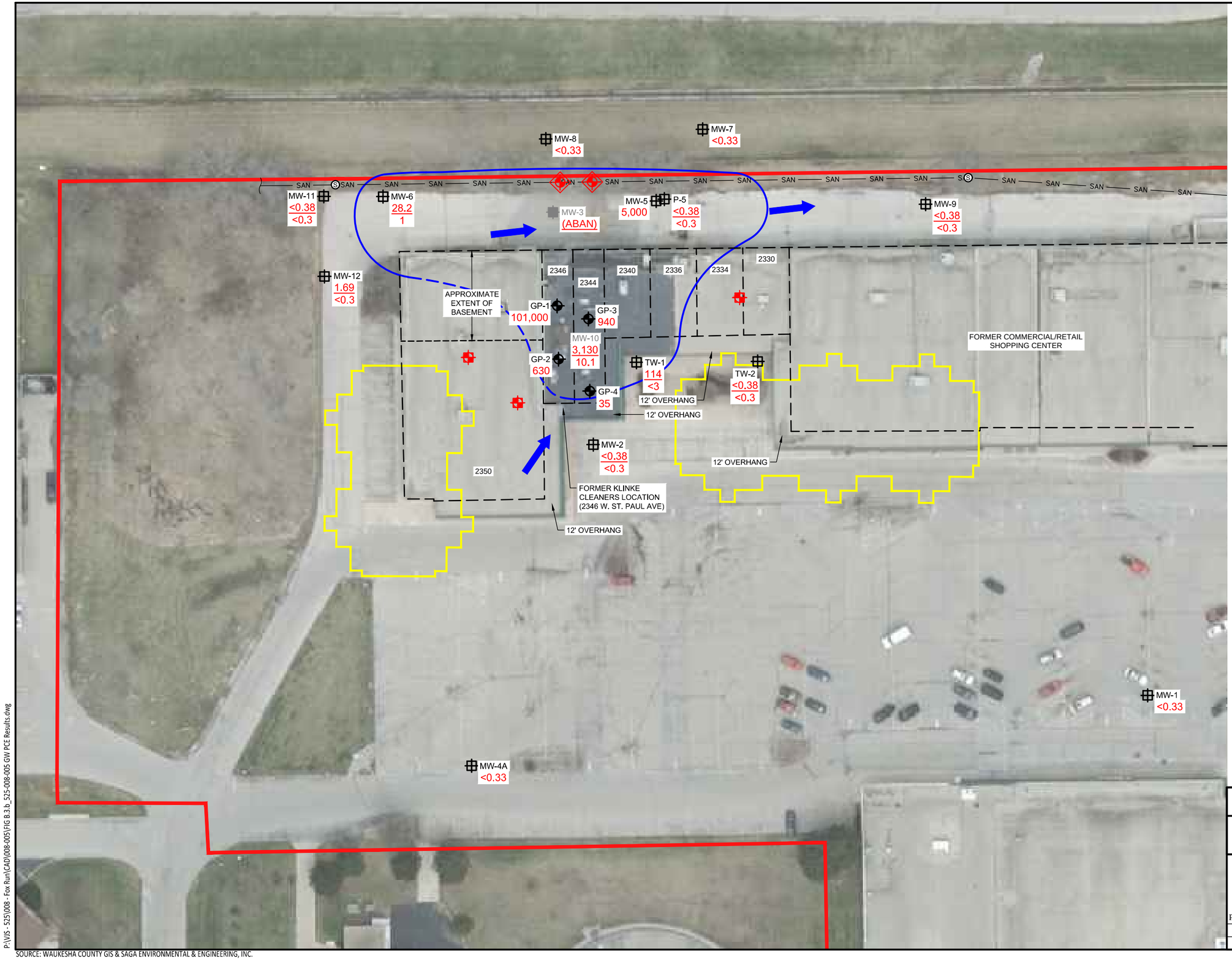
KLINKE CLEANERS - FOX RUN
2346 W. ST. PAUL AVENUE
WAUKESHA, WISCONSIN 53188

Endpoint Solutions
6871 S. Lovers Lane
Franklin, WI 53132
Phone: (414) 427-1200 Fax: (414) 427-1259

DRAWN BY: NWD	DATE: 07/21/2020	B.2.b
REVIEWED BY: RAC	PROJECT NO: 525-008-005	

P:\VJS - 525\008 - Fox Run\CAD\008-005\FIG B.2.b_525-008-005 Residual Soil Contamination.dwg

SOURCE: WAUKESHA COUNTY GIS & SAGA ENVIRONMENTAL & ENGINEERING, INC.



SUBJECT PROPERTY

APPROXIMATE LOCATION OF PROPOSED BUILDING (PER VJS PRELIMINARY SITE PLAN SHEET C1.01 REVISED 11/05/19)

BUILDING PERIMETER AND DEMISING WALL

MONITORING WELL LOCATION

ABANDONED MONITORING WELL

SOIL BORING WITH GRAB GROUNDWATER SAMPLE

PROPOSED SOIL BORING CONVERTED TO NR 141 COMPLIANT MONITORING WELL

PROPOSED GRAB GROUNDWATER SAMPLE

SHALLOW GROUNDWATER FLOW DIRECTION

3,130 (PCE)
10.1 (TCE)
GROUNDWATER RESULT (ug/L)

EXTENT OF GROUNDWATER IMPACTS (DASHED WHERE ESTIMATED)

NOTE: ALL SAMPLE LOCATIONS SHOWN ARE APPROXIMATE

GROUNDWATER RESULTS

12/12/19	MW-2, P-5, MW-6, MW-9, MW-10, MW-11, MW-12, TW-1, TW-2
4/17/20	MW-1, MW-4A, MW-5, MW-7, MW-8
4/24/20	GP-1, GP-2, GP-3, GP-4

N

0 60' 120'

GROUNDWATER PCE RESULTS

KLINKE CLEANERS - FOX RUN
2346 W. ST. PAUL AVENUE
WAUKESHA, WISCONSIN 53188

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6871 S. Lovers Lane
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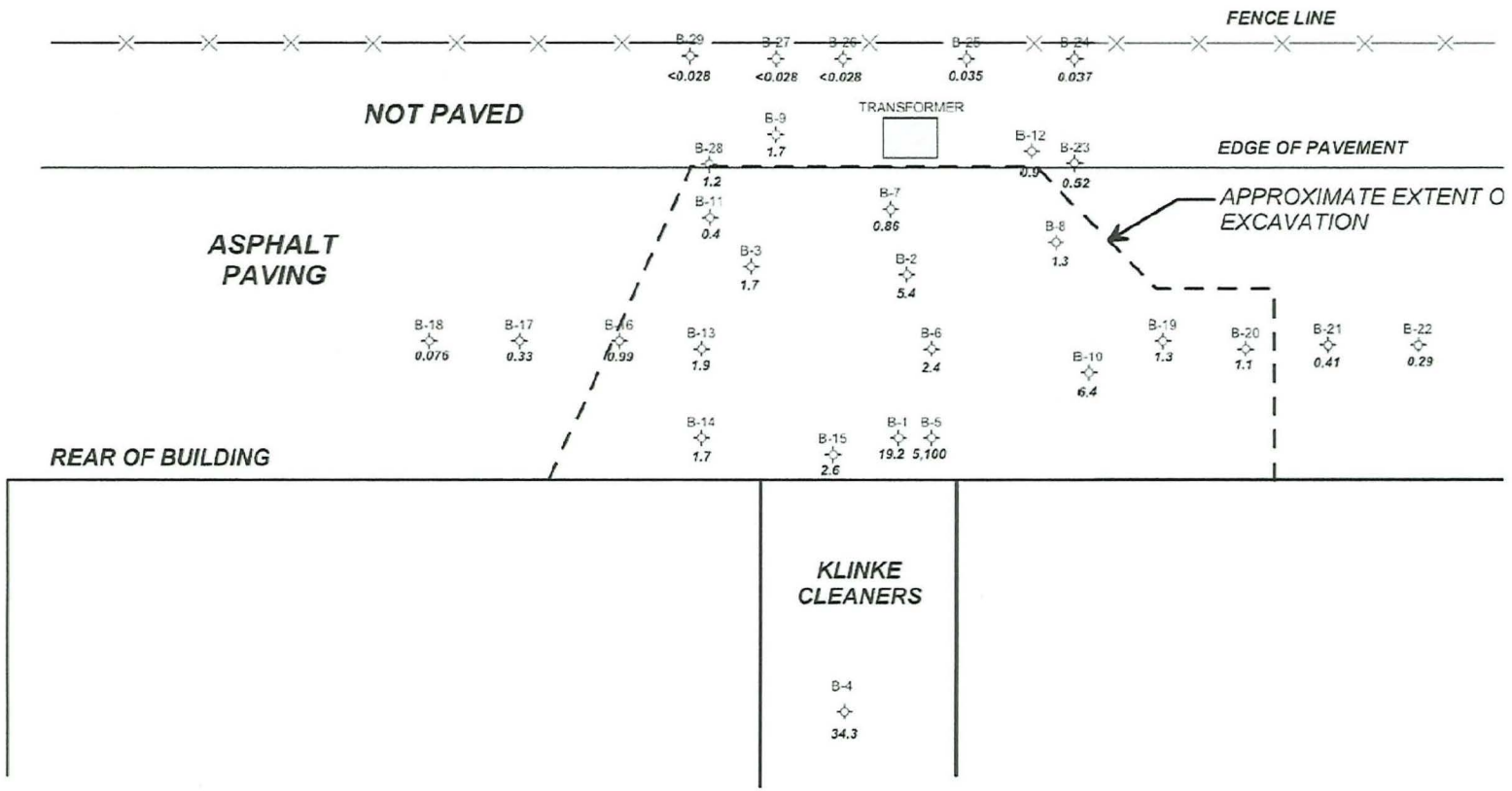
DRAWN BY: NWD	DATE: 07/21/2020	B.3.b
REVIEWED BY: RAC	PROJECT NO: 525-008-005	

P:\VJS - 525\008 - Fox Run\CAD\008-005\FIG B.3.b_525-008-005 GW PCE Results.dwg

SOURCE: WAUKESHA COUNTY GIS & SAGA ENVIRONMENTAL & ENGINEERING, INC.

APPENDIX A

FIGURE 3 FROM SAGA 11/14/11 STATUS REPORT



LEGEND

Boring Location With PCE
1.7 Concentration in mg/kg

0 10 20 40
Approximate Scale (feet)

Project No: 05-529
Date: July 2011
Adapted By: GHT

FIGURE 3

Soil Analytical Summary - May 2008

Klinke Cleaners - Fox Run
2346 W. St. Paul Ave.
Waukesha, Wisconsin