



July 17, 2020

Ms. Bailey Copeland
Fox Run 3, LLC
c/o VJS Development Group
W233N2847 Roundy Circle West
Pewaukee, WI 53072

Subject: Review of Comprehensive Site Investigation Report and Remedial Action Plan
Klinke Cleaners Fox Run at 2346 W St. Paul Avenue, Waukesha
DNR BRRTS Activity #: 02-68-535535; FID #: 268188910

Dear Ms. Copeland:

The Department of Natural Resources (DNR) has completed its review of the May 27, 2020 “Comprehensive Site Investigation Report and Remedial Action Plan” (SIRAP) and other documentation submitted previously for the site identified above. The DNR recognizes that while a considerable effort has been made to reduce the amount of tetrachloroethene (PCE) contamination at this site, residual soil, groundwater, and soil vapor contamination remains. Additional investigation and data analysis needs to be completed to confirm the extent of residual contamination and to determine what measures may be necessary to mitigate the risks posed by it. This letter outlines specific activities the DNR has identified as being necessary to complete the investigation, mitigate the risks posed by residual contamination, and obtain case closure.

Soil investigation and assessment

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 PCE contamination that exceeds direct contact residual contaminant levels.
- Areas north, west, and southwest of the former Klinke tenant space to define the extent of PCE that exceeds the protection of groundwater residual contaminant level. 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.

The extent of soil contamination needs to be assessed using current DNR residual contaminant levels. The site-specific screening level used earlier in this project does not adequately assess the risk posed by the remaining contamination and cannot be used to evaluate remedial action options. Figures prepared to display the extent of soil contamination must identify areas of the property where PCE concentrations exceed current DNR RCLs for the protection of groundwater and for the direct contact risk.

Post development groundwater monitoring will be required if pavement currently in place over soil contamination will be removed and not replaced to confirm that the change in surface conditions will not result in an expanding groundwater plume or a change in groundwater flow direction. If pavement has been removed during demolition,

and it is known that it will not be replaced, this sampling can begin, but should include the additional sampling locations requested below.

The SIRAP proposes preparing a soil management plan to meet the requirements of NR 718. This would need to be provided to DNR for review and approval if contaminated soil will be excavated or otherwise disturbed during this project and managed on-site or at another non-licensed facility.

Groundwater investigation

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.
- 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 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.

Vapor assessment

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 are acting 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 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 DNR cannot require the operation of a mitigation system without this data. The DNR recommends that vapor sampling ports be installed during building construction so they can be easily accessed later.

Active mitigation will be required where contaminant concentrations in sub-slab soil or groundwater pose a risk to vapor intrusion. Installing a garage ventilation system and sealing the garage ceiling by itself is not sufficient to address a vapor intrusion risk. Any ventilation system installed for this purpose must operate and be commissioned as outlined in DNR guidance RR-800 (Addressing Vapor Intrusion at Remediation &

Redevelopment Sites in Wisconsin). An operation and maintenance plan will need to be developed and provided to building owners responsible for ensuring the system operates as proposed. Indoor air sampling will likely be required to demonstrate that they system is effective.

Report and figure corrections

A site investigation addendum report should be prepared that describes field activities conducted to address the comments presented above. A remedial construction documentation report should also be submitted as was proposed in the SIRAP to describe the construction of the soil cap over residual soil and the installation of vapor mitigation systems in the buildings, if necessary. The construction documentation report should also identify whether utilities were installed during site development that could have the potential to be a migration pathway for residual contamination.

The DNR 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.

We appreciate your efforts to protect the environment at this site. If you have any questions regarding this request, please contact me by calling (262) 574-2166, or by email at paul.grittner@wisconsin.gov.

Sincerely,



Paul Grittner
Hydrogeologist
Remediation & Redevelopment Program

cc: Robert Cigale, Endpoint Solutions Corp., 6871 South Lovers Lane, Franklin, WI 53132
SER File