



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

July 3, 2024

Transmitted via Email

Michael McKee
ML McKee, LLC d/b/a Executive Cleaners
McKee 6, LLC
201 North Main Street
Elkhart, IN 46516

Re: Conceptual Site Model Update and Request for
Site Characterization Approval
Executive Cleaners
201 North Main Street
Elkhart, IN
VRP #6190406

Dear Mr. McKee:

The Indiana Department of Environmental Management (IDEM) has reviewed the Conceptual Site Model Update and Request for Site Characterization Approval report, prepared by Crossroads Environmental Consulting (CEC, March 18, 2024), for the Executive Cleaners site located at 201 North Main Street in Elkhart, Indiana.

The report was uploaded to the IDEM Virtual File Cabinet (VFC) as document #83612364. Further site history can be found in the VFC located on the IDEM website vfc.idem.in.gov. This technical letter contains a brief background summary including comments generated during our review of the above-mentioned report.

Background

The site is in a mixed commercial and residential area on the north side of Elkhart, IN. Executive Cleaners has operated at the site for the past 11 years as a dry cleaning and laundry service facility utilizing tetrachloroethylene (PCE) in the dry-cleaning process. The property is believed to have operated as a dry-cleaning facility since 1920. The current site building was constructed in 1971. Investigations began in 2018 after a Notice of Liability letter (State Cleanup #0000746) was sent to the property owner. Initial investigations of the soil and groundwater indicated that incidental releases have occurred from historical dry-cleaning operations. The release-related chemicals (RRC) for the site include chlorinated Volatile Organic Compounds (cVOCs) such as PCE and its breakdown products. The site is not located in a Wellhead Protection Area.

Multiple phases of site investigation have been conducted to date. Soil investigations have identified soil impacts above IDEM published levels that are limited to on-site. Groundwater impacts have been found to extend off-site to the north and northwest towards the Elkhart and St. Joseph Rivers. Investigations into the extent and origin of groundwater impacts beyond the rivers



Visit on.IN.gov/survey or scan the QR code to provide feedback.

We appreciate your input!



Executive Cleaners - Conceptual Site Model Update and Request for Site Characterization Approval, March 18, 2024

July 3, 2024

Page 2 of 4

remain ongoing. Sewer gas is currently sampled quarterly to monitor the sanitary sewer as a potential preferential pathway for contamination. Vapor intrusion (VI) assessments have been completed for nearby structures where access has been granted. Two (2) vapor mitigation systems were installed at 211 North Main Street and 114 West Jefferson Street in February 2019 to address VI concerns.

In November 2021, two (2) orphaned underground storage tanks (USTs) containing solvent were uncovered and the contents were sampled for waste characterization and approved for disposal. These USTs were left in-place. In December 2021, Crossroads oversaw a geophysical investigation, which included high resolution time domain electromagnetic metal detection (EMD) and groundwater penetrating radar (GPR). The results of these investigations identified two (2) known USTs and two (2) additional potential USTs; and Crossroads oversaw removal of the USTs. Based on the information provided in the Interim RWP Implementation Report Phase 1 – UST Removal, dated February 22, 2022 (see VFC #83285958), it appears geophysical investigation, excavation, UST closures, and disposal activities were completed adequately. Crossroads recommended implementation of the remaining tasks proposed in the Interim RWP under Phase 2.

In May/June 2022, Crossroads implemented Phase 2 of the Interim RWP dated August 19, 2022. The Phase 2 implementation included the installation of four (4) Permeable Reactive Barriers (PRBs) in areas with the greatest dissolved phase cVOC concentrations using PlumeStop® Liquid Activated Carbon™, Sulfidated Micro Zero-Valent Iron (S-MicroZVI®), and Bio-Dechlor Inoculum Plus (BDI PLUS™). The PRBs appear to have been completed appropriately. Crossroads compared their interpreted groundwater plume footprints from May 2021 and September 2023. Based on the side-by-side comparison, the groundwater plume appears to be decreasing in size. Although there is some seasonality of cVOC concentrations in groundwater, the interim remedial efforts appear to be overall effective. Comments generated during our review of the Conceptual Site Model Update and Request for Site Characterization Approval report are provided below.

Comments

1. Given the investigations completed to date, consistent groundwater flow direction, and nearby potential off-site sources, CEC states that no further delineation is needed, and requests site characterization approval. IDEM will not attempt to assess attribution to the contamination in the potentially commingled plume with the information provided. Several of the locations identified do not have a release report and do not have analytical data associated with them to include as part of an overall evaluation of potentially commingled plumes. If the consultant can show the plume behaves predictably, and all exposure pathways on nearby affected properties are controlled, then the site may be able to move forward towards regulatory closure.
2. Ten (10) sewer vapor samples were collected in December 2023 and March 2024 over an 8-hour period. The concentrations of trichloroethylene (TCE) in samples MH-3, MH-10, and MH-11 were above the R2 Commercial Sub Slab Published Level (CSSPL) of 300 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). TCE in MH-10 and MH-11 was detected for the first time above the Residential Sub Slab Published Level (RSSPL) of $70 \mu\text{g}/\text{m}^3$ since the initial sampling. TCE and remaining cVOCs were not detected in MH-10 or MH-11 during previous sampling events. If the concentrations of TCE continue to be above the R2 RSSPL in MH-10 and MH-11, paired samples from all nearby properties should be collected and analyzed for VOCs.

Executive Cleaners - Conceptual Site Model Update and Request for
Site Characterization Approval, March 18, 2024

July 3, 2024

Page 3 of 4

3. On March 12, 2024, Crossroads collected six (6) indoor air (IA) samples at the commercial property located to the south of the site at 125 North Main Street. This commercial property is split into two (2) units (south and north). Two (2) IA samples per level were collected from the basement, first floor, and second floor of both units. The basement floor is constructed of brick; therefore, sub slab samples were not collected. Indoor air in the north basement had a PCE concentration of $100 \mu\text{g}/\text{m}^3$, which is below the commercial IAPL of $200 \mu\text{g}/\text{m}^3$. The building is currently vacant. A summer worst-case IA sampling event is needed with soil gas samples on the north side of the building to determine if sampling will need to continue once the structure is occupied.
4. Although included in the reviewed report, IDEM notes that isopleth maps were not provided in the most recent quarterly monitoring report. The consultant must depict groundwater delineation for respective RRCs in future reports as lines drawn on shallow and deep plume maps. If applicable, any software used to generate those lines should be specified. In addition to delineation purposes, these lines assist in evaluating reductions in plume extents over time.
5. Groundwater monitoring and sewer conduit vapor sampling should continue to evaluate plume behavior, monitor remediation effectiveness, and assess potential risk. Although sub-slab soil gas (SGss) samples have been collected as part of VI assessments, the soil vapor plume has not been evaluated. Given the SGss exceedances and elevated cVOCs concentrations in groundwater, additional investigation is needed to delineate soil vapor to below residential soil gas published levels (RSGPLs) in accordance with R2 Section 2.3.6.4. The number, location, and depth of soil gas samples must be based on the conceptual site model (CSM), including known or likely source areas, distance (vertical and horizontal) between the potential vapor source(s), and any receptors. A work plan must be submitted to IDEM for review.

Groundwater monitoring and sewer conduit vapor sampling should continue to further evaluate conditions and interim remediation effectiveness. A summer worst-case IA sampling event is needed at the 125 North Main Street location. Additional investigation is needed to delineate soil vapor to below RSGPLs. Please respond within 30 days from the receipt of this letter with a plan or scope of work to address these comments. The consultant must notify IDEM at least 14 days prior to conducting field work. If you have any questions, please contact me at (317) 941-4517, (800) 451-6027, or at email CAPitche@idem.in.gov.

Sincerely,



Chad Pitcher, CHMM
Project Manager
Voluntary Remediation Program
Office of Land Quality

CP:tt

ec: Mike Cooper, Crossroads Environmental Consulting
Nick Gahl, Gahl Legal Group
Michael Nelson, Nelson Law Group
Gary Boyn, Warrick and Boyn
John Espar, City of Elkhart
Jim Weingart, IDEM Northern Regional Office

Executive Cleaners - Conceptual Site Model Update and Request for
Site Characterization Approval, March 18, 2024

July 3, 2024

Page 4 of 4

It is the goal of IDEM to enable remediation sites to move forward in a timely manner. If an impasse has been reached over technical issues, a Technical Review Panel of non OLO scientists is available to review and offer a non-binding opinion to help resolve technical disagreements with the VRP and State Cleanup Program project managers. The goal is to facilitate progress at your site. This review process is available immediately. If you would like to request a review by the Panel, please contact Kevin Davis, Remediation Services Branch Chief for the Office of Land Quality, at 317-232-4535 or kdavis2@idem.in.gov.

Any decision produced by the Technical Review Panel is not an agency action as defined in IC § 4-21.5-1-4 or an order as defined in IC §4-21.5-1-9. This decision is not subject to administrative review because it is not a determination of any legal rights, duties, privileges, immunities, or other legal interests, and because it is issued pursuant to an informal procedure for dispute resolution as allowed by IC 4-21.5-3-34 (a).