



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

July 2, 2024

* Transmitted via electronic mail

Scott Harkness
Norris Choplin Schroeder LLP
101 W. Ohio Street, Ninth Floor
Indianapolis, IN 46204

Re: Revised Remediation Work Plan Review
Former B&E Realty (Former Schwitzer Facility)
1125 Brookside Avenue
Indianapolis, IN
VRP #6150102

Dear Mr. Harkness:

The Indiana Department of Environmental Management (IDEM) has reviewed the Revised Remediation Work Plan (Wilcox Environmental Engineering, Inc., February 9, 2024) for the Former B&E Realty site located at 1125 Brookside Avenue in Indianapolis, Indiana.

The report was uploaded to the IDEM Virtual File Cabinet (VFC) as document #83596189. 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 Revised Remediation Work Plan (RWP). The overall objective of the Revised RWP is to remediate site impacts and mitigate exposure risks in accordance with a risk-based approach to closure, as provided in IDEM's July 8, 2022 Risk-based Closure Guide (R2).

Background

The site is a commercial/industrial facility that includes a 500,000 square foot building with multiple subdivided spaces and several loading docks. The site has an extensive history of commercial and industrial use in a mixed use residential and commercial/industrial area. In 1989, the property was purchased by B&E Realty and was subsequently divided into multiple independent spaces (Circle City Industrial Complex) for various commercial, industrial, art studio use, and storage. Redevelopment activities are reportedly expanding into the west end of the building, which was previously undeveloped. The site entered the Voluntary Remediation Program (VRP) in 2015, and the release-related chemicals (RRCs) include chlorinated volatile organic compounds (cVOCs).

A release was discovered in 2004 (State Cleanup # 2004-03-226) and indicated soils contained various volatile organic compounds, semi volatile organic compounds, total petroleum hydrocarbons, and metals above residential and some industrial closure levels on-site. The majority of the soil impacts were identified in the central and southern portions of the building and property. One hundred monitoring wells (shallow 10-25 feet below ground surface and deep 30-70 feet below ground surface) have been installed on and off-site to delineate the



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groundwater plume. The groundwater flows west/southwest from the site and cVOCs are present in both the shallow and deep groundwater. The groundwater plume extends approximately 1,250 feet down-gradient with the highest concentrations in the center of the site building and east in a neighborhood park.

The site building sub-slab was sampled in March and April 2013, and the results indicated elevated levels of tetrachloroethylene (PCE) and trichloroethylene (TCE), which prompted the installation of two (2) vapor mitigation systems (VMS). The East End VMS and West End VMS were installed in December 2014. Only the East End VMS was operating because the western portion of the building was unoccupied. Subsequent vapor assessments completed in 2015 and from 2018 to 2023 have shown elevated concentrations of PCE and TCE in samples collected from the building sub-slab. In correspondence dated June 4, 2021, IDEM comments with regard to pressure field extension (“PFE”) monitoring as a possible alternative to continued indoor air sampling were apparently later misinterpreted as formal approval. IDEM did not provide concurrence with the consultant’s recommendation from the Winter 2021 Vapor Investigation Report (VFC #83132624) to move to PFE testing only.

The previous RWP was submitted in April 2016 and details source mass reduction using in situ chemical reduction (ISCR) injections and eliminating the exposure risk to human health and the environment by using institutional and engineering controls. The anaerobic dechlorination enhancing slurry injections (37,800 gallons of solution) were implemented as an interim response measure in September 2015 targeting five (5) treatment areas 10-20 feet below ground surface. Groundwater plume stability monitoring has been on-going using Mann-Kendall trend analysis post injections. An Environmental Restrictive Covenant (ERC) was recorded at the site property on February 16, 2018, instrument number A201800015985, which restricts interference with ongoing groundwater monitoring activities, residential property use, extraction of groundwater, and requires a vapor mitigation system for current and future site buildings.

In December 2022, the property owner notified Wilcox that the West End of the site building was undergoing development and would be completed as commercial tenant spaces similar to the rest of the site building. Wilcox mobilized to the site on January 20, 2023 to reassess site vapor intrusion conditions. Paired indoor air and sub-slab samples were collected from the West End of the site building. No commercial indoor air published level (IAPL) exceedances were reported. Laboratory results for TCE were reported above the large building sub-slab published level (LB CSSPL) of 3,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at SS-55 (8,800 $\mu\text{g}/\text{m}^3$) and SS-57 (4,250 $\mu\text{g}/\text{m}^3$). The East End VMS is currently in operation and the West End VMS is pending repair and potential operation.

Wilcox plans to install monitoring wells downgradient of the site as replacement wells for additional plume delineation and monitoring (Downgradient Monitoring Wells Work Plan, February 9, 2024, VFC document # 83596192). The proposed well locations were approved by IDEM in correspondence dated May 14, 2024. The monitoring wells are planned for installation in the summer of 2024 and will replace some of the wells destroyed during the I-65/I-70 interchange construction.

The proposed remediation strategy includes ISCR injections, permeable reactive barrier (PRB) injections, post-treatment plume behavior evaluations, and institutional controls. The following chemical treatments have been proposed as part of the remediation strategy:

- Source area ISCR injections using three (3) Vertebrae Well System (“VWS”) wells installed within the building footprint. Approximately 10,800 pounds of 3D MicroEmulsion (3DME®), 9,000 pounds of Sulfidated-MicroZV (S-MZVI®), and 54 liters of Bio-Dechlor

INOCULUM Plus (BDI Plus®) will be mixed with 33,504 gallons of water and injected from 11 to 21 feet below grade.

- PRB injections north of 11th Street consisting of 80 injection points (from 11 to 21 feet) spanning 410 feet in length. Approximately 13,600 pounds of liquid activated carbon (PlumeStop®), 2,100 pounds of S-MZVI®, 2,000 pounds of HRC®, and 19 liters of BDI Plus® will be mixed with 29,770 gallons of water to complete installation of the PRB.

Comments generated during our review of the Revised RWP are provided below.

Comments

1. The revised Quality Assurance Project Plan (QAPP) provided in Appendix G of the RWP and related attachments appear overall acceptable for the project. Several references in the sampling and analysis plan (SAP) need to be updated to show the IDEM R2 and other currently available IDEM sampling and analysis guidance documents. Section 6 and Tables 3 and 4 of the SAP should be revised to show the current laboratory (Eurofins instead of Pace) assigned for vapor sample analysis.
2. Most of the site monitoring wells are currently sampled using passive diffusion bag samplers for quarterly monitoring as approved by IDEM. Once installed, the replacement monitoring wells should be sampled using traditional sampling methods as described in the SAP for at least four (4) quarters prior to requesting IDEM approval for use of passive diffusion bag samplers.
3. IDEM continues to recommend long-term IA monitoring to ensure potential vapor risk is managed by the active VMS remedy at the East End of the site building. Vapor data collected during January 2023 indicates Scenario 3 (indefinite sampling or implement remedy) still applies for the West End of the building. The consultant is evaluating repairs to the West End VMS versus indefinite sampling, which is acceptable.
4. IDEM agrees there has been a general decrease in PCE/TCE contaminant concentrations in groundwater with a corresponding increase in daughter products especially near the 2015 injection areas. Groundwater results reported from off-site downgradient monitoring wells (MW-69 – MW-72) were also below the respective published levels for the RRCs, including PCE and TCE, since the 2015 injections. Since their destruction during the I-65/I-70 interchange project, some of the off-site monitoring wells will be replaced in the summer of 2024 (see VFC document #83596192). The well installations will include both shallow and deep wells. IDEM understands that some of the proposed monitoring well locations may need to be adjusted due to the presence of underground utilities, to avoid damage to the Monon Trail, or due to the presence of surface feature impediments.
5. The consultant must depict groundwater delineation in future reports as lines drawn on the 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. Underground utilities must also be added to future cross-section maps along with contaminant delineation extent lines.
6. The revised RWP did not include an evaluation of potential preferential pathways. A review of the nearby Former Indianapolis Public Schools Bus Maintenance and Former Coca-Cola Bottling Plant (IPS-Coca-Cola Site, State Cleanup #0000613), located

generally downgradient to the southwest of the Former B&E Realty facility, indicates that some sewer lines in the area may be as deep as 18 to 20 feet below grade. Wilcox later confirmed this information in a June 19, 2024 email. The sewer line to the east of the site building and running northeast to southwest is identified by Citizens Energy Group as an interceptor line and may be located within or near the top of the groundwater table. A preferential pathway evaluation must therefore be included in a revised RWP.

7. Per R2 2.3.6.6., IDEM may request conduit vapor screening for cVOCs if groundwater containing release-related chemicals potentially intersects the conduit or cVOCs may have been dumped or disposed of down facility drains, both of which appear applicable. The sewer line investigation conducted in May 2018 (see VFC document #82588298) suggests that the sanitary sewer system is not acting as a preferential pathway into the surrounding neighborhood. Quarterly conduit sampling within the sewer line must be completed to further evaluate the potential pathway and account for any seasonal fluctuations in contaminant concentrations, if present. A conduit sampling work plan must be submitted to IDEM for review.
8. The proposed ISCR and PRB injections are generally acceptable as an interim response measure. It is recommended that injections not occur within 15 feet of the monitoring wells to prevent potential bias in the monitoring program. In addition, a minimum of eight (8) quarters of post equilibration period (one year) monitoring are recommended for trend analysis. The off-site wells are relatively far from the most downgradient ISCR injection well and may not show reduction in impacts as rapidly as the wells in proximity to the building footprint. Additional off-site investigation and/or remediation efforts may be required dependent upon the groundwater results from the planned replacement/delineation wells. It should be noted that additional groundwater monitoring may be needed pending future trend analyses.

Continue vapor assessments at the Former B&E Realty facility including sub-slab and indoor air sampling to ensure potential vapor risk is managed. The majority of the remaining above comments can be addressed in future reports including a revised RWP. After groundwater data from the planned replacement monitoring wells and potential preferential pathways are evaluated, a revised RWP must be submitted. Please respond within 60 days from the receipt of this letter with a work plan to address the sewer conduit sampling. IDEM must be notified at least 14 prior to the implementation of field work. If you have any questions, please contact me at (317) 941-4517, (800) 451-6027, or at capitche@idem.in.gov.

Sincerely,



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

ec: Syed Jaffery, IDEM Project Manager for Former IPS-Coca-Cola Site, State Cleanup Site #0000613
Lisa McCoy, IDEM Office of Legal Counsel
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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 OLQ 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 Branch Chief for Office of Land Quality, at KDavis2@idem.in.gov or (317) 232- 4535.

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).