MEMORANDUM

DATE: December 7, 2021

FROM: Douglas Ballotti, Director
Superfund & Emergency Management Division

TO: Brigid Lowery
Director, Assessment and Remediation Division,
Office of Superfund Remediation and Technology Innovation

SUBJECT: Withdrawal of Previous Proposal to Add the Riverside Ground Water Contamination Site to the National Priorities List (NPL)

I. Introduction

The purpose of this memorandum is to request withdrawal of the Riverside Ground Water Contamination Plume Site (Site) located in Indianapolis, Marion County, Indiana from proposed addition to the National Priorities List (NPL). The site was proposed for addition to the NPL on April 7, 2016 (81 FR 20277) based on detections of certain chlorinated Volatile Organic Compounds (cVOCs) in the raw groundwater in some City of Indianapolis wells operated by Citizen Energy, which provide drinking water to approximately 875,000 people. The State of Indiana, through the Indiana Department of Environmental Management (IDEM), concurs with this request as documented in a September 28, 2021, letter to the U.S. Environmental Protection Agency (EPA) (Attachment 1).

EPA has reviewed documentation supporting this action and is confident that IDEM will continue to take or ensure appropriate actions to address the Site in compliance with a 2017 Memorandum of Agreement (MOA) with EPA that deferred addition of the site to the NPL while the State oversees response actions. (Attachment 2). Under IDEM, the site is referred to as Site 0153. The IDEM is overseeing investigation and cleanup activities at individual potentially responsible party sites which are believed to be the sources of the cVOCs contamination in the groundwater pursuant to their authority through State remediation programs. These sources are located within the minimum five-year time of groundwater travel that is used to help delineate the wellhead protection area. Contaminant concentrations in the raw untreated groundwater in all active City production wells are currently below Maximum Contaminant Levels (MCLs) and have been for the last five years. Remediation Goals (i.e., MCLs) have been achieved at the individual production wells and the White River and Riverside Municipal Wellfields. Additionally, the groundwater is mixed with surface water and treated prior to distribution. Finished drinking water provided to Citizen Energy’s customers has met and continues to meet all the requirements of the
Safe Drinking Water Act (SDWA). The City of Indianapolis, Marion County Health Department, Indianapolis Environmental Equity Council, and Citizens Water support the de-proposal of the site (Attachment 3, 4, 5, 6). Natural resource trustees were notified of the intention to de-propose the site and they have not raised an objection (Attachment 7).

II. Site Background

The Riverside Ground Water Contamination Site (ID#INN0000510936), or Site 0153, is located in Indianapolis, Marion County, Indiana. The site consists of an area of groundwater with low-level cVOCs detections in the vicinity of the Riverside and White River Municipal Wellfields (Wellfields), located in the confluence of the White River and Fall Creek in central Indianapolis. The Wellfields are operated by Citizens Energy (Citizens) which operates the public drinking water supply utility for the City of Indianapolis. In February 2013, Citizens Energy reported to IDEM that low levels of cVOCs were detected in some water samples from the untreated “raw” groundwater samples collected from production wells in the Wellfields. In 2014, IDEM sampled the wells and found low levels of cVOCs in five of the 17 production wells during a Site Inspection (SI). With the exception of production well WR-3, all cVOCs concentrations in raw groundwater were below and have remained below their respective MCLs. The groundwater plume, depicted by samples from municipal wells meeting observed release criteria, measures approximately 53 acres, and is composed of trichloroethylene (TCE), dichloroethylene (cis-1,2-DCE), and vinyl chloride (VC). As part of its drinking water operations, Citizens mixes raw groundwater from the Wellfields with surface water from the Indianapolis Central Canal, which is then treated and filtered, creating the “finished water” distributed to the public. The finished drinking water provided to customers by Citizens has met and continues to meet the SDWA MCLs.

The Wellfields are located in a heavily developed urban mixed-use area of the city where dozens of historic commercial and industrial activities, which potentially used cVOCs, operated over the course of several decades. The cVOCs have migrated to the Wellfields from off-site source(s) in the area. IDEM sent a letter in support of listing the site on the NPL in August 2015. On April 7, 2016, EPA published a Proposed Rule in the Federal Register, proposing to include the site on the NPL based on the presence of low-level detections of certain cVOCs in the raw water in some Citizens’ production wells. A variety of potential sources of the detected cVOCs were identified within the five-year time of travel for the Wellfields, some of which were already at the time of Proposal under investigation and/or remediation in a State Program. Based on public comments and new data from Citizens showing decreasing cVOCs concentrations in the Wellfields, IDEM withdrew and rescinded their request that the site be added to the NPL, allowing that the State instead manage the investigation and remedial actions at the Site.

Subsequently, EPA and IDEM executed a MOA on June 8, 2017 that deferred addition of the Site to the NPL while the State oversees response actions. The MOA specifies the expectations and obligations of each agency regarding the Site and memorializes the agreements necessary to ensure that the response actions undertaken at the Site achieve a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) protective cleanup. The MOA includes programmatic expectations including implementation requirements, procedural requirements, community participation requirements, and completion of state response action requirements.
III. Enforcement History and Cleanup History

Following execution of the MOA in 2017, IDEM conducted a search for PRPs and potential cVOCs sources in the five-year time of travel from the Wellfields. IDEM is overseeing response actions at individual potential cVOCs sources through various State remediation programs. As part of these State remediation programs, PRPs are responsible for conducting their own site investigations and remediation, under directive from IDEM, to address their potential cVOCs impact contributions to the Wellfields.

IDEM identified 89 potential sources of cVOCs within a five-year time of groundwater travel to the Wellfields. Notice of liability letters were issued at 25 facilities, and over 140 information request letters were sent out. Seventy-seven of the initial 89 potential source areas are being addressed, to some extent, in one of IDEM’s remediation programs. However, a definitive source(s) of cVOCs impacting the Wellfields has not been identified to date. The conceptual site model shows that a number of individual sources likely contributed to a commingled groundwater plume which led to the low-level cVOCs impacts detected in certain production wells in the Wellfields. Information on the enforcement, investigation, and response actions at individual PRP sites are included in the Priority Site Summaries (Attachment 8). Sixteen property owners have entered into an Agreed Order with IDEM to fund a Monitoring and Future Response Fund (MAFR Fund) in the amount of $425,000. IDEM will use the MAFR Fund to continue to monitor the quality of groundwater within the site area over the next 10 years and perform any cleanups if any become necessary.

As identified in the Alternative Plan submitted by IDEM as part of the MOA, Citizens developed and implemented a Groundwater Monitoring Plan with an increased sampling of production wells from semi-annually to quarterly to monitor cVOCs concentrations in the Wellfields. Citizens has also taken interim response actions at the one production well that had low-level exceedances of TCE in raw groundwater above the MCL. The interim response actions included shutting down production well WR-3 in September 2016, and engineering and installing an aeration system for production well WR-3 in September 2019. Aeration system construction was completed in late January 2020. Citizens conducted aeration testing on production well WR-3 from February through April 2020 and production well WR-3 is now back in service. Currently all raw water generated from production well WR-3, even before it is aerated, is below MCLs, providing further evidence that cVOCs concentrations in the Wellfields continue to decline. Citizens continues to treat the production well WR-3 water, providing an extra margin of safety.

IDEM completed a Remedial Investigation (RI), Human Health and Ecological Risk Assessment (HHERA), and a Feasibility Study (FS) for the site focusing on the Wellfields. The RI characterized Site conditions, summarized PRP investigations at individual releases, and investigations within the Wellfields, evaluated the fate and transport and nature and extent of cVOCs affecting the Wellfields, and summarized risk to human health and the environment. The HHERA concluded there is no reasonable potential for adverse effects to human health or the environment associated with the operation of the Wellfields or the drinking water supplied by Citizens. Since 2016, cVOCs concentrations have been decreasing and the raw water from every production well has been lower than the MCL for cVOCs. The interim response actions taken by
Citizens has been successful at further reducing cVOCs levels in WR-3. The FS evaluated available remedial technologies to address impacts to the Wellfields in the future, if cVOCs exceedances above the MCL are detected in the raw groundwater at any production well. The Record of Decision (ROD) and Remedial Action Plan (RAP) summarize site conditions and select the site remedy.

The Selected Remedy includes continued monitoring of cVOCs concentrations in the Wellfields and continue operation of the aeration system on WR-3. The Selected Remedy also includes the plan to remove from service any production well where raw groundwater cVOCs concentration exceeds an MCL in the future. This would prevent raw groundwater exceeding an MCL from entering the Citizens mixing and pre-treatment plant, which would prevent exposure. Should treatment of the raw production well groundwater become necessary in the future, an aeration treatment system will be installed on the production well and confirmation sampling will be performed prior to the well is returned to service. This will prevent impacted groundwater above MCLs from entering the Citizens mixing and pre-treatment plant prior to mixing, treatment, and distribution. All documents pertaining to the State’s work at the site can be found at https://www.in.gov/idem/cleanups/sites-of-special-interest/site-0153-ground-water-contamination-site/.

IV. Current Status of Cleanup

IDEM, as required by the MOA, has documented the potential risks associated with the Site and the Wellfields, has identified numerous PRPs and potential source(s) within site and is managing the investigation/remediation efforts at these potential sources under various State cleanup programs. Although investigation and remediation of all individual PRP sites is not complete, adequate information is available to rely on for decision making purposes as it pertains to the overall protection of the Wellfields, safety of drinking water supply, evaluation of the interim response action, and selection of a final remedy for the Wellfields. IDEM will continue to pursue PRPs, as necessary and appropriate, to limit future potential cVOCs contributions to Wellfields. Summaries of the work completed at the PRP priority sites can be found in Attachment 8. Additional information about the clean-up efforts and progress at individual priority sites can be found on the State’s site website.

Currently, cVOCs concentrations in the raw groundwater within the Wellfields are either non-detect or below all of the applicable EPA MCLs. As part of the selected site remedy, Citizens will continue to monitor groundwater, remove production wells above an MCL from service, and install aeration treatment, as needed, prior to returning to service. Citizens will continue to report quarterly results and updates to IDEM and ensure that finished drinking water complies with all SDWA requirements prior to distribution.

V. Conclusion

The Site cleanup efforts will continue to be conducted by PRPs, under the regulatory authority of IDEM, and by State funded actions. IDEM has continued to meet the requirements set in the MOA and will continue to issue annual reporting to EPA.
The raw groundwater from the production wells at the Wellfields meet the MCL before treatment. The interim response action has been effective at reducing cVOCs concentrations in WR-3 and the aeration system will continue to be operated. The site remedy outlines monitoring requirements and the procedures to taken should further response actions be necessary in the future.

IDEM requested that the site be de-proposed from addition to the NPL in a letter to EPA dated September 28, 2021. EPA Region 5 concurs with IDEM’s request, and based on EPA’s review of the site file, believes that it is appropriate to withdraw the proposal to add the Site to the NPL. Withdrawal of the proposal to place the site on the NPL is consistent with the November 12, 2002 EPA Office of Solid Waste and Emergency Response policy memorandum “Guidelines for Withdrawing a Proposal to List a Site on the NPL” and the current Superfund Program Implementation Manual.

Attachments
Attachment 1 – IDEM Support Letter for De-proposal
Attachment 2 – Memorandum of Agreement Between US EPA and IDEM for the 0153/Riverside Groundwater Contamination Site Indianapolis, IN
Attachment 3 – Letter of Support City of Indianapolis
Attachment 4 – Letter of Support Marion County Public Health Department
Attachment 5 – Letter of Support from the Indianapolis Environmental Equity Council Inc.
Attachment 6 – Letter of Support from Citizens Energy Group
Attachment 7 – IDEM Letter to Natural Resource Trustees
Attachment 8 – PRP Priority Site Summaries
September 28, 2021

Douglas Ballotti, Director  
Superfund & Emergency Management Division  
US Environmental Protection Agency, Region 5  
77 W. Jackson Blvd., SR-6J  
Chicago, IL 60604

Dear Mr. Ballotti:

Re: National Priority List De-Proposal  
Riverside Groundwater Contamination  
Indianapolis, Marion County  
State Cleanup Site #0000635

The Indiana Department of Environmental Management (IDEM) is providing this letter in support of the United States Environmental Protection Agency (US EPA), Region 5, de-proposing its April 7, 2016, proposal of the Riverside Groundwater Contamination (Site 0153), Marion County, Indiana to the Superfund National Priorities List (NPL).

On June 8, 2017, a Memorandum of Agreement (MOA) was signed between the US EPA and IDEM that deferred the listing of Site 0153 on the NPL. The MOA specifies the expectations and obligations of each agency regarding addressing cleanup and closure of Site 0153. As part of the MOA, IDEM would conduct a comprehensive search for Potentially Responsible Parties (PRPs) to identify the potential source of chlorinated volatile organic compound (cVOC) detections identified historically in the raw groundwater in Indianapolis’ Riverside and White River Municipal Drinking Water Production Wells (Wellfields). In addition, IDEM would oversee investigation of the potential sources of cVOC releases and manage the cleanup and closure of identified sources through one of the various remediation programs at IDEM and determine their contributions to risk exposure to the Wellfields.

Following the execution of the MOA, IDEM has conducted an exhaustive search for PRPs and potential cVOC sources in the Site 0153 project area. Through issuance of 140 Notice of Liability and Information Request letters, IDEM has required the investigation and completion of remediation as necessary to further reduce the risks to the Wellfields. It is important to note, that while an extensive investigation and evaluation of the area has been performed, no specific cVOC source or combination of sources has been identified as the definitive source of the impacts identified in the production wells. This supports the conclusion that there is no single source or group of sources that are causing impacts detected in the Wellfields, but rather the impacts have been caused by a large number of individual, disparate sources that were in...
operation for decades and have contributed to a widely dispersed, low-level, commingled groundwater plume.

IDEM has completed and implemented a Community Involvement Plan, including holding several public information meetings in various neighborhoods within Site 0153, and scheduled bi-monthly stakeholder meetings with the City of Indianapolis, Citizens, and the Marion County Public Health Department (MCPhD) to coordinate responses to public concerns. IDEM awarded a Technical Assistance Grant (TAG) to a community group for document review, vapor intrusion risk assessment, and community outreach to help the community better understand the risks associated with Site 0153.

The Remedial Investigation (RI), Human Health and Ecological Risk Assessment (HHERA), Feasibility Study (FS), and the Proposed Remedial Action Plan (RAP) for Site 0153, demonstrates that IDEM has fulfilled the key criteria required under the MOA. Adequate information has been developed to understand the nature and extent of Site 0153 impacts, the overall risk associated with impacts to the Wellfields. IDEM will continue to provide oversight of cleanup actions of individual sites and PRPs, and of the public water supply under the existing permit, to ensure any remaining contamination in groundwater does not pose a human health risk exposure. A recommended remedial alternative if needed in the future, and a Proposed RAP that allows for the protection of the public water supply has been developed as a contingent measure.

If you have any questions or comments concerning this matter, please contact Haley Faulds, IDEM State Cleanup Project Manager, at (317) 234-3505 or Ryan Groves, IDEM State Cleanup Section Chief at (317) 232-3413.

Sincerely,

Peggy Dorsey, Assistant Commissioner
Office of Land Quality

ec:
MEMORANDUM OF AGREEMENT

BETWEEN

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION 5

AND

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

FOR THE

0153/RIVERSIDE GROUND WATER CONTAMINATION SITE, INDIANAPOLIS, INDIANA

I. PURPOSE

This Memorandum of Agreement (MOA) specifies the plans and expectations of the Indiana Department of Environmental Management (IDEM) and the United States Environmental Protection Agency (EPA) at the Riverside Ground Water Contamination Superfund Site (Site) in order to ensure that the response actions undertaken at the Site are substantially similar to actions that would otherwise be taken under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Contingency Plan (NCP). Once the Site remedial action is successfully completed, it is expected that EPA will have no further interest in considering the Site for final listing on the National Priorities List (NPL) and that the Site will be de-proposed from the NPL.

II. BACKGROUND

The Site is located in Indianapolis, Marion County, Indiana. On February 20, 2013, IDEM staff received notice from Citizens Energy Group (Citizens) that elevated levels of vinyl chloride (VC) and cis-1,2-dichloroethene (cis-1,2-DCE) were being detected in the groundwater prior to treatment (“raw water”) at the Riverside Municipal Wellfield. Citizens was concerned that the increasing levels of VC in Well RS29 were approaching the Maximum Contaminant Level (MCL) for VC, which might adversely impact the use of that well to supply drinking water to residents in Indianapolis. Riverside and White River Wellfields supply drinking water to over 17,000 people in Indianapolis.

On May 20 and 21, 2014, IDEM staff conducted a groundwater Site Inspection at the Riverside and White River Wellfields. A total of 25 water samples, taken prior to entry into the treatment facility, were obtained. The samples consisted of 19 groundwater samples, four (4) duplicate samples, and two (2) trip blanks. The ground water samples were collected from 19 municipal wells located in the Riverside and White River Wellfields. All samples were analyzed for volatile organic compounds (VOCs) only. Vinyl chloride, cis-1,2-DCE, trichloroethylene (TCE),
and 1,1,1 trichloroethane were the primary VOCs detected. Although VOCs were detected in some of the municipal wells, none of the concentrations of VOCs exceeded any MCL set by EPA in raw water. All raw water is treated and tested by Citizens prior to distribution and no VOCs have been detected in water leaving the utility (finished water) which is the water sent to customers.

Using the data collected during the Site Inspection, a Hazard Ranking System (HRS) documentation record was submitted to EPA determining that the Site qualified for the NPL. The HRS documentation identified approximately 89 potential sources of VOC contamination to the Riverside and White River Wellfields’ five-year time of travel of groundwater. More than fifteen (15) sites are already in one of IDEM’s remediation programs, and have either addressed the potential sources at their site or are on track to do so. As described more fully in Section IV B, below, a number of individual sources may be contributing to a commingled volatile organic compound (VOC) groundwater plume, and an undetermined number of individual Potentially Responsible Parties (PRPs) would be held responsible for conducting site investigations and remediation of their sites. For an illustration of the potential Site area, see Attachment B.

On August 13, 2015, IDEM’s former Commissioner, Thomas Easterly, requested inclusion of the Site on the NPL. In April 2016, EPA proposed to add the Site to the NPL in the Federal Register. IDEM has since determined that it would be in the best interests of the State and City, and responsive to the majority of the public’s requests, to address the Site in IDEM’s State Cleanup program. IDEM officials, along with members of the City of Indianapolis Mayor’s office, and Citizens requested, in letters written in May 2016 and also at a meeting in July 2016, that EPA allow IDEM to manage the investigation and remedial actions at the Site (Attachment B). The August 18, 2016 letter from former Commissioner Carol Comer formally withdrew support for including the Site on the NPL.

In October 2016, EPA Region 5 began discussions outlining certain criteria that IDEM would need to satisfy in order for EPA to consider allowing IDEM to manage the Site in lieu of EPA. After taking into consideration community feedback, IDEM has renamed the Site as “Site 0153” and all future documentation from IDEM will reflect the name change. Based on IDEM’s strategy plan and commitments made in this agreement meeting the deferral criteria, EPA is allowing IDEM to ensure necessary investigations and response actions are completed at the Site. Once the required response actions at the Site are successfully completed, it is expected that EPA will have no further interest in considering the Site for listing, unless there is a release or potential for release that poses an imminent threat to human health or the environment. In addition, when response actions are completed, the Site may be archived in the Superfund Enterprise Management System (SEMS).

III. IMPLEMENTATION

A. State Program- IDEM is authorized under state law to implement a hazardous substances remediation program which should ensure that response actions at the Site are carried out and that these actions are protective of human health and the environment. Furthermore, IDEM has sufficient capabilities, resources, expertise and authorities to ensure that a remediation is
completed to the protective levels required under CERCLA and will coordinate with EPA, other interested agencies, and the public on different phases of implementation.

B. **Site Eligibility**- The State of Indiana has expressed interest in having the Site listing deferred and in IDEM overseeing the response at the Site under state law. IDEM agrees to pursue response actions at the Site in a timely manner. EPA and IDEM agree that a deferral should address the Site sooner than, and at least as quickly as EPA would expect to respond. The Site is included in the SEMS inventory and has been assessed and scored for listing on the NPL. The State will not request, nor utilize, Superfund trust fund money to implement any portion of the actions required by this Agreement.

C. **Community Acceptance**- During the public comment period for the proposed NPL listing (published in the Federal Register April 7, 2016, with the public comment period ending on September 5th, 2016), community groups held public meetings to discuss the proposed listing. IDEM and EPA provided outreach to the affected community in at least three (3) public meetings held in April and July of 2016. IDEM and EPA explained to the community the differences between a response action under state law pursuant to the terms of a proposed Deferral Agreement and a response conducted under the NCP and requested feedback from the community. IDEM informed EPA of its outreach efforts and conveyed the general results of the feedback and viewpoints of the community. Comments provided as part of the public comment period showed that community members mostly supported EPA deferral of the Site, but they also requested more involvement in the process. EPA participated in a public meeting with IDEM held on March 25, 2017 to inform the public of the deferral process and to explain IDEM’s strategy to address the Site. The response from the community was mixed, with some preferring to list the Site on the NPL while the majority were in favor of EPA deferring the Site to IDEM oversight. The community requests will be addressed as part of the Community Involvement Plan required by IDEM’s Site Investigation Strategy (Attachment C).

EPA is aware that the Riverside Civic League sent IDEM a list of requests entitled “Requests of the Local Plan Principle” in a letter dated August 23, 2016 (Letter) and that IDEM responded to the requests made in the Letter (Response). IDEM will complete a Community Involvement Plan, as described in V. **Community Participation** of this MOA. Target completion date of the Community Involvement Plan is Fall 2017 (see IV. **Procedural Requirements B. Schedule for Performance**). The Riverside Civic League Letter and IDEM Response will become part of the Community Involvement Plan.

D. **Cleanup Levels**- IDEM will pursue CERCLA-protective cleanups\(^1\) of the Site that will be substantially similar to a CERCLA response. The response action will be protective of human health and the environment, as generally defined for individual human exposure, by remediating to an acceptable risk level for carcinogens between \(10^3\) and \(10^6\) and for non-carcinogens a Hazard Index of 1 or less; and no significant adverse impacts to ecological receptors. IDEM has proposed using a \(10^5\) risk level as a screening level for determining the need for further remedial investigation and risk assessment, which is within EPA’s acceptable risk level range for

---

\(^1\) The term CERCLA-protective cleanup is defined in OSWER Directive 9375.6-11, Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions (May 3, 1995)
carcinogens. The response actions will also address sources of contamination to the extent feasible. IDEM will give preference to solutions that will be reliable over the long term. In addition, IDEM will ensure that any remedy selected at the Site will comply with all applicable or relevant and appropriate federal requirements and any more stringent applicable or relevant and appropriate State requirements to the maximum extent practicable under IDEM’s State authorities. Soils, sediments, subsurface intrusion, surface and groundwater will be investigated and assessed as part of the comprehensive risk assessment that will be conducted at the Site. The comprehensive risk assessment will include the consideration of potential exposure pathways to residents and sensitive populations that might exist in and around the Riverside neighborhood. EPA anticipates that the CERCLA-protective remedy includes the recognition that ground waters of the United States are valued natural resources, and that response actions will ensure the remedies are protective and will not present a threat to the Riverside and White River Wellfields.

E. Natural Resources Trustees- IDEM will promptly notify the appropriate State and Federal trustees for natural resources of discharges and releases at the Site that are injuring or that may injure natural resources, and include the trustees, as appropriate, in activities at the Site. The State shall, consistent with CERCLA and the NCP, seek to coordinate necessary assessments, evaluations, investigations, and planning with State, Affected Tribal and Federal Trustees.

IV. PROCEDURAL REQUIREMENTS

A. Roles and Responsibilities- IDEM has primary responsibility, with minimal EPA involvement, to provide for a timely CERCLA-protective cleanup under state authority and to support the public’s right of participation in the decision-making process. EPA’s role will generally be limited to review of IDEM semi-annual and annual reports and consultation on the proposed remedy. However, EPA may request reports, data, or other documentation related to the remedial activities at the Site, as it deems appropriate, or arrange for IDEM to provide certain draft documents for EPA review as they are prepared. EPA will not provide financial assistance for site activities to the State, affected Tribes or the community during a deferral.

In the event that community members or affected Tribal governments request that EPA reconsider deferral of the Site or request EPA’s intervention in response actions, the EPA agrees to meet with IDEM to discuss the community concerns and to review the response actions in light of this MOA and the EPA’s Deferral Guidance, and make a decision regarding whether terminating the deferral is warranted.

The following are the contacts for the agencies (any changes may be made by notice):

2 The phrase "applicable or relevant and appropriate requirements" shall be defined by reference to Section 121 of CERCLA, 42 U.S.C. § 9621, the National Contingency Plan (see 40 C.F.R. § 300.5 definitions of applicable requirements" and "relevant and appropriate requirements"), and applicable EPA Guidance.
<table>
<thead>
<tr>
<th>IDEM Management</th>
<th>EPA Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peggy Dorsey, Assistant Commissioner</td>
<td>Margaret M. Guerriero, Acting Director</td>
</tr>
<tr>
<td>Ind. Dept. of Environmental Management</td>
<td>US Environmental Protection Agency</td>
</tr>
<tr>
<td>Office of Land Quality</td>
<td>Superfund Division</td>
</tr>
<tr>
<td>IGCN 11th Floor</td>
<td>SI-6J</td>
</tr>
<tr>
<td>100 N. Senate Ave.</td>
<td>77 W. Jackson Blvd.</td>
</tr>
<tr>
<td>Indianapolis, IN 46204</td>
<td>Chicago, IL 60604</td>
</tr>
<tr>
<td>317-234-0337</td>
<td>312-886-0399</td>
</tr>
<tr>
<td><a href="mailto:pdorsey@idem.in.gov">pdorsey@idem.in.gov</a></td>
<td><a href="mailto:guerriero.margaret@epa.gov">guerriero.margaret@epa.gov</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IDEM Project Manager</th>
<th>EPA Technical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryan Groves</td>
<td>Katherine Thomas</td>
</tr>
<tr>
<td>Ind. Dept. of Environmental Management</td>
<td>US Environmental Protection Agency</td>
</tr>
<tr>
<td>Office of Land Quality</td>
<td>Superfund Division</td>
</tr>
<tr>
<td>IGCN 11th Floor</td>
<td>SR-6J</td>
</tr>
<tr>
<td>100 N. Senate Ave.</td>
<td>77 W. Jackson Blvd.</td>
</tr>
<tr>
<td>Indianapolis, IN 46204</td>
<td>Chicago, IL 60604</td>
</tr>
<tr>
<td>317-232-3413</td>
<td>312-353-5878</td>
</tr>
<tr>
<td><a href="mailto:rgroves@idem.in.gov">rgroves@idem.in.gov</a></td>
<td><a href="mailto:thomas.katherine@epa.gov">thomas.katherine@epa.gov</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IDEM Legal</th>
<th>EPA Legal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tim Junk</td>
<td>Nola Hicks</td>
</tr>
<tr>
<td>Ind. Dept. of Environmental Management</td>
<td>US Environmental Protection Agency</td>
</tr>
<tr>
<td>Office of Legal Counsel</td>
<td>Office of Regional Counsel</td>
</tr>
<tr>
<td>IGCN 13th Floor</td>
<td>C-14J</td>
</tr>
<tr>
<td>100 N. Senate Ave.</td>
<td>77 W. Jackson Blvd.</td>
</tr>
<tr>
<td>Indianapolis, IN 46204</td>
<td>Chicago, IL 60604</td>
</tr>
<tr>
<td>317-2349581</td>
<td>312-886-7949</td>
</tr>
<tr>
<td><a href="mailto:tjunk@idem.in.gov">tjunk@idem.in.gov</a></td>
<td><a href="mailto:hicks.nola@epa.gov">hicks.nola@epa.gov</a></td>
</tr>
</tbody>
</table>

B. **Schedule for Performance** - Due to the nature of the Site, including 1) the number of individual sources that may be contributing to a commingled plume; 2) that individual Potentially Responsible Parties (PRPs) will be conducting the site investigations and remediation; and 3) that some PRPs are already managed within a remediation program at IDEM, the parties agree that a Schedule for Performance regarding the Site as a whole will necessarily be broad and speculative. A tentative proposed schedule of events for the Site cleanup is set forth in the following table. The Target Completion timelines in the table are subject to change. EPA shall be notified of a change in a Target Completion as soon as IDEM becomes aware that such a change is necessary or unavoidable.
<table>
<thead>
<tr>
<th>Task</th>
<th>Target Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Community Involvement Plan</td>
<td>Fall of 2017</td>
</tr>
<tr>
<td>Begin Phase I Remedial Investigation</td>
<td>Within 3 months of issuance of Notice Letters</td>
</tr>
<tr>
<td>Prepare Removal Work Plan as necessary</td>
<td>If any imminent threat is discovered, removal will be expedited.</td>
</tr>
<tr>
<td>Complete additional Remedial Investigation as necessary</td>
<td>Following submittal of Remedial Investigation Report and IDEM request for additional RI</td>
</tr>
<tr>
<td>Complete Human Health and Ecological Risk Assessment</td>
<td>Six months after final RI information is gathered.</td>
</tr>
<tr>
<td>Complete Feasibility Study</td>
<td>90 days post complete RI and HHERA.</td>
</tr>
<tr>
<td>Proposed Remedial Action Public Comment Period</td>
<td>30 days from publication of draft Proposed Plan.</td>
</tr>
<tr>
<td>Record of Decision</td>
<td>180 days from end of Public Comment Period.</td>
</tr>
<tr>
<td>Remedial Design</td>
<td>One year from publication of Record of Decision.</td>
</tr>
<tr>
<td>Implement Remedial Action</td>
<td>Six months from final Remedial Design/Technical Specifications</td>
</tr>
</tbody>
</table>

C. **Documentation Submissions to EPA** - IDEM will make available all Site data, reports, and other documentation to EPA upon request.

D. **IDEM Reporting to EPA** - IDEM will provide written reports to EPA at least annually on whether the conditions in this Agreement are being met and on the progress in the investigation, assessment and response actions. In addition, IDEM will report in writing to EPA at least semi-annually on any difficulties that it is having meeting the conditions of this Agreement. Following the submission of a report required or requested, EPA may request a briefing or meeting with IDEM to discuss the report(s).

E. **Proposed Remedial Action** - IDEM will provide a written report to EPA on the proposed remedial action (Draft Record of Decision Staff Report) both before and after soliciting public comment. EPA and IDEM will determine prior to the briefing the appropriate staff to review the proposed remedial action report and attend the briefings.

V. **COMMUNITY PARTICIPATION**

IDEM will ensure public involvement that is substantially similar to the intent of the NCP and in accordance with the Community Involvement Plan (CIP), which IDEM will have finalized by the fall of 2017. IDEM will ensure the following actions are undertaken as required by the CIP:
A. Site files will be maintained at the IDEM project manager's office or as required by the CIP.

B. Site related documents will be made available online in IDEM's Virtual File Cabinet (VFC) at https://vfc.idem.in.gov/DocumentSearch.aspx under State Cleanup Site No. 0153 and as required by the CIP. The community groups expressing an interest in the Site will be included in discussions to determine the best and most efficient way to provide information to the groups. This information will become a part of the CIP.

C. Through the CIP, or other agreement with IDEM, the affected community will be able to acquire technical assistance in interpreting information with regard to the nature of the hazard, investigations, and studies conducted, and implementation decisions at the Site. This technical assistance will be in the form of an appropriate conveyance that can be used to hire a technical expert to explain monitoring reports and decision documents and advise the community.

VI. COMPLETION OF STATE RESPONSE ACTION

Certification and Confirmation- Once IDEM considers the response action at the Site to be complete, it will certify to EPA, any affected Tribal Governments with which it has MOUs, and the affected community that the remedy has been successfully completed and intended cleanup levels achieved. As part of the certification, IDEM will submit for EPA review a response action completion documentation substantially similar to that described in the June 1992 OSWER Direct: "Remedial Action Report; Documentation for Operable Unit Completion" (OSWER Directive 9355.0-39FS). EPA will review the certification and supporting information, and may choose to initiate a deferral completion inquiry to confirm the certification. EPA will work with IDEM to address any data deficiencies hindering the confirmation and agree to a time frame for completion of the inquiry. If the response at the Site is confirmed as complete, the Site will not be further evaluated for NPL listing, unless EPA receives information of a release or potential release at the site which poses a significant threat to human health or the environment. Upon completion of response actions and confirmation by EPA, the Site will be archived in SEMS.

VII. AGREEMENT TERMINATION AND MODIFICATION

EPA may terminate this Memorandum of Agreement at any time after providing 30 days’ notice to IDEM which notice shall include the basis for such termination as provided in this paragraph. This Memorandum of Agreement may be terminated: 1) if the response is not CERCLA-protective; 2) is unreasonably delayed; 3) is inconsistent with this Memorandum of Agreement; 4) does not adequately address the concerns of the affected community or affected Tribal governments with whom IDEM has MOUs, or 5) for other reasons constituting a violation of this agreement, such as the State's inability to enforce compliance; or the absence of appropriate funding to complete the response action. IDEM may also choose at any time, after 30 days’ notice to EPA, to terminate this Memorandum of Agreement for any reason. During any 30-day notice period required by this paragraph, EPA and IDEM agree to meet to discuss the decision to terminate this Memorandum of Agreement.
Upon termination of this Memorandum of Agreement, EPA will consider taking any necessary response actions including initiating the rulemaking process to formally list the Site on the NPL. EPA and IDEM will coordinate efforts to notify the community of the termination of this Memorandum of Agreement. These actions will assure the public that EPA will continue to respond at the Site. At EPA's request, IDEM will provide to EPA all information in its possession regarding the Site to the extent permitted by State law.

This Memorandum of Agreement adheres to EPA's "Guidance of Deferral of NPL Listing Determinations While States Oversee Response Actions" (OSWER Directive 9375.6 11) dated May 3, 1995. If there are any conflicting provisions, this Agreement prevails. Furthermore, this Deferral Agreement may be modified at any time upon agreement of both parties. Notwithstanding any provision of this Deferral Agreement, EPA and IDEM retain their respective authorities and reserve all rights to take any and all response actions authorized by law.

VIII. AGREEMENT APPROVALS

[Signature]
Robert A. Kaplan, Acting Regional Administrator
Region 5, United States Environmental Protection Agency

[Signature]
Bruno L. Pigott, Commissioner
Indiana Department of Environmental Management

Date
6/8/17

ATTACHMENTS
(A) Letters/Comments Requesting Deferral (Comer, Citizens, Hoggsett)
(B) Map Showing PRPs and Wellfields
(C) Site Investigation Strategy
Re: National Priority List / Request to Withdraw Proposal / Site 0153

Dear Mr. Ballotti:

The City of Indianapolis (City) is providing this letter in support of the Indiana Department of Environmental Management’s (IDEM’s) request that the United States Environmental Protection Agency (US EPA), Region 5, withdraw its April 7, 2016, proposal of the Riverside Groundwater Contamination, Marion County, Indiana (Site 0153) to the Superfund National Priorities List (NPL).

The primary environmental concerns at Site 0153 are the five chlorinated volatile organic compounds (cVOCs) found in the drinking water aquifers used by a portion of Indianapolis. Today, many of the production wells within Site 0153 are showing non-detections in the raw water, and the rest of the wells are showing cVOC levels in the raw water below the maximum contamination levels (MCLs) specified for finished water under the Safe Drinking Water Act.

Moreover, the cVOC contamination levels in these production wells have been decreasing over time. Additionally, IDEM and Citizens Energy Group (CEG) have developed a robust and protective contingency plan should an MCL be exceeded in raw production well water in the future.

The City has followed IDEM and CEG’s efforts to address contaminant concentrations in the groundwater, and agrees that contaminants are being effectively reduced and that adequate information has been developed to understand the nature and extent of Site 0153 impacts and the overall risks associated with impacts to the Wellfields. The City of Indianapolis supports IDEM’s request to de-propose Site 0153 for the NPL.
If you have any questions or comments concerning the matter, please contact me at (317) 327-5131, Scarlett.Martin@indy.gov.

Sincerely,

Scarlett Andrews Martin
Director

cc: Piers Kirby, Principal Program Manager – Brownfield Redevelopment
Anne Mullin O’Connor – Corporation Counsel
September 29, 2021

Douglas Ballotti, Director
Superfund & Emergency Management Division
US Environmental Protection Agency, Region 5
77 W. Jackson Blvd., SR-6J
Chicago, IL 60604

Re: National Priority List De-Proposal

Dear Mr. Ballotti:

The Marion County Public Health Department (MCPHD) is providing this letter in support of IDEM’s proposal to request that the United States Environmental Protection Agency (US EPA), Region 5, de-propose its April 7, 2016, proposal of the Riverside Groundwater Contamination (Site 0153), Marion County, Indiana to the Superfund National Priorities List (NPL).

The primary environmental concerns at Site 0153 are the five chlorinated volatile organic compounds (cVOCs) found in the drinking water aquifers used by a portion of Indianapolis. Today, many of the production wells within Site 0153 are showing non-detections in the raw water, and the rest of the wells are showing cVOC levels in the raw water below the maximum contamination levels (MCLs) specified for finished water under the Safe Drinking Water Act. Moreover, the cVOC contamination levels in these production wells have been decreasing over time. Additionally, IDEM and Citizens Energy Group have developed a robust and protective contingency plan should an MCL be exceeded in raw production well water in the future.

The MCPHD investigated private wells located within the Site 0153 investigation area to determine the status of the private wells and requested owner access to collect a sample. All wells that MCPHD was granted access by the owner to sample were found to be non-detect for cVOCs. Only a small number (7) of residential private wells were identified in the area. The MCPHD will continue to address private well issues and conduct sampling in the future if needed, and residents may always make use of the MCPHD’s free well testing program.

The MCPHD has been involved in the de-proposal process and agrees that adequate information has been developed to understand the nature and extent of Site 0153 impacts and the overall risk associated with impacts to the Wellfields. The MCPHD supports IDEM’s proposal to have Site 0153 removed from the NPL and does not believe removal of the site from the NPL will be detrimental to public health.

Sincerely,

Dana Reed Wise, MPH, REHS
Chief, Bureau of Environmental Health
September 9, 2021

Douglas Ballotti, Director  
Superfund & Emergency Management Division  
US Environmental Protection Agency, Region 5  
77 W. Jackson Blvd., SR-6J  
Chicago, IL 60604

Re: National Priority List De-Proposal  
Site 0153 in Indianapolis

Dear Mr. Ballotti:

The Indianapolis Environmental Equity Council, Inc. (IEEC), a coalition of several neighborhood groups, is providing this letter in support of the Indiana Department of Environmental Management’s (IDEM’s) decision to de-propose Site 0153 from the United States Environmental Protection Agency (US EPA), National Priorities List (NPL).

De-proposal of the Site will allow the US EPA and IDEM to focus their efforts on higher priority sites and will allow IDEM to focus on the individual sites that have real impacts to the people in the community.

Site 0153 was initiated due to impacted raw water in the White River and Riverside wellfields and the potential impact it could have on the people drinking the finished water. IEEC feels that IDEM and Citizens Energy Group have adequately investigated potential sources of impacts to the wellfields, monitored raw and finished water, and used a conservative approach in ensuring that drinking water remains safe for use and consumption. Citizens Energy Group has removed production wells from service and installed aeration systems to impacted wells to mitigate the impacts and has committed to doing the same, should future concentrations in production well raw water exceed any maximum contaminant levels (MCLs).

IEEC understands that de-proposal of Site 0153 will not affect ongoing or future investigations or risk assessments of individual sites located within the wellfield. IDEM remains committed to addressing known sources of contamination to ensure that any necessary remediation will be undertaken to protect human health in the wellfield area.

Additionally, IEEC was awarded a Technical Assistance Grant to further evaluate and ensure that the sources contributing to impacts in the production well raw water have been adequately addressed by IDEM and that no residences in areas of known contamination are impacted by vapor intrusion of these contaminants.

For the reasons listed above, IEEC supports IDEM’s decision to de-propose Site 0153 from the NPL.

Sincerely,

[Signature]

Paula Brooks,  
Community Coordinator
September 28, 2021

Via U.S. Mail

Douglas Ballotti, Director
Superfund & Emergency Management Division
US Environmental Protection Agency, Region 5
77 W. Jackson Blvd., SR-6J
Chicago, IL 60604

Re: Riverside Groundwater Contamination Site
U.S. EPA ID# INN000510936
National Priority List De-Proposal

Dear Mr. Ballotti:

Citizens Water, a part of Citizens Energy Group (Citizens Water or Citizens), submits this letter in support of de-proposal of the Riverside Groundwater Contamination Site (U.S. EPA ID# INN000510936) (Site 0153 or Site) for inclusion on the United States Environmental Protection Agency (EPA) National Priorities List (NPL). Citizens Water is the public drinking water supply utility for the City of Indianapolis and owns, operates, and manages the Riverside and White River Municipal Wellfields (Wellfields) that are the focus of Site 0153.

Site 0153 is located in Indianapolis, Marion County, Indiana and consists of an area of marginally impacted groundwater in the vicinity of Citizens Water’s Wellfields. In 2013, Citizens notified the Indiana Department of Environmental Management (IDEM) that low levels of chlorinated volatile organic compounds (cVOCs) had been detected in untreated “raw” groundwater samples collected from certain water production wells in the Wellfields. As part of its standard drinking water operations, Citizens mixes raw groundwater from the Wellfields with surface water from the Indianapolis Central Canal, which is then treated and filtered, creating the “finished water” distributed to the public. The finished drinking water provided to customers by Citizens has always met and continues to meet the “maximum contaminant levels” (MCLs) and other requirements established by EPA under the Safe Drinking Water Act.

In 2016, the EPA published a Proposed Rule in the Federal Register, proposing to include Site 0153 on the EPA NPL. 81 Fed. Reg. 20277 (April 7, 2016). Following publication of the proposed rule, IDEM, the City of Indianapolis, local citizens, Citizens, and others developed and proposed to EPA an “Alternative Plan” that would allow Site 0153 to be managed by IDEM under state law in lieu of listing the site on the NPL and managing it as a federal Superfund Site. In response to this proposal and other public comments on the proposed rule, EPA agreed with the Alternative Plan. In 2017, IDEM and EPA entered into a Memorandum of Agreement (MOA) that specified the work to be performed by IDEM to address conditions at Site 0153. The ultimate goal of the MOA was that once the work required by the MOA was completed, EPA would “de-propose” the Site for NPL listing.
IDEEM has now completed the response actions for the Site as described in IDEEM’s Record of Decision (ROD) dated January 4, 2021 and published for public comment until February 18, 2021. These actions included installation of an aeration system on Citizens’ production well WR-3, completed in January 2020, to remove low-level chlorinated solvents from the raw groundwater before it is mixed and treated for distribution. The response actions also include a robust plan to be implemented if an MCL is exceeded in raw groundwater at any production well in the future.

Currently, chlorinated solvent concentrations continue to decline in the raw water produced by Citizens’ production wells. Results from testing raw water produced by Citizens production wells are, and have been for several years, below MCLs in every production well with the sole exception of WR-3. Results from testing the raw water produced by WR-3 (which continues to be treated) have generally been below MCLs since the aeration system was installed in January 2020. The plan approved by the ROD will ensure that all water from each production well in the wellfields will be below MCLs before that water is mixed with surface water and treated thus ensuring that the finished water supplied to the public will always be below all MCLs.

For all of these reasons, Citizens supports IDEEM’s proposal to have Site 0153 de-proposed from inclusion on the NPL. If you have any questions or comments concerning this matter, please do not hesitate to contact Joe Sutherland with Citizens Energy Group (JSutherland@citizensenergygroup.com).

Sincerely,

LaTona S. Prentice
Vice President, Regulatory & External Affairs
Citizens Energy Group

cc: Bruno Pigott, Commissioner, IDEEM
    Ryan Groves, Senior Environmental Manager, State Cleanup Program, IDEEM
August 23, 2021

Beth Admire
Indiana NRD Co-Trustee
Ind. Dept. of Env. Mgmt.
100 N. Senate Ave., IGCN 1307
Indianapolis, IN 46204

Chris Smith
Indiana NRD Co-Trustee
Ind. Dept. of Natural Resources
402 W. Washington Street
Indianapolis, IN 46204

Scott Pruitt
Federal NRD Trustee
US Fish & Wildlife Service
620 South Walker Street
Bloomington, IN 47403-2121

To the State and Federal Co-Trustees for Indiana:

RE: 0153 Groundwater Contamination Site
De-Proposal from NPL Listing
Indianapolis, Marion County

In October, IDEM anticipates asking the United States Environmental Protection Agency (US EPA) to de-propose the 0153 Groundwater Contamination Site (Site 0153) from the National Priorities List. Many of our local stakeholders want to remove the stigma of a potential Superfund priority listing under or around their downtown property, and we believe that the US EPA will agree that de-proposal is now warranted.

Four years ago in June 2017, IDEM and the US EPA signed a memorandum deferring the listing of the Riverside Groundwater Contamination site (now known as Site 0153) on the National Priorities List. The memorandum outlines IDEM’s commitment to investigate the nature and extent of contamination and clean up Site 0153 to the same standards as an US EPA-lead cleanup.

The primary environmental concerns at Site 0153 are chlorinated volatile organic compounds (CVOCs) found in the drinking water aquifers used by a portion of downtown Indianapolis. Today, many of the production wells within Site 0153 are showing non-detect in the raw water, and the rest of the wells show CVOC levels in the raw water below the MCLs specified for
finished water under the Safe Drinking Water Act. Moreover, the CVOC contamination levels in these production wells have been decreasing over time.

IDEM’s activities over the past four years are summarized in the January 2021 Report to EPA on Site 0153, as available on IDEM and EPA websites. Additional activities since January include:

- On February 18, 2021, the public comment period closed on (1) a Proposed Remedial Action Plan, and (2) a Record of Decision. No adverse comments were received.

- In March, 16 property owners signed an Agreed Order to fund a Monitoring and Future Response Fund in the amount of $425,000. The money will be used to monitor the quality of underground drinking water over the next ten years, and perform any cleanups, if necessary.

- To fulfill the commitment to a TAG grant, in July IDEM funded an independent consultant to review areas of concern identified by local residents. We anticipate that EPA will act on IDEM’s de-proposal request within the next two months.

Sincerely,

Ryan Groves, Chief
State Cleanup Section
Office of Land Quality

RLG/sb
ec: IDEM Project File
Katherine Thomas, US EPA, RPM for Site 0153

---

1 EPA website at: https://cumulis.epa.gov/saperepad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0510936&bkground
IDEM website at: https://www.in.gov/idem/cleanups/sites-of-special-interest/site-0153-ground-water-contamination-site/
Priority Site

Summaries
SITE BACKGROUND

Several addresses have been found to be associated with this Site, including (but not necessarily limited to): 2175 N. Pennsylvania Street, 2179 N. Pennsylvania Street, 2171 N. Pennsylvania Street, and 111 E. 22nd Street. This Site was originally two lots most recently designated as 2175 and 2179 North Pennsylvania Street. The current City of Indianapolis Geographic Information System (GIS) website (http://maps.indy.gov/MapIndy/index.html) lists only one parcel number (1011131) under the 2179 North Pennsylvania Street address and this modern parcel consists of both of the 2175 and 2179 North Pennsylvania addresses.

The property was residential prior to 1957, a dry cleaner from 1959 to 1972, a variety store from 1978 to 1984, and a dry cleaner from 1984 to the present day. Tetrachloroethylene (PCE) was used at the facility from at least 1984 to January 2014, when the facility switched to using hydrocarbon in their dry-cleaning operation. A PCE release was discovered at the facility during the investigation at a nearby property managed under the IDEM Brownfield’s program. The facility was entered into the State Cleanup Program (SCP) in September 2017 when the IDEM sent the Notice of Liability and Information Request letter (September 5, 2017). Soil and groundwater samples collected at this facility have contained detections of PCE, trichloroethylene (TCE), and cis-1,2-dichloroethylene (cis-1,2-DCE). PCE and TCE have been detected at concentrations exceeding Remediation Closure Guide (RCG) Screening Levels (SLs). The facility applied for IDEM’s Voluntary Remediation Program (VRP) and was accepted September 2020.

FIELD ACTIVITIES

Multiple subsurface investigations have been performed for the Site. Forty-seven (47) soil borings have been advanced with a total of 119 soil samples collected. Borings were drilled to a maximum depth of 71.5 feet below grade (ft. bg.). Two hundred and forty-three (243) grab groundwater samples were collected from several depth intervals with a maximum depth of 60-64 ft. bg. A total of 29 individual monitoring wells have been installed, most of them nested with one or two other wells, with the deepest wells installed to approximately 48 ft. bg.

Thus far, vapor intrusion investigations have been completed on-Site and at six residential properties. Based on results, vapor mitigation systems have been installed on-Site and at two residences. Sewer soil gas samples were also collected to evaluate the preferential pathway.
SUBSURFACE IMPACTS

Several soil samples have contained PCE concentrations exceeding the Soil Migration to Groundwater (MTG) SL. The most significantly impacted soil sample was directly beneath the building slab from 0-2 ft bg with a PCE concentration of 94.4 ppm. PCE-impacted soil ranged in depth from 0 to 44 ft bg. According to Mundell & Associates, Inc. (Mundell), high PCE concentrations in soil samples collected from immediately under the slab indicate that a source (or several sources) may be located beneath the rear on-Site building slab. TCE was also detected in soil samples above the Soil MTG SL at depths ranging from 17 to 42 ft bg., with the highest concentration being 2.1 parts per million (ppm) from 23-25 ft bg.

Current investigation results indicate that dissolved PCE and TCE are present from the top of the saturated unit to the maximum sampled depth of 56 to 60 ft bg. The maximum PCE concentration detected in groundwater was 1,530 parts per billion (ppb) (immediately southwest of the property) in monitoring well MW-5s screened from 13.70 to 23.70 ft bg. The maximum TCE concentration detected in groundwater was 273 ppb (immediately southwest of the property) in monitoring well MW-5m screened from 23.75-33.75 ft bg. Several soil borings and monitoring wells have been installed off-Site. Currently the farthest downgradient well is 250 feet downgradient from the facility. Based on the results of the grab groundwater and monitoring well sample testing, the horizontal and vertical extent of chlorinated volatile organic compounds (cVOC) impacts has not been delineated.

CURRENT SITE STATUS (as of September 1, 2021)

As of September 1, 2021, additional work is planned for the Site including installation of 9 new wells, with 6 locations to have 2 nested wells depths, and 3 locations to have 3 nested well depths. Deep wells will also be added to 2 existing well clusters for vertical delineation of groundwater impacts. Additionally, on-going vapor intrusion investigation is planned, including continued attempts to gain access to a residence determined to need evaluation (2156 N Pennsylvania St.), and continued maintenance and bi-annual sampling at the locations where mitigation systems are installed.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Keramida Environmental, Inc. Off-Site Groundwater Investigation Report, October 2, 2007 (submitted by a nearby property in the Brownfields program). (Virtual File Cabinet (VFC) #70359085)
- IDEM. Preliminary Assessment Report, October 20, 2014. (VFC #80021147)
Site Name: Sparkle Cleaners  
Site Address: 2198 North Meridian Street ("Site")  
Corresponding Figure 6 Map Label ID: 2  
State Program: State Cleanup Section  
Site Number: State Cleanup Site #0000835  
State Cleanup Project Manager: Haley Faulds  
Indiana Department of Environmental Management (IDEM) Priority Rating: Medium  
Request for Information (RFI) or Notice of Liability (NOL): Request for Information, March 25, 2019  

SITE BACKGROUND

The Site operated as a Former Dry Cleaner from approximately the 1970s to 2015. No dry cleaning has been conducted at the Site since June 11, 2015 to the business's closure in July 2018. The Site building is currently vacant. The IDEM sent a Request for Information (RFI) letter to the current owners (Duckworth, Inc. and Kim Duckworth) on March 4, 2019 and March 25, 2019. Attorneys for the current owners provided a response to the request on June 21, 2019. No releases have been reported at the Site.

FIELD ACTIVITIES

No field activities associated with the Site have been conducted.

SUBSURFACE IMPACTS

The IDEM noted in the RFI letter that groundwater contamination was identified in an area along the intersection of North Illinois and 22nd Street, near the Site. However, as no subsurface investigation has occurred at the Site, no subsurface impacts have been identified.

CURRENT SITE STATUS (as of September 1, 2021)

As of September 1, 2021, additional Investigation is pending the results from Excelsior Laundry (VRP Site #6200904).

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Farmer, Scott, Ozete, Robinson & Schmitt, LLP. Request for Information Response, 2019. (Virtual File Cabinet (VFC) #82799433)
Site Name: Near North Development Corporation  
Site Address: 2179 N. Illinois Street ("Site")  
Corresponding Figure 6 Map Label ID: 3  
State Program: State Cleanup Program (SCP)/ Voluntary Remediation Program (VRP)  
Site Number: 0000658 SCP & 6200903 VRP  
Indiana Department of Environmental Management (IDEM) Project Manager: Emily Kauffman  
IDEM Priority Rating: Medium  
Request for Information (RFI) or Notice of Liability (NOL): Notice of Liability and Information Request, August 2, 2017

SITE BACKGROUND

The Site operated as a Former Dry Cleaner from 1965 to 1995. Historic records indicate the Site could have been operated a laundry or cleaners as early as 1915. A release was reported to the IDEM in 2017 for tetrachloroethylene (PCE) detections in soil and groundwater at the Site. The Site entered into State Cleanup Program (SCP) in 2017. The Site applied and was accepted into the Voluntary Remediation Program (VRP) in October 2020.

FIELD ACTIVITIES

A total of 51 soil borings have been advanced on- and off-Site during multiple subsurface investigation including a 1999 Limited Phase II Site Investigation. Soil boring depths range from 4 feet below grade (ft. bg.) to a maximum depth of 60 ft. bg. Five monitoring wells have been installed at the Site to a maximum depth of 25 ft. bg. Grab groundwater samples have been collected from multiple intervals throughout the water column to a depth of 55-60 ft. bg.

SUBSURFACE IMPACTS

Analytical result reports volatile organic compounds (VOCs) (mainly PCE) in soil with the maximum PCE concentration of 112,000 μg/kg. One soil sample was collected from the clay unit and no constituents of concern (COCs) were reported above Screening Levels (SLs). Grab groundwater samples were collected at depths to 55 ft. bg. where a clay unit was encountered and VOCs were detected above Remediation Closure Guide (RCG) Residential Tap Water (RTW) Screening Levels (SLs). Analytical results from the monitoring well network reported PCE at a maximum of 884 μg/kg in a monitoring well screened from 14 to 24 ft.bg. and TCE at a maximum of 50.9 ppb in a monitoring well screened from 15 to 25 ft bg. Groundwater impacts extend off-Site. Based on analytical data, Stantec Consulting Services, Inc.(Stantec) has concluded that there is a potential for upgradient off-Site sources as well. Based upon the grab groundwater sample results collected off-Site in 2020, vapor intrusion assessment is warranted at 4 off-Site facilities.

CURRENT SITE STATUS (as of September 1, 2021)

In April 2021, Stantec proposed to install a deep soil boring, install 6 off-Site monitoring wells, conduct vapor intrusion investigations at off-Site facilities (pending occupancy and access), and install additional downgradient wells, as needed. IDEM generally approved the proposed work in correspondences in May and July 2021. Currently, redevelopment of the Site is proposed and
source removal via excavation is being considered.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- Indianapolis Department of Public Works. *Phase I Environmental Site Assessment*, 1995. (Virtual File Cabinet (VFC) #80485635)
- Stantec Consulting Services Inc. *Additional Site Investigation Data Package*, March 6, 2019. (VFC #82716868)
Site Name: Karstadt-Reed Cleaners  
Site Address: 1449 N. Illinois Street ("Site")  
Corresponding Figure 6 Map Label ID: 4  
State Program: State Cleanup Program (SCP)  
State Program Number: 000000298  
Indiana Department of Environmental Management (IDEM) Project Manager: Jeffrey Kavanaugh  
IDEM Priority Rating: Medium  
Request for Information (RFI) or Notice of Liability (NOL): Special NOL, August 10, 2009

**SITE BACKGROUND**

According to the 1898 Indianapolis Sanborn Map #34, Karstadt Brothers Dye Works, which is noted as a cleaning and dyeing establishment, was located on the property as early as 1898. The facility was operated as a dry-cleaning establishment from as early as 1898 to 2007. Karstadt-Reed Cleaners was assigned to the State Cleanup Program (SCP) in July 2008 after a release was reported based on results from a subsurface investigation conducted for another property in the area. The contaminants for this facility are the chlorinated solvent tetrachloroethylene (PCE), and its associated breakdown products trichloroethylene (TCE), cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride (VC). There are several other documented downgradient sources of chlorinated solvent groundwater contamination in the vicinity. Co-mingled groundwater contamination from the downgradient sources, the Karstadt-Reed Cleaners facility, and any unidentified additional sources is collectively referred to as the 14th Street Corridor Plume.

**FIELD ACTIVITIES**

Multiple investigations have been completed at the facility both on- and off-Site including soil and grab groundwater sampling (shallow to 75 feet below grade (ft. bg.)), periodic groundwater sampling from monitoring wells, and indoor air and sub-slab vapor sampling. The well network currently consists of 31 monitoring wells at varying depths. The shallowest monitoring well is screened 23 to 33 ft. bg., while the deepest is screened 68 to 73 ft. bg. Soil and groundwater impacts extend off-Site.

**SUBSURFACE IMPACTS**

Although the facility has not achieved Site characterization approval, an October 14, 2015 IDEM letter acknowledges that the Karstadt-Reed plume extends down-gradient approximately 1,700 feet and ends near the interstate and the Stewart Manufacturing property. Recent investigations have focused on better defining the plume core and evaluating the co-mingled plume dynamics and investigating vapor intrusion at off-Site structures. Despite not having Site characterization approval, the Karstadt-Reed facility has conducted on-Site remediation work to address the source of impacts.
In August 2015, a remedial excavation was performed at the Karstadt-Reed facility to remove the most heavily impacted cohesive clayey soil to reduce contaminant loading to deeper sandy soil and groundwater. Approximately 2,839 tons of shallow contaminated soil were excavated and disposed. Following the excavation, a combination soil vapor extraction (SVE) and ozone sparge (OS) system was installed to address on-Site impacts and commenced operation in August 2016. The SVE/OS system operated until January 31, 2019.

To evaluate on-Site soil remediation effectiveness, an on-Site soil investigation was conducted in April 2019. As reported, results indicate up to a 99% reduction of PCE soil concentrations at the Karstadt-Reed facility and the residual PCE concentrations are predominantly below the IDEM Remediation Closure Guide RCG soil Migration to Groundwater (MTG) Screening Level. Based on results, the consultant concluded that the SVE remediation objectives were achieved and further operation of the SVE system was not warranted at this time.

CURRENT SITE STATUS (as of September 1, 2021)

In November 2017, a pilot study for a downgradient groundwater remedial alternative was conducted following the injection of a PlumeStop Liquid Activated Carbon (PlumeStop®) subsurface permeable sorption wall from the interval of 25 to 50 feet below grade along North Capitol Avenue. Based on the previously reported findings from the pilot study well, EnviroForensics developed a downgradient remedial design that consisted of installing a subsurface permeable reactive barrier (PRB) system to transect portions of the groundwater plume between Senate and N. Capitol Avenue. Groundwater monitoring and vapor intrusion assessments and/or mitigation at nearby and off-Site properties are currently ongoing.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Quality Environmental Professionals, Inc. Limited Phase II Subsurface Investigation, March 14, 2000 (VFC #23476218)
- Quality Environmental Professionals, Inc. VRP Phase II Investigation/Remediation Work Plan/Remediation Completion Report, September 10, 2002 (VFC #49627704)
- Roux Associates, Inc. Subsurface Site Investigation, March 13, 2009 (VFC #44705395)
- St. John-Mittelhauser & Associates. Subsurface Investigation Work Plan for the former Karstadt Reed Cleaners located at 1149 North Illinois Street, Indianapolis, IN, September 8, 2009 (VFC #51221740)
- St. John-Mittelhauser & Associates. Technical Memorandum-Vapor Intrusion Investigation Results, October 15, 2012 (VFC #66971515)
- Enviroforensics. *Further Site Investigation Work Plan*, September 30, 2013 (VFC #68945302)
- Enviroforensics. *Source Area Remediation Engineering Design Summary*, June 18, 2015 (VFC #80121682)
- Enviroforensics. *Summer 2017 Vapor Intrusion Assessment Summary*, January 3, 2018 (VFC #80583710)
- Enviroforensics. *Vapor Intrusion Assessment Report*, July 12, 2018 (VFC #82580623)
Site Name: Michaelis/Fame Laundry  
Site Address: 1352 N. Illinois Street ("Site")  
Corresponding Figure 6 Map Label ID: 5  
State Program: State Cleanup Program (SCP)/Voluntary Remediation Program (VRP)  
Site Number: SCP #200403014/VRP #6090502  
Indiana Department of Environmental Management (IDEM) Project Manager: Jeffrey Kavanaugh  
IDEM Priority Rating: Medium  
Request for Information (RFI) or Notice of Liability (NOL): Notice of Liability, March 4, 2004

SITE BACKGROUND

The Site operated as a dry-cleaning facility from approximately the 1940s to the 1960s. Following the 1960s, the Site was used for office space and general storage. The main chemical of concern identified at the Site is tetrachloroethylene (PCE), with few detections of trichloroethylene (TCE).

An incident report was filed in March 2004, and the Site entered the State Cleanup Program (SCP). However, following investigations and correspondence with the IDEM, the Site was moved to the Voluntary Remediation Program (VRP) in 2009.

FIELD ACTIVITIES

A Phase I Environmental Site Assessment (ESA) was completed by Patriot Engineering and Environmental, Inc. (Patriot) in 2002, followed by a Limited Site Investigation (LSI). This LSI included the advancement of seven soil borings to a maximum depth of 33 feet below grade (ft. bg.) August Mack Environmental, Inc. (AME) and Troy Risk Inc. (Troy Risk) have also conducted work at the Site. In the Remediation Work Plan (RWP) submitted by Troy Risk, it was noted that a total of 52 soil borings to a maximum of 36 ft. bg. have been advanced at the Site. A total of 10 monitoring wells, maximum 36 ft. bg., were also installed at the Site.

After these investigations, the IDEM required further delineation of the soil and groundwater impacts. Therefore, Troy Risk performed a Further Site Investigation (FSI) in 2012, during which two deep soil borings were advanced to a depth of 43 ft. bg. Two additional monitoring wells were then installed at a depth of 42 ft. bg.

In 2014, Specialty Earth Sciences, Limited Liability Company (LLC) (SE Sciences) conducted a Limited Phase II Investigation and advanced eight soil borings. The depths of these borings were not noted in any of the available reports.

SUBSURFACE IMPACTS

During the LSI by Patriot in 2002, the following results were determined:

- PCE detected in soil at a maximum depth of 15 ft. bg. and maximum concentration of 0.058 parts per million (ppm);
- PCE detected in groundwater at a maximum depth of 15 ft. bg. and a maximum concentration of 73 parts per billion (ppb); and,
- Chloroform detected in groundwater at a maximum depth of 33 ft. bg. and maximum concentration of 10 ppb.

The Data Transmittal report submitted by AME in 2006 noted the following:
- PCE was present in deep and shallow soil;
- PCE was present in groundwater; and,
- TCE was detected in groundwater.

Troy Risk delineated the soil and groundwater impacts to extend off-Site in the 2011 FSI. The IDEM responded and accepted the vertical delineation to 55 ft. bg. for soil and groundwater. However, the IDEM determined horizontal delineation was not feasible for groundwater due to the potential off-Site sources. Additional properties (former Shuron, Karstadt Reed, and Stewart Manufacturing) with known chlorinated volatile organic compounds (cVOCs) impacts are present within the area of the Site and are enrolled in State Programs. Site summaries are provided for these properties.

Treatment efforts included the installation of a soil vapor extraction (SVE) system by Troy Risk; the system ran from 2009 to 2012. In 2015, SE Sciences installed an active sub-slab depressurization system. Environmental Restrictive Covenants (ERCs) were also put in place for surrounding properties.

**CURRENT SITE STATUS (as of September 1, 2021)**

The IDEM issued a Certificate of Completion for the VRP program and a Covenant Not to Sue in 2018 (Virtual File Cabinet (VFC) #82548862).

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- Patriot Engineering and Environmental, Inc. *Phase I Environmental Site Assessment*, March 6, 2002. (VFC #54568140)
- August Mack Environmental, Inc. *Data Transmittal Letter*, December 29, 2006. (VFC #44597167)
- Troy Risk, Inc. *Voluntary Remediation Program Application*, May 1, 2009. (VFC #52518595)
• Troy Risk, Inc. *Plume Stability Evaluation*, June 1, 2015. (VFC #80078488)
• Specialty Earth Sciences. *Active Sub-Slab Depressurization System Design and Layout*, June 17, 2015. (VFC #80070654)
• Troy Risk, Inc. *Implementation of Remediation Work Plan*, July 31, 2015. (VFC #80122269)
• Troy Risk, Inc. *Remediation Completion Report and Institutional Control Implementation Assurance Plan*, November 6, 2015. (VFC #680182682)
Site Name: Shuron
Site Address: 1402 N. Capitol Avenue ("Site")
Corresponding Figure 6 Map Label ID: 6
State Program: State Cleanup Program (SCP)/Voluntary Remediation Program (VRP)
Site Number: SCP #200409062/VRP #6070101
Indiana Department of Environmental Management (IDEM) Project Manager: Jeffrey Kavanaugh
IDEM Priority Rating: Medium
Request for Information (RFI) or Notice of Liability (NOL): None to date

SITE BACKGROUND

The property currently referred to as Former Shuron Facility operated as an optical supplies manufacturer from the 1920s to 1977. Cohn operated the property as a heavy equipment parts storage and repair facility from 1977 to 2004. Soil and groundwater impacts were identified at the Site and a release was reported to the IDEM in 2004. The facility was assigned State Cleanup Program (SCP) #200409062. Volatile organic compounds (VOCs) (mainly tetrachloroethylene (PCE)) were identified at the Site. According to Stantec Consulting Corporation (Stantec), there are no records of Cohn using PCE at the Site; therefore, it is assumed that the impacts are from historic operations prior to 1977. The Site was enrolled into the Voluntary Remediation Program (VRP) in July 2007. The VRP Number for the Site is 6070101.

FIELD ACTIVITIES

Since 2004, multiple investigations have been performed at the facility and have included advancing over 80 soil borings and installing 20 monitoring wells. Soil borings were advanced to a maximum depth of 55 feet below grade (ft. bg.) on-Site. Nineteen monitoring wells were installed to depths ranging between 25 and 40 ft. bg. One deeper monitoring well was installed to a depth of 75 ft. bg. off-Site.

SUBSURFACE IMPACTS

PCE impacts have been reported in on-Site soil at a maximum concentration of 117 parts per million (ppm). Groundwater analytical results collected from the monitoring well network have shown PCE impacts on-Site and migrating off-Site. PCE concentrations were historically reported as high as 810 ppb on-Site. As of September 2019, the highest concentration reported was 113 ppb in a downgradient monitoring well and the furthest downgradient monitoring well (MW-15) reported concentrations of PCE at 17.9 parts per million (ppb). According to Stantec, grab groundwater samples collected at 55 ft. bg. reported PCE above Screening Levels (SLs). No Contaminants of Concern (COCs) have been detected above the laboratory reporting limit in the deeper monitoring well MW-20 installed off-Site. The IDEM has described the groundwater plume as "relatively well understood" but requested additional deep monitoring wells in 2018 to establish vertical delineation.
CURRENT SITE STATUS (as of September 1, 2021)

A soil vapor extraction (SVE) system was installed on-Site in 2012. A Remediation Work Plan (RWP) was submitted for the Site and proposed active remediation of soil via SVE system, exposure prevention via Environmental Restrictive Covenants (ERCs) and analysis of plume behavior. Operation of the SVE system ceased in Third Quarter 2016. The IDEM approved the RWP in October 2019. As part of the plume analysis, four consecutive quarters of groundwater monitoring was performed and completed in 2019. IDEM is currently working with Indiana University Health (current owner) to record ERCs and move the Site to closure.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- August Mack Environmental, Inc. Initial Site Characterization Report, February 18, 2005. (Virtual File Cabinet (VFC) # 51485907)
- August Mack Environmental, Inc. Further Site Investigation Report, January 25, 2007. (VFC #55257033)
- Secor International, Inc. VRP Remediation Work Plan, March 7, 2008. (VFC #29160121)
- Stantec Consulting Services, Inc. Limited Subsurface Soil Investigation, June 29, 2010. (VFC #56622183)
- Stantec Consulting Services, Inc. Work Plan for Soil Remediation, January 18, 2012. (VFC #64732381)
- Stantec Consulting Services, Inc. Proposed Monitoring Well Network Modification, February 9, 2012. (VFC #65158825)
- Stantec Consulting Services, Inc. Remediation Work Plan, May 13, 2016. (VFC #80292338)
- Stantec Consulting Services, Inc. First/Second Quarter 2019 Groundwater Monitoring Results, September 5, 2019. (VFC #82838396)
- Stantec Consulting Services, Inc. Third/Fourth Quarter 2019 Groundwater Monitoring Results, December 4, 2019. (VFC #82880408)
- Stantec Consulting Services, Inc. 4th Quarter 2019 Groundwater Monitoring Report, March 10, 2020. (VFC #82943052)
**SITE BACKGROUND**

The Site operated as an industrial manufacturing facility from 1987 to 2004. According to Mundell & Associates, Inc. (Mundell), operations at the Site included metal stamping, degreasing, painting, drying and assembly operations. Volatile organic compounds (VOCs) (mainly trichloroethylene (TCE)) were reported in soils in the vicinity of the former above-ground storage tank (AST) and drum storage area along the western side of the building and drainage lines inside the building. A release of hazardous substances was reported to the IDEM in August 2003 and the Site was assigned State Cleanup Program (SCP) #200308081. In 2004, the Site entered into the Voluntary Remediation Program (VRP).

**FIELD ACTIVITIES**

Multiple investigations have been completed to evaluate soil and groundwater impacts identified at the Site. Investigations have included advancing over 50 soil borings and installing 39 monitoring wells on- and off-Site (upgradient and downgradient of the Site). Monitoring wells were installed at varying depths. The shallowest monitoring well is screened 26 to 36 feet below grade (ft. bg.), while the deepest is screened approximately 70 to 80 ft. bg. Groundwater impacts have been identified both upgradient and downgradient of the Site.

**SUBSURFACE IMPACTS**

Chlorinated VOCs (cVOCs) have been identified in on-Site and off-Site soil and groundwater. According to Mundell, TCE is the main contaminant of concern (COC) for the Site; however, tetrachloroethylene (PCE) and 1,1,1-trichloroethane (1,1,1-TCA) have been detected. TCE concentrations in shallow soil were reported at a maximum concentration of 15 ppm and reported in deeper soil samples (35-36 ft. bg.) at 33 parts per million (ppm). The TCE groundwater plume extends from upgradient, through the Site downgradient towards 11th Street. TCE and PCE have been reported in an off-Site deep monitoring well (70 - 80 ft. bg.) as recently as Third Quarter 2019; however, TCE and PCE were not reported above laboratory reporting limits in another deep monitoring well further downgradient. IDEM has acknowledged the groundwater impacts are part of a commingled plume. There are three (former Shuron, Michaelis/Former Fame Laundry and Karstadt Reed) properties within the area of the Site with documented sources of cVOCs. Site summaries are provided for these properties.
Remediation efforts have been performed for the Site and are on-going. Approximately 760 tons of impacted soils were removed and an air sparge/soil vapor extraction (AS/SVE) and ozone system were installed at the Site in 2005. A Revised Remediation Work Plan (RWP) was approved in March 2017, which included installing and operating a Pump-and-Treat system. The Pump-and-Treat system has been installed and tested. Full system start-up was initiated the week of February 1, 2021. As of September 1, 2021, the Pump-and-Treat system continues to operate and groundwater monitoring is on-going.

### INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

• Mundell & Associates, Inc. *Soil Closure Confirmation Sampling Plan*, May 9, 2018. (VFC #82542235)
Site Name: Peerless Pump / Sterling Fluid Manufacturing  
Site Address: 2005 Dr. Martin Luther King Jr. Street ("Site")  
Corresponding Figure 6 Map Label ID: 8  
State Program: Formerly State Cleanup Program (SCP)  
State Program Number: 200110517 (previous tank closure), 00010000  
Indiana Department of Environmental Management (IDEM) Project Manager: Crystal Haulter  
IDEM Priority Rating: Low  
Request for Information (RFI) or Notice of Liability (NOL): Request for Information, January 23, 2018

**SITE BACKGROUND**

The Site has operated as a pump manufacturing facility since 1948. Investigations completed at the Site to date were related to former underground storage tanks (USTs) and concentrated on petroleum constituents. The IDEM submitted a Request for Information on January 23, 2018 in association with Site 0153. Sterling Fluid Systems (SFS) (USA) Holding Incorporated provided a response to the request for information on October 11, 2019 (Virtual File Cabinet (VFC) #82863332).

**FIELD ACTIVITIES**

IDEM conducted a soil and groundwater investigation on the Peerless Pump property and adjacent downgradient property on October 5-6, 2020 (VFC #83077563 and 83074314). No contaminants of concern were detected on, or downgradient of the facility.

**SUBSURFACE IMPACTS**

No contaminants of concern were detected on, or downgradient of the facility.

**CURRENT SITE STATUS (as of September 1, 2021)**

IDEM is not requiring any additional investigation at this time.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- URS Corporation. *Phase II Environmental Site Assessment*, November 12, 2002. (VFC #4866175)  
SITE SUMMARY

According to a Phase I Environmental Site Assessment (ESA) dated November 18, 2019, the Site is approximately 8.2-acres and is comprised of four parcels, which were once owned and operated separately. The Site is currently used as a moving and storage facility. The Site was historically industrial in nature including companies such as the J.B. Allfree Manufacturing Company, the Fairbanks-Morse Electrical Manufacturing Company, the Isgrigg Lumber Company, A.B. Meyer & Co., Ernest Johnson Coal Company, the Stokol Stopek Manufacturing Company, the Allison Division of General Motors Corporation, and the A.A.A Warehouse. Features (depicted on Sanborn maps) associated with these companies (noted in the Phase I ESA) include machine shops, foundry, brass foundry, coal yard, a varnishing and shipping room, paint storage/spraying, oil house, and a motor parts manufacturing facility. Dorothy Shamrock Coal Company operated a coal yard and building supplies center from approximately 1898 to 1995 on the northern portion of the Site.

A Brownfield Environmental Assessment was completed in June 1997 (Brownfields #4960013) on the portion of the Site formerly occupied by Dorothy Shamrock Coal Company. The Assessment included collection of 14 soil samples and 6 groundwater samples. During the investigation, 6 soil borings were installed to a maximum depth of 26 ft. bg. At least two soil samples were collected from each boring. Groundwater samples were collected from each boring at a depth of approximately 22-26 ft. bg. Analysis indicated that the soil and groundwater samples for volatile organic compounds (VOCs) were below the July 1996 Voluntary Remediation Program (VRP) Tier II Cleanup Goals for the Nonresidential Land-Use Scenario (which were the applicable standards at that time). Although below the July 1996 VRP Tier II Cleanup Goals, trichloroethylene (TCE) was detected in one groundwater sample at 110 parts per billion (ppb).

More recent investigations have been completed on the Site under Brownfields #4191108. Recent investigations and reports completed by Terracon Consultants, Inc. include a Limited Site Investigation (LSI) (November 16, 2018), Supplementary Site Investigation (SSI) (June 5, 2019), Phase I Environmental Site Assessment (ESA) (November 18, 2019), Vapor Intrusion Investigation (December 19, 2019) and Concrete Vault Removal Report (December 20, 2019).

The LSI was conducted to investigate several recognized environmental conditions (RECs) identified during a Phase I ESA prepared by Terracon dated February 2, 2018. The SSI further investigated areas of concern identified during the LSI. During these investigations, a total of 31 soil borings, eight temporary wells, and six monitoring wells were installed on the Site. Borings
were installed to a maximum depth of 24 feet below grade (ft. bg.) and groundwater samples were collected from a maximum depth of 25 ft. bg. Tetrachloroethylene (PCE) was detected in eight soil samples, all located on the southwest portion of the Site, six of which were collected from shallow soil (six ft. bg. or less). However, only one of these soil samples was above the Soil Migration to Groundwater (MTG) Screening Level (SL) for PCE. This soil sample also contained TCE concentrations above the Soil MTG SL. Two groundwater samples (one from a monitoring well and one from a temporary well) contained PCE concentrations exceeding the Residential Tap Water (RTW) SL. PCE groundwater impacts have not been investigated deeper than 25 feet (ft).

Vapor intrusion investigations were conducted in the Site office building during the LSI, SSI, and Vapor Intrusion Investigation. As a part of the vapor intrusion investigation sub-slab soil gas samples, an exterior soil gas sample, indoor air samples, and ambient air samples were collected for analysis. Sub-slab soil gas samples contained several detections of chlorinated VOCs (cVOCs) (PCE, TCE, and 1,1,1-trichloroethane (1,1,1-TCA)). TCE was detected in one sub-slab soil sample above its commercial/industrial SL, using an attenuation factor of 0.03, while two subsequent sub-slab soil gas samples were below the SL. cVOC constituents have not been detected in indoor air samples. Terracon recommended no further action regarding vapor mitigation in the on-Site buildings.

**CURRENT SITE STATUS (as of September 1, 2021)**

The current property owner submitted a Comfort Letter application to the Brownfields program in November 2019. In response to the Comfort Letter application, the Brownfields program sent a Project Status Letter, dated April 29, 2020, (Virtual File Cabinet (VFC) #82958448) requiring institutional controls to address contamination remaining on-Site. ERCs were recorded for the property and the current owner received a Bona Fide Prospective Purchaser Comfort Letter from Brownfields on December 21, 2020 (VFC #83086137).

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- IDEM. *Brownfield Environmental Assessment*, June 27, 1997 (VFC #14540031)
- Pratter Environmental Services, Inc. *Underground Storage Tank Closure Report*, December 17, 1998 (VFC #24402104)
- Terracon Consultants, Inc. *Limited Site Investigation*, November 16, 2018 (VFC #82876811)
- Terracon Consultants, Inc. *Supplemental Site Investigation*, June 5, 2019 (VFC #82876808)
- Terracon Consultants, Inc. *Phase I Environmental Site Assessment*, November 18, 2019 (VFC #82876805)
- Terracon Consultants, Inc. *Vapor Intrusion Investigation*, December 19, 2019 (VFC #82883946)
- Terracon Consultants, Inc. *Phase I Environmental Site Assessment*, September 15, 2020 (VFC #83061807)
Site Name: Parts Landlord Limited Liability Company (LLC)
Site Address: 940 W. 16th Street ("Site")
Corresponding Figure 6 Map Label ID: 13
State Program: State Cleanup Program (SCP)
Site Number: 0000858
Indiana Department of Environmental Management (IDEM) Project Manager: Crystal Haulter
IDEM Priority Rating: Medium
Request for Information (RFI) or Notice of Liability (NOL): Request for Information, September 25, 2018; Notice of Liability, February 28, 2019

SITE BACKGROUND

Parts Landlord LLC is the owner of the Site located at 940 W 16th Street in Indianapolis. U-Pull- &-Pay is the current tenant, previously referred to as Pic-A-Part. The Site has been utilized as an auto salvage facility and repair yard since the early 1970s. Previous operations also included the servicing of automobiles. According to consultants that performed investigations at the Site, potential sources of contamination include uncovered roll-off boxes of salvaged automobile components, multiple vehicles, above-ground storage tanks (ASTs), and off-Site sources. During Site investigations, chlorinated volatile organic compounds (cVOCs) were detected in groundwater. The Site was entered into the State Cleanup Program (SCP) in February 2019 when the IDEM sent a NOL letter (February 28, 2019).

FIELD ACTIVITIES

United Research Services Corporation (URS) conducted a Phase I and Limited Phase II Environmental Site Assessment (ESA) and a Screening Level Groundwater Investigation in 2011. The Phase I report referenced previous investigations conducted by Continental Placer Inc. (CPI) in 2007. The CPI investigation included the advancement of three soil borings and six observation test pits, the deepest at 11 feet below grade (ft. bg.) Twelve soil samples were collected from varying depths between one and six ft. bg. Soil samples were analyzed for volatile organic compounds (VOCs). All soil samples from the 2007 CPI investigation were non-detect for cVOCs.

The Phase II investigation performed by URS included the advancement of 15 soil borings, the deepest advanced to 32 ft. bg. as well as collection of 15 groundwater samples collected from temporary wells placed in borings, one stormwater sample, and one sediment sample. During the Screening Level Groundwater Investigation, URS returned to three temporary well locations (installed during the Phase II) and collected confirmatory groundwater samples, followed by collection of an additional 11 groundwater samples up to 50 ft. bg. No monitoring wells were installed during these investigations.

In December 2020, SESCO Group advanced three soil borings to depths of 20 ft. bg. Soil samples were collected at depths ranging from 6 to 14 ft. bg. And the borings were converted to permanent monitoring wells for groundwater sampling.

SUBSURFACE IMPACTS
Results of the Phase II and Screening Level Groundwater investigations conducted by URS in 2011 reported the following:

- cVOCs were non-detect in soil samples
- Trichloroethylene (TCE) was detected in groundwater from 15 to 20 ft. bg.
- The maximum TCE concentration in groundwater was 55 parts per billion (ppb)
- cVOCs were below laboratory reporting limits in deep (45-50 ft. bg.) groundwater samples

URS concluded that groundwater impacts at the Site were due to the assumption of unknown off-Site sources or isolated on-Site sources and did not recommend additional sampling at that time.

No treatment or removal efforts have been documented for the Site.

**CURRENT SITE STATUS (as of September 1, 2021)**

IDEM issued a Groundwater Monitoring Request letter on October 14, 2020, requesting four consecutive quarters of groundwater monitoring to assist with evaluation of the Site. To date, three quarters of groundwater monitoring have been conducted. Soil samples collected in conjunction with monitoring well installation were non-detect for cVOCs. TCE was detected in groundwater samples at 18.7 ppb in one well and vinyl chloride was detected in groundwater at 5.58 ppb in another well. No other cVOCs have been detected in groundwater samples. IDEM has also requested an evaluation of sediment and stormwater for constituents not related to Site 0153.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- URS Corporation. *Phase I Environmental Site Assessment*, August 10, 2011 (VFC #82671042, pages 75 to 410)
- URS Corporation. *Phase II Environmental Site Assessment*, August 10, 2011 (VFC #82671042, pages 411 to 1,064)
Site Name: Former Parker Property NW (Haag Trucking Company, Inc.)
Site Address: 550 W. 16th Street & Dr. Martin Luther King Jr. Street ("Site")
Corresponding Figure 6 Map Label ID: 15
State Program: State Cleanup Program (SCP)
Site Number: 0000787
Indiana Department of Environmental Management (IDEM) Project Manager: Haley Faulds
IDEM Priority Rating: High
Request for Information (RFI) or Notice of Liability (NOL): Notice of Liability and Information Request, February 15, 2019

SITE BACKGROUND

The Site currently referred to as Haag Trucking Company, Inc. operated as a trucking company until the late 1990s; the surrounding properties included an undeveloped dumping area with abandoned vehicles as well as a gasoline station adjacent to the south. Trichloroethylene (TCE) has been identified on the Site during previous investigations. These investigations encompassed multiple properties and addresses in the immediate surrounding area, which included the Haag Trucking Company property. A Notice of Liability (NOL) and Information Request (RFI) was issued on February 15, 2019.

FIELD ACTIVITIES

Keramida Environmental, Inc. (Keramida) conducted a Phase I Environmental Site Assessment (ESA) in 1996 that encompassed multiple properties and addresses, including this Site. In 1997, Keramida divided these areas into sections and performed multiple Phase II Investigations. The Phase II for Parker Properties North, which includes the Site, included the advancement of 10 soil borings, the deepest to 32 feet below grade (ft. bg.). A subsequent investigation included eight soil borings, the deepest advanced to 63 ft. bg. No monitoring wells were installed during these investigations.

The Phase II for the Former Star Service Station (south of the Site) included the advancement of six soil borings, the deepest to 32 ft. bg. Three of these borings were converted to monitoring wells of the same depth.

IDEM conducted a soil and groundwater investigation on the Haag Trucking Company, Inc. property and adjacent downgradient property on October 5-6, 2020 (VFC #83106176). Four soil borings and four grab groundwater samples were collected.

SUBSURFACE IMPACTS

During the Phase II for Parker Properties North, TCE and other chlorinated volatile organic compounds (cVOCs) were identified in groundwater at multiple depths, ranging from 24 to 63 ft. bg. The groundwater TCE impacts ranged from 29 parts per billion (ppb) to 460 ppb. TCE was also identified in soil at depths from 25 to 27 ft. bg. Keramida did not vertically or horizontally delineate the groundwater or soil impacts.

During the Phase II for the Former Star Service Station, TCE was identified in groundwater at
levels from 69 ppb to 250 ppb at approximately 28 ft bg. Keramida did not delineate soil or groundwater impacts due to the assumption that unidentified off-Site sources were contributing to the contamination on-Site.

The IDEM conducted investigation showed TCE in groundwater at 137 μg/L and TCE in soil at 93.2 μg/kg and PCE at 15.5 μg/kg in soil. IDEM is in the process of bidding a Scope of Work for additional investigation on this Site.

CURRENT SITE STATUS (as of September 1, 2021)

A NOL and RFI Request was issued on February 15, 2019. A response to the NOL and RFI was submitted to the IDEM on March 20, 2019. IDEM conducted a soil and groundwater investigation on the Former Parker Property NW on October 6, 2020. IDEM confirmed TCE above screening levels. IDEM is in the process of bidding a Scope of Work that includes six (6) permanent groundwater monitoring well and three (3) soil gas exterior samples on this property, if results indicate that a release of cVOCs has occurred on the property, the Potential Responsible Party (PRP) will be required to conduct further investigation and remediation, as needed. Results of the investigation and any future requirements resulting from this investigation will be filed in the VFC under Site #0000787.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Keramida Environmental. Phase II Environmental Investigations Parker Properties - North, April 11, 1997. (Virtual File Cabinet (VFC) #22322738)
- Keramida Environmental. Phase II Environmental Investigation Former Star Service Station, April 11, 1997. (VFC #22311469)
- IDEM Completed Investigation Results (VFC #83106176)
**SITE BACKGROUND**

The 450 W. 16th Place facility currently consists of 26 parcels. Various businesses with various addresses have operated at the Site including:

- Ashijan Brothers Rug Cleaning, 454 W. 16th Place, circa 1925-1983;
- Ashijan Brothers Rug Cleaning, 460 W. 16th Place, circa 1981-1982;
- Deranian Brothers Rug Cleaning, 448 W. 17th Street (now 450 W. 16th Place), circa 1913-1916;
- Haag Trucking Co., 450 W. 16th Place, circa 1991-2005;
- Perfect Pallets, 450 W. 16th Place, 1991-present;
- Perfect Pallets Export, 450 W. 16th Place, 2012-present;
- Perfect Transportation, 450 W. 16th Place, 2003-current;
- Safco USA Inc. (later known as Quest Environmental Resources Corp.), 450 W. 16th Place, circa 1991-2005;
- Clover Petroleum Inc., 458 W. 16th Street, circa 1941
- Dance Oil Service Inc., 458 W. 16th Street, circa 1960-1971;
- Harris SM Service Station and Garage, 458 W. 16th Street;
- Cornett's Gulf Service, 458 W. 16th Street;
- Boatwright Funeral Home, 1645 Northwestern (Northwestern was renamed Dr. Martin Luther King Jr. Street in the mid-1980s), circa 1951-1952;
- Cement Masons Local Union Headquarters, 1645 Northwestern;
- LH Smith Oil Corporation, 462 W. 17th Street;
- Peerless Cleaners, 1645 Dr. Martin Luther King Jr. Street, circa 1944-1945;
- Leo's Clothing and Pressing, 452 W. 16th Street, circa 1952-1954; and
- Several grocery stores, restaurants, taverns, lounges, and a coal yard.

The Site was entered into the State Cleanup Program (SCP) in January 2018 when the IDEM sent a *Notice of Liability and Information Request* letter (January 26, 2018). Soil and groundwater samples collected at the Site have contained detections of trichloroethylene (TCE), tetrachloroethylene (PCE), cis-1,2-dichloroethylene (cis-1,2-DCE), and 1,1,1-trichloroethane (1,1,1-TCA). TCE and PCE have been detected at concentrations exceeding Remediation Closure Guide (RCG) Screening Levels (SLs).
FIELD ACTIVITIES

A Preliminary Investigation Report (Troy Risk, Inc., February 27, 2019), Children's Bureau Indoor Air Investigation (Troy Risk, Inc., March 21, 2019), Further Site Investigation (FSI) (Troy Risk, Inc., December 6, 2019), several rounds of quarterly monitoring, and a Further Site Investigation 2 (Troy Risk, Inc., June 24, 2020) have been prepared for the Site. During these investigations, a total of 21 soil borings and 28 monitoring wells were installed on-Site. Fifteen borings were installed to 30 feet below grade (ft. bg.) and one soil boring was installed to 50 ft. Bg. Groundwater was first observed at approximately 24-25 ft. bg. in soil borings. Sixteen monitoring wells were installed to approximately 29-30 ft. bg. with 10 feet (ft.) of screen and one monitoring well was installed to approximately 50 ft. bg. with five ft. of screen.

Six indoor air samples were collected from an adjacent property and analyzed for TCE, PCE, cis-1,2-DCE, trans-1,2-dichloroethylene (trans-1,2-DCE), vinyl chloride (VC), and 1,1,1-TCA. There were no detections of chemicals of concern in any of the indoor air samples collected at the adjacent property.

SUBSURFACE IMPACTS

Two or three soil samples were collected from each soil boring with a total of 45 soil samples collected. Thirty-two of the 45 soil samples collected contained detectible concentrations of chlorinated volatile organic compounds (cVOCs). Soil impacted above RCG SLs has been detected as shallow as 2-4 ft. bg. (Troy Risk concluded this indicated a nearby source) and as deep as 47.5-50 ft. bg. Soil and groundwater samples collected at the Site have contained detections of TCE, PCE, cis-1,2-DCE, and 1,1,1-TCA. TCE and PCE have been detected at concentrations exceeding RCG SLs. Groundwater impacts were detected in shallow monitoring wells (screened approximately 19-29 ft. bg. and 20-30 ft. bg.) and TCE concentrations (177 parts per billion) above the RCG Commercial/Industrial Vapor Intrusion to Groundwater Screening Level (VIGWSL) has been detected in a groundwater sample collected from the 50-foot deep well. Groundwater samples were last collected in June 2021.

CURRENT SITE STATUS (as of September 1, 2021)

Off-Site soil and groundwater samples have been proposed by Metric Environmental (VFC #83209778) which includes sampling and gauging the existing wells on Parker Property Southwest as well as collecting soil gas samples along Martin Luther King Street and the Children’s Bureau Property. This work plan has been approved by IDEM and work is expected to start in the fall of 2021. Pending the results, additional investigation may be warranted.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Haag Trucking. *Initial Incident Report*, February 9, 1989. (Virtual File Cabinet (VFC) #82543168)
• Troy Risk, Inc. *Children’s Bureau Indoor Air Investigation*, March 21, 2019. (VFC #82731537)
• Troy Risk, Inc. *Further Site Investigation Report*, December 6, 2019. (VFC #82877597)
• Troy Risk, Inc. *Further Site Investigation – 2 Report*, June 24, 2020. (VFC #82996865)
• Metric Environmental *Further Site Investigation Work Plan*, August 26, 2021. (VFC #83209778)
Site Name: Former Parker Property Southwest (SW) / Truck and Bus
Site Address: 1520 Dr. Martin Luther King Jr. Street ("Site")
Corresponding Figure 6 Map Label ID: 17
State Program: State Cleanup Program (SCP)
Site Number: 0000788
Indiana Department of Environmental Management (IDEM) Project Manager: Haley Faulds
IDEM Priority Rating: High
Request for Information (RFI) or Notice of Liability (NOL): None to Date

**SITE BACKGROUND**

The Site operated as a truck maintenance and repair facility from approximately 1948 to 1994. The property building was divided into two separate buildings in 1994, the Parker Supply building and KLH Truck Service. According to the 2010 Arcadis, Inc. (Arcadis) Phase I Environmental Site Assessment (ESA), the buildings were vacant in 1997 and were demolished in 1999.

The Site was historically investigated as part of a Brownfields redevelopment project (Brownfields Site #4980006) at 16th Street and Martin Luther King Jr. Street. The project included three surrounding properties (Parker Properties- North, Former Star Service Station, and Universal Sign) and the Site (referenced as Parker Properties - South in historic reports). Chlorinated volatile organic compounds (cVOCs) (mainly trichloroethylene (TCE)) were reported in soil. TCE was reported in groundwater.

**FIELD ACTIVITIES**

Multiple investigations have been conducted at the Site. A Phase II {Keramida Environmental, Inc. (Keramida), 1997} was mentioned in a 1998 Keramida Risk Evaluation report. Additionally, two Further Site Investigations (FSIs) were also performed.

During these investigations, approximately 35 soil borings were advanced to a maximum depth of 65 feet below grade (ft. bg.) In addition, 12 groundwater monitoring wells were installed, with depths ranging from 30 ft. bg. to 100 ft. bg. A total of four soil gas ports were also installed to a depth of 16 ft. bg. Soil, groundwater, and soil gas samples were all collected at various depths during these investigations.

In addition to the Site activities, numerous off-Site investigations have taken place north of the Site to determine the extent of the soil and groundwater impacts in the area.

IDEM completed an investigation on October 5-6, 2020, this included sampling the existing wells on-Site. 12 wells were sampled and found tetrachloroethylene (PCE) over groundwater screening levels.

**SUBSURFACE IMPACTS**

During the subsurface investigations, TCE impacts were identified in soil. Additionally, TCE has been detected in groundwater samples collected from shallow monitoring wells and grab samples.
(collected at maximum depths of 65 ft. bg.). TCE was reported at a maximum concentration of 1,170 parts per billion (ppb) in shallow monitoring well, MW-2, screened 23-33 ft bg. TCE was not detected in deep monitoring wells screened at the aquifer/bedrock interface. Total depths of the deep monitoring wells range from 83 to 93 ft. bg.

According to the investigations conducted, groundwater impacts have not been delineated at the Site and TCE was detected in soil gas at depths ranging from 6 to 16 ft. bg.

As there was no on-Site building, soil gas samples were collected as part of the Further Site Investigation conducted by Arcadis Inc. (Arcadis) in 2008. TCE concentrations in one sample collected near the southern property boundary exceeded IDEM Residential Soil Gas Prompt Action Levels and IDEM Residential Potential Chronic Levels. No further on-Site soil gas sampling was conducted as there was no on-Site VI exposure pathway at the time.

As a result of TCE concentrations, an IDEM comment letter from November 2008 requested paired sub-slab and indoor air sampling from three homes immediately south of the Site. Arcadis conducted off-Site VI sampling in the requested properties detailed in a March 31, 2010 report. The Arcadis report was summarized within Weaver Boo's 2011 Further Site Investigation. There were detections of "constituents" within the samples "below concentrations for typical urban/suburban air" but further details are not available.

**CURRENT SITE STATUS (as of September 1, 2021)**

IDEM collected groundwater samples from the existing monitoring well network (12 wells) on the Former Parker Property SW on October 5-6, 2020, to evaluate current Site conditions. Groundwater samples showed tetrachloroethylene (PCE) over screening levels. IDEM concluded that the contamination is migrating on-Site from an upgradient source known as Ashjian Cleaners. IDEM requested in a letter from June 2021 requiring Ashjian to sample the on-Site wells. Off-Site soil and groundwater samples have been proposed by Metric Environmental which includes sampling and gauging the existing wells on Parker Property Southwest as well as collecting soil gas samples along Martin Luther King Street and the Children’s Bureau Property. This work plan has been approved by IDEM and work is expected to start in the fall of 2021.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- Arcadis, Inc. *Further Site Investigation*, August 28, 2008. (Virtual File Cabinet (VFC) #34522604, VFC #34526149, VFC #34478197, VFC #34526171, VFC #34522071)
- Arcadis, Inc. *Phase I Environmental Site Assessment*, March 31, 2010. (VFC #60377192)
- Weaver Boos Consultants *Further Site Investigation*, August 4, 2011. (VFC #63218841)
SITE BACKGROUND

McBroom Electric has been operating at 800 W. 16th Street since 1964 as an electric component repair facility. The business receives damaged or unserviceable electrical components from clients; cleans the components of any dirt, oil/grease, and/or debris using petroleum-based products; repairs and/or resurfaces the electric components; tests and returns the component in operating condition to their clients. Although it is unclear at what capacity, McBroom Electric has used trichloroethylene (TCE). McBroom Electric applied for a U.S. EPA identification number in 1998 to dispose of waste from a one-time cleanup at the facility. Hazardous waste manifest list waste codes D040 (TCE), and F001 (spent halogenated solvents) for disposal.

The facility was entered into the State Cleanup Program (SCP) in April 2018 when the IDEM sent a Notice of Liability and Information Request letter (April 9, 2018). Soil and/or groundwater samples collected at this facility have contained detections of TCE, tetrachloroethylene (PCE), and 1,1,1-trichloroethane (1,1,1-TCA). TCE and PCE have been detected at concentrations at or above RCG SLs.

FIELD ACTIVITIES

Multiple investigations have been conducted at the Site, including ongoing quarterly groundwater monitoring. During these investigations a total of 14 soil borings, 11 temporary wells, and three monitoring wells were installed on-Site. Borings ranged in depth from 16 to 30 feet below grade (ft. bg). A significant slope in elevation(approximately an 11-foot change) is present at the facility, indicated by the varying boring depths. Three monitoring wells were installed to approximately 28-30 ft. bg. with 10 feet of screen.

SUBSURFACE IMPACTS

One or two soil samples were collected from each soil boring with a total of 24 soil samples collected. Eleven of the 24 soil samples collected contained detectable concentrations of chlorinated volatile organic compounds (cVOCs). Soil impacted above the TCE Remediation Closure Guide (RCG) Soil Migration to Groundwater (MTG) Screening Level (SL) has been detected as shallow as 6-8 ft. bg. and as deep as 28-30 ft. bg. (saturated soil). Soil samples collected at this facility have contained detections of TCE and PCE. The highest TCE concentration in soil was detected at 0.0767 parts per million which exceeds the RCG soil MTG SL. Groundwater samples collected at the facility have contained TCE, PCE, and 1,1,1-TCA. PCE was detected in groundwater at one location equal to the RCG Residential Tap Water
(RTW) SL. TCE has been detected in groundwater at concentrations exceeding the RCG Commercial/Industrial Vapor Intrusion to Ground Water Screening Level (VIGWSL). The highest TCE detection was reported in September 2019 at 65.1 micrograms per liter (μg/L) in a monitoring well screened from 20-30 ft bg. The highest concentration of TCE detected in the deep wells was 58.5 μg/L at a depth of 37-42 ft. bg.

**CURRENT SITE STATUS (as of September 1, 2021)**

Based on the data submitted, there is evidence of an up-gradient, off-Site source of TCE in groundwater; however, the potential for on-Site contribution to the commingled plume is unclear. IDEM has requested that additional shallow wells be installed near on-Site data gaps and further gauging and groundwater sampling. Passive soil gas samples will also be utilized inside the Site building to identify potential on-Site source areas.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- Wilcox Environmental Engineering. *Initial Site Investigation*, September 6, 2018. (Virtual File Cabinet (VFC) #82611369)
SITE BACKGROUND

The Site is currently vacant and has been since the early 2000s. According to Phase I Environmental Site Assessments (ESAs) conducted by Keramida in 2004 and 2011, the Site formerly operated as a machine shop. The Phase I ESAs revealed the Site was associated with a historic address of [redacted]. According to an August 21, 2019 IDEM letter, an RFI was issued for the Site and a response was provided by Indiana University.

FIELD ACTIVITIES

Keramida performed a Phase I ESA and Phase II in 2004. During the Phase II, seven soil borings were advanced to a maximum depth of 28 ft. bg. A second Phase I was conducted in 2011 that summarized the previous investigation.

SUBSURFACE IMPACTS

Soil and groundwater samples collected as a part of the 2004 Phase II investigation did not contain concentrations of chlorinated volatile organic compounds (cVOCs) greater than the IDEM Risk-Integrated System of Closure (RISC) residential default closure levels.

CURRENT SITE STATUS (as of September 1, 2021)

Per the August 21, 2019, IDEM letter, Indiana University responded to an RFI for several properties which included [redacted]. The IDEM listed the Site as "No additional action needed presently". If conditions change or new information becomes available, additional investigation may become warranted.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Keramida, Inc. *Phase I Environmental Site Assessment*, April 21, 2011. (VFC #82612872)
SITE BACKGROUND

The Site was used as a lumber company from approximately 1925 to at least 1949. The property was listed as vacant in 1959 when Goodwill Industries bought and developed the Site into a sorting facility and retail store. The Site operated as a sorting facility and retail store until approximately 2004, when it transitioned to its current use as a high school and adult learning center. A 1968 architectural drawing identified a former dry cleaner at the Site that used tetrachloroethylene (PCE) for spot treatment.

The Site entered the IDEM's State Cleanup Program (SCP) in 2015 after impacted media was identified during a Phase II Subsurface Investigation conducted by Patriot Engineering and Environmental, Inc. (Patriot) on the down-gradient property to the east. The last submitted milestone document was a Work Plan to Install Additional Deep Wells by Acuity Environmental Solutions (AcuityES) (July, 2019).

FIELD ACTIVITIES

Multiple investigations have been performed by AcuityES at the Site and adjacent properties. Investigations have included on- and off-Site soil borings, hi-resolution membrane interface probe (MIP), monitoring well installation, vapor intrusion sampling, pilot testing, and vapor mitigation system installation (on-Site). Approximately 197 soil borings (15 of which are MIP), 21 monitoring wells, 11 piezometers, and 26 sub slab vapor ports have been installed to delineate the nature and extent of contamination in addition to eight off-Site borings advanced by Patriot on the east adjacent property as part of the Phase II.

SUBSURFACE IMPACTS

Shallow soil impacts are primarily beneath the Site building in the vicinity of the former dry-cleaning area at concentrations of up to 200 parts per million (ppm) in the 4 feet below grade (ft. bg.) interval. Additional soil impacts are present at multiple locations within the building footprint at depths of 20 ft. bg. or less. However, the soil impacts at CS-5, located beneath the sanitary catch basin, are above the IDEM Remediation Closure Guide (RCG) 2019 Migration to Groundwater (MTG) Screening Levels (SLs) at a depth of 52 ft. bg. Remedial objectives at the Site are limited to PCE, although impacts at the adjacent off-Site property to the east included PCE, trichloroethylene (TCE), and vinyl chloride (VC). AcuityES has consistently stated the
impacts at the east adjacent property were the likely result of migration from the Site. AcuityES reports that PCE impacts originate from three separate areas 1) the former dry-cleaning area; 2) the sanitary sewer catch basin near entrance Door No. 1; and 3) an undetermined source area in the southeast corner of the Site building.

The groundwater plume extends from the Site source areas to the White River. The IDEM has stated that additional investigation is necessary to determine if contamination is derived wholly from on-Site sources or if the plume is co-mingled with other up-gradient sources. Groundwater contaminants of concern (COCs) are primarily PCE with the highest groundwater impacts in the sewer catch basin area at 1,760 parts per billion (ppb) on-Site and at the terminal end of the plume off-Site at 1,570 ppb. In a 2019 Site Status and Investigation Work Plan Response Letter, the IDEM states that while impacts along the White River have been fully delineated, groundwater in the vicinity of Patriot borings SB-2 and SB-3 have not been vertically delineated at this time.

Vapor intrusion investigations were performed, and six vapor mitigation systems were installed along the central and eastern portions of the Site building as part of remedial efforts.

**CURRENT SITE STATUS (as of September 1, 2021)**

At IDEM’s request, AcuityES submitted a Comprehensive Site Investigation Report, to document all the investigations that have been conducted at the Site. AcuityES concludes that PCE impacted soil is contained to the Site, the groundwater plume is delineated horizontally and vertically, and vapor intrusion concerns on and off-Site have been adequately addressed. The Remediation Work Plan is forthcoming.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- Acuity Environmental Solutions. *Focused Further Site Investigation Work Plan*, June 16, 2015. (Virtual File Cabinet (VFC) #80062477)
- Acuity Environmental Solutions. *Initial Site Investigation Report*, June 17, 2015. (VFC #80062387)
- Protect Environmental. *Vapor Intrusion Investigation Report*, June 24, 2015. (VFC #80067174)
- Protect Environmental. *Vapor Mitigation Pilot Test Report*, December 9, 2015. (VFC #80189244)
- Acuity Environmental Solutions. *Work Plan to Validate the Conceptual Site Model*, March 17, 2017. (VFC #80571550)
- Protect Environmental. *Project Status Report*, May 7, 2018 (VFC #82563203)
• Acuity Environmental Solutions. *Work Plan to Install Additional Deep Wells*, July 15, 2019. (VFC #82811357)
• Acuity Environmental Solutions. *Comprehensive Site Investigation Report*, May 27, 2020. (VFC #82978793)
Site Name: Component Machine  
Site Address: 1631 Gent Avenue ("Site")  
Corresponding Figure 6 Map Label ID: 29  
State Program: State Cleanup Program (SCP)  
Site Number: 200412100  
Indiana Department of Environmental Management (IDEM) Project Manager: Crystal Haulter  
IDEM Priority Rating: High  
Request for Information (RFI) or Notice of Liability (NOL): Notice of Liability, December 17, 2004  

SITE BACKGROUND

The Site has operated as an automobile rebuilding facility since at least the 1950s, and neighboring properties operated as a storage warehouse and metal shop. According to consultants that have conducted investigations on the Site, potential sources of contamination include a concrete vault that previously received spent wash water and cleaning solutions from the cleaning of automobile parts. Off-Site sources have also been identified as potentially contributing to Site contamination. The main chlorinated volatile organic compounds (cVOCs) that have been identified on the Site include tetrachloroethylene (PCE) and trichloroethylene (TCE). A release of hazardous substances was reported for the Site in December 2004 and the Site was assigned SCP #200412100.

FIELD ACTIVITIES

Multiple investigations have been conducted at the Site including soil sampling (shallow to 40 feet below grade (ft. bg.)), installation and sampling of groundwater from monitoring wells, and soil gas sampling. A total of 64 soil borings have been advanced at the Site to a maximum depth of 40 ft. bg. An additional 11 soil borings were advanced to a maximum of 20 ft. bg. at the property north of the Site (1701 Gent Avenue) as part of off-Site investigations. The well network consists of 17 monitoring wells at varying depths, with the maximum depth at 25 ft. bg. Five soil gas vapor probes have also been installed at a depth of 6 ft. bg. at the Site.

SUBSURFACE IMPACTS

During the multiple investigations, subsurface impacts have been detected both on- and off-Site. PCE and TCE have been detected in soil and groundwater at various depths extending off-Site. The off-Site impacts have been identified at the Disc Graphics property south of the Site, as well as the warehouse property north of the Site. During the September 2018 groundwater sampling event, PCE was detected at a maximum concentration of 226 parts per billion (ppb) in a monitoring well screened at 15-25 ft. bg. and TCE was detected at a maximum concentration of 73.1 ppb in a monitoring well screened at 15-25 ft. bg.

In an April 10, 2018 comment letter, the IDEM stated that the Lynn-Douglas, Inc. (Lynn-Douglas) lines of evidence alone, did not confirm that the upper unit is isolated from the lower unit. In the Response to the IDEM 4/10/2018 Comment Letter (Virtual File Cabinet (VFC)
Lynn-Douglas noted that the depth of impacts on the Site had been delineated to 48 ft. bg. based on data collected in June 2009. Lynn-Douglas also performed an evaluation of the connectivity of the upper and lower aquifer by a pump test. In a May 14, 2019 letter, the IDEM noted that a full evaluation of the pump test and related conclusions could not be completed with the current data set, due to lack of recovery monitoring. In a May 29, 2020 comment letter, the IDEM noted that the magnitude of on-Site contamination has been altered by remedial actions, and that neither the up-gradient, nor down-gradient extent of contamination have been completely evaluated. Additionally, further evaluation of preferential pathways and vapor intrusion is warranted.

Some remediation has been performed at the Site. Patriot Engineering and Environmental, Inc. (Patriot) removed the concrete vault that had been part of the wastewater conveyance system, as well as the impacted soil around the vault. A soil vapor extraction (SVE)/air sparge (AS) remediation system was installed in early 2006. The system was shut down in 2008 due to lack of improvement in contaminant of concern (COC) concentrations. In 2012, Acuity Environmental Solutions (AcuityES) performed remediation work that included groundwater recirculation and injections of a chemical oxidizer. Groundwater monitoring is ongoing at the Site in accordance with the Revised Monitoring Well Sampling Plan (VFC #82977050).

**CURRENT SITE STATUS (as of September 1, 2021)**

In December 2020, Lynn-Douglas submitted a Closure Workplan (VFC #83080585) outlining plans to utilize groundwater plume modeling and robust lines of evidence to support site closure. Additional groundwater monitoring will be conducted to develop a Compound Specific Isotope Analysis to distinguish between commingled plumes. Additionally, soil gas samples will be collected from the utility backfill near the former oil/water separator and outflow.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- Patriot Engineering and Environmental, Inc. *Site Investigation Report*, February 15, 2005. (VFC #49119264 and VFC #49314771)
- Acuity Environmental Solutions. *Annual Progress Report*, February 27, 2013. (VFC #80065916)


SITE BACKGROUND

Boyle Racing Headquarters operated at the facility from at least 1920 to 1940. An automotive repair facility was located on the northeast portion of the property in 1923. Hype & Gropp Metal Spinners and Indianapolis Plating Co. operated at the facility in 1929. Indianapolis Cage Co. operated at the facility manufacturing chromed steel birdcages and radios from 1928 to 1933. Optical Industries, Inc. operated on the southern half of the property from 1940-1964. Newton Research Laboratories operated at the facility in 1945. Rex Metal Craft, Inc operated at the facility from at least 1950 to 1982. Sherman Carburetor Parts operated at the facility in 1985.

On June 12, 2017 a Request for Information letter was sent to Boyle Racing (VFC #80472328) regarding contamination discovered on their property during investigations conducted on behalf of the downgradient site, Component Machine (Site #200412100). In response, Boyle Racing provided a Phase I Report, which indicated that PCE and TCE contamination were present at the Site above applicable screening levels in soil and groundwater. A Notice of Liability and Bona Fide Prospective Purchaser (BFPP) Denial letter was sent to Boyle Racing Headquarters on February 9, 2018 (VFC #80608585).

FIELD ACTIVITIES

Reports that have been prepared for the facility include: Phase I Environmental Site Assessment (ESA) (Environmental Forensics Investigation, Inc., January 26, 2017), Limited Site Investigation (LSI) [Polaris, Environmental, Inc. (Polaris), March 13, 2019], and Further Site Investigation (FSI) Report (Polaris, October 14, 2019). During these investigations a total of 21 soil borings, eight (8) temporary wells, and five (5) monitoring wells were installed on-Site. Borings ranged in depth from 8 to approximately 30 feet below grade (ft. bg.) Five monitoring wells were installed to approximately 25-28 ft. bg. with 10 feet of screen.

SUBSURFACE IMPACTS

A total of 21 soil borings have been completed at the facility, however soil samples were not collected from each boring (4 borings were not sampled). A total of 25 soil samples have been collected. Twenty-two (22) of the 25 soil samples collected contained detectable concentrations of chlorinated volatile organic compounds (cVOCs), specifically TCE and PCE. TCE and PCE-impacted soil exceeding the RCG Soil Migration to Groundwater (MTG) SLs has been detected as shallow as 0-2 ft. bg. (several locations) and as deep as 14-16 ft. bg. The highest PCE and
TCE concentrations were reported at 276 and 109 parts per million (ppm) in a soil sample collected from 6-8 ft bg. Groundwater samples collected at the facility have contained detectible concentrations of TCE and PCE. PCE has been detected in groundwater exceeding the RCG Residential Tap Water (RTW) SL and TCE has been detected in groundwater exceeding RCG Residential Vapor Intrusion to Ground Water Screening Level (VIGWSL). Groundwater samples were last collected in March 2020. The highest PCE and TCE concentrations in groundwater were reported in monitoring well, MW-2, at 20.1 and 21.4 parts per billion (PPB); respectively. To date all soil and groundwater samples collected on behalf of this facility have been collected on-Site. Investigations completed by others on adjacent properties indicate a likely comingled plume.

**CURRENT SITE STATUS (as of September 1, 2021)**

In January 2021, IDEM requested that Polaris provide a Comprehensive Closure Report to complete the conceptual site model and present robust lines of evidence that the supply well is not likely to be impacted by site contaminants. Boyle Racing submitted the requested report on July 7, 2021. As of September 1, 2021, the report is still under review by IDEM. In the interim, IDEM requested paired vapor intrusion sampling of the newly constructed on-Site Community Events Center, due to nearby soil gas results collected on behalf of the Component Machine Site.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- EnviroForensics. *Phase I Environmental Site Assessment*, January 26, 2017. (VFC #80627352)
- Polaris Environmental, LLC. *Limited Subsurface Investigation*, March 13, 2019. (VFC#82721899)
- Polaris Environmental, LLC. *Further Site Investigation Work Plan*, July 17, 2019. (VFC#82822535)
- Polaris Environmental, LLC. *Further Site Investigation Report*, October 14, 2019. (VFC#82865970)
- Polaris Environmental, LLC. *4th Quarter 2019 and 1st Quarter 2020 Quarterly Monitoring Report*, April 17, 2020. (VFC #82951145)
- Polaris Environmental, LLC. *Phase I Environmental Site Assessment*, November 22, 2020. (VFC #83105718)
- Polaris Environmental, LLC. *Comprehensive Closure Report*, July 7, 2021. (VFC #83182539)
Site Name: IU Parcel Kiger Riefer  
Site Address: 1830 West 16th Street ("Site")  
Corresponding Figure 6 Map Label ID: 31  
State Program: State Cleanup Program (SCP)  
Site Number: 0000804  
Indiana Department of Environmental Management (IDEM) Project Manager: Haley Faulds  
IDEM Priority Rating: Medium  
Request for Information (RFI) or Notice of Liability (NOL): Request for Information, August 21, 2019

SITE BACKGROUND

The Site presently services as a satellite building for Indiana University Purdue University Indianapolis (IUPUI) and has been associated with the University since at least 1985. The Site was previously identified as associated with the name "Kiger Riefer". Historic records identify "Kiger & Co" at the Site property from at least 1959 to 1980. No releases associated with the Site have been reported to the IDEM.

FIELD ACTIVITIES

A total of seven soil borings have been advanced at the Site in a single subsurface investigation conducted in November 2019. Soil borings were advanced to 30 ft. bg., or until groundwater was encountered. Seven temporary monitoring wells were installed at each boring location to a maximum depth of 30 ft. bg. Three vapor intrusion sampling events have been conducted within the Site building, associated with investigation of an adjacent property.

SUBSURFACE IMPACTS

Analytical results indicated the detection of a chlorinated volatile organic compound (cVOC), 1,1,1-trichloroethane (1,1,1-TCA) in one soil sample at a concentration of 0.011 parts per billion, below the IDEM Remediation Closure Guide (RCG) Migration to Groundwater (MTG) Screening Level (SL). In three other soil samples, tetrachloroethene (PCE) and/or trichloroethane (TCE) were detected at estimated concentrations below laboratory reporting limits and below IDEM RCG SLs. Soil samples were collected at a maximum depth of 29 ft. bg.

In groundwater collected from a temporary well, tetrachloroethene (PCE) was detected in one sample at a concentration of 14 parts per million, above the IDEM RCG Residential Tap Water (RTW) SL but below the IDEM RCG Residential Vapor Intrusion Ground Water (VIGW) SL. Keramida concluded that as no cVOCs were detected in the soil sample collected from this boring, that there is no on-Site source and impacts were believed to have originated off-Site. In three other groundwater samples, PCE and/or TCE was detected at estimated concentrations below laboratory reporting limits and below IDEM RCG SLs. Groundwater samples were collected from temporary wells with a five ft. screened interval generally from approximately 20 ft. bg. to 25 ft. bg.
CURRENT SITE STATUS (as of September 1, 2021)

The IDEM reviewed Keramida's Site Investigation Report and requested a Further Site Investigation on April 21, 2020. The IDEM requested additional monitoring wells to determine Site-specific groundwater flow, evaluate seasonal fluctuations, and further assess potential risks.

Keramida responded in a July 15, 2020 letter that no further investigation of the Site was necessary due to the requested information already provided to the IDEM for adjacent properties. Additionally, it was noted that the building has been assessed for potential vapor intrusion three times as part of environmental activities at the neighboring property.

The IDEM reviewed Keramida's response and responded in an August 31, 2020 letter. The IDEM indicated that further investigation remains necessary to determine the source and magnitude of contamination at the Site and that the delineation of impacts is not complete. The IDEM noted that previous sampling was conducted near the perimeter of the property and the interior of the Site building was not addressed. IDEM stated that additional data was necessary before appropriate institutional controls could be established. Keramida submitted the additional data that IDEM had requested in a report dated November 25, 2020 (VFC#8307632). With this data, IDEM agreed the Site could be closed with institutional controls. An ERC was recorded with Marion County on August 8, 2021. The restrictions include prohibiting the use or extraction of groundwater on the property for any reason. At this time no additional action is required.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- IDEM, Further Site Investigation Request, April 21, 2020. (VFC #83036074)
- Keramida, Inc. Response to IDEM Comments, July 15, 2020. (VFC #83008227)
- Keramida, Inc. Response to IDEM Comments Further Site Investigation Request, November 25, 2020. (VFC #8307632)
- IDEM, Re: Response to IDEM's Comments, February 1, 2021. (VFC #83105720)
- IDEM, Re: Draft ERC & QA/QC Data, April 21, 2021. (VFC #83145022)
- Environmental Restrictive Covenant, August 9, 2021. (VFC#83204606)
Site Name: Flexdar, Inc.
Site Address: 1825 W. 18th Street ("Site")
Corresponding Figure 6 Map Label ID: 32
State Program: State Cleanup Program (SCP)
Site Number: 200404159
Indiana Department of Environmental Management (IDEM) Project Manager: Syed Jaffery
IDEM Priority Rating: Medium
Request for Information (RFI) or Notice of Liability (NOL): Notice of Liability, April 26, 2004

SITE BACKGROUND

Although there have been multiple property owners, only three tenants have been identified at the Site: Dupont, Flexdar, Inc., and Oscar Munoz. Dupont occupied the property from 1955 to 1991 and used the building as a paint warehouse and automotive parts distribution center. Flexdar Inc. became the tenant of the Site circa 1994 and used trichloroethylene (TCE) and nitric acid in its operations as a rubber stamp and printing-plate manufacturer. The Site was purchased in 2005 by Oscar Munoz and is currently used as a distribution facility for Mexican food products.

The Site entered the IDEM State Cleanup Program (SCP) in 2004 after impacted media was identified during a Phase II Subsurface Investigation. The last submitted milestone document was a revised Interim Remediation Work Plan (RWP) II by Environmental Resources Management (ERM) (November, 2019).

FIELD ACTIVITIES

Multiple investigations and consultants {American Environmental Corporation, Troy Risk, Inc. (Troy Risk), Keramida Environmental, Inc. (Keramida), and ERM} have performed work at the Site and adjacent properties. Investigations have included on- and off-Site soil borings, high-resolution membrane interface probe (MIP)/hydraulic profiling tool (HPT) investigations, monitoring well installation, vapor intrusion sampling, geochemical sampling, hydraulic conductivity testing, pump and treat system installation and operation (on-Site), and vapor mitigation systems installation (off-Site). Approximately 100 borings (20 of which were MIP/HPT) and 31 monitoring wells have been installed to delineate the nature and extent of contamination.

Troy Risk historically reported three hydro stratigraphic units: 1) shallow unsaturated soil and/ orfill material to approximately 13 feet below grade (ft. bg.); 2) sand/sand & gravel/discontinuous loams between 13 and 22 ft. bg.; 3) and silt loam or clay loam from 22 to 40 ft. bg. Depth to water was typically between 10 and 17 ft. bg. ERM (2017) indicated that there was sufficient evidence to support a lateral continuity of a lower confining unit; although the IDEM did not concur due to insufficient information.
SUBSURFACE IMPACTS

Chlorinated volatile organic compounds (cVOCs) detected in soil include: TCE, cis-1,2-dichloroethylene (cis-1,2-DCE), trans-1,2-dichloroethylene (trans-1,2-DCE), and vinyl chloride (VC). TCE has been detected above the Excavation Direct Contract Screening Level (SL) and cis-1,2-DCE has been detected above the Soil Migration to Groundwater (MTG) SL. Shallow soil impacts are primarily beneath and to the west of the Site building with concentrations of TCE up to 1,600 parts per million (ppm). Troy Risk reports and the IDEM concurred in 2011 that soil impacts are horizontally and vertically delineated. Troy Risk reports that the TCE impacts appear to originate from a surface release near the center of the on-Site building.

Groundwater impacts are primarily in hydro stratigraphic unit 2 beneath the west side of the building migrating southeasterly in a long skinny plume that is presumed to terminate at the White River. Groundwater contaminants of concern (COCs) are primarily TCE, cis-1,2-DCE, and VC. Historically, the highest TCE concentrations detected in groundwater samples collected from monitoring wells was 28,000 parts per billion (ppb) on-Site and 3,070 ppb off-Site. The IDEM concurred that the groundwater plume was horizontally delineated (2013) but vertical delineation was not confirmed. Troy Risk reported that none of the shallow Riverside Wellfield production wells (wells screened less than 80 ft. bg.) are within the delineated extents of the TCE plume. The most recent groundwater data (December 2017) showed the highest TCE concentration (657 ppb) was reported in an off-Site monitoring screened from 12 to 22 ft bg.

A groundwater pump and treat system was installed and began operation in 2008 and was shutoff circa 2012 due to instrument failure caused by groundwater mineralization. The consultant determined even with repairs and maintenance the current system would not meet the necessary pump rate to hydraulically control the groundwater plume Due to cost of repairs, maintenance, and expanding the system, the pump and treat option was no longer retained. Vapor intrusion investigations were performed and vapor mitigation systems were installed on various adjacent properties as part of remedial efforts.

CURRENT SITE STATUS (as of September 1, 2021)

The submitted RWP in 2019 proposed installation of a permeable reactive barrier using Regenesis' PlumeStop® supplemented with HRC and Bio-Dechlor Inoculum to treat off-Site groundwater and proposed shallow excavation with emulsified zero valent iron in-situ chemical reduction to treat on-Site soil and groundwater impacts. IDEM generally accepted the proposed remedial technologies; however, requested additional information be submitted prior to implementation. Vapor intrusion systems are continuing to be maintained in 4 off-Site buildings. Vapor intrusion sampling and quarterly groundwater monitoring are ongoing.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Keramida Environmental, Inc. Investigation Report, April 19, 2005. (Virtual File Cabinet (VFC) #45321866)
- Keramida Environmental, Inc. Former Flexdar Inc. Site Status, August 11, 2005. (VFC #45002999)
• Bose McKinney & Evans LLP. *Former Flexdar Facility Site Status Letter*, February 13, 2006. (VFC #45003510)


• Troy Risk Inc. *Vapor Intrusion Investigation and Mitigation System Installation Report*, February 23, 2009. (VFC #43905924)

• Troy Risk Inc. *Subsurface Investigation Report #3*, June 14, 2010. (VFC #56260846)


• Troy Risk Inc. *Downgradient Vapor Intrusion Investigation Report*, November 27, 2013. (VFC #69268613)


• Environmental Resources Management. *Results of Vapor Intrusion Sampling*, March 4, 2016. (VFC #80243230)


• Environmental Resources Management. *Results of Vapor Mitigation System Performance Monitoring*, April 5, 2017. (VFC #80443603)

• Environmental Resources Management. *Indoor Vapor Sampling Results*, April 14, 2017. (VFC #80464157)

• Environmental Resources Management. *Vapor Mitigation System Confirmation Results*, April 27, 2017. (VFC #80460185)

• Environmental Resources Management. *Further Site Investigation #5*, November 2, 2017. (VFC #80552507)

• Environmental Resources Management. *Interim Remediation Work Plan for Off-Site Groundwater*, March 5, 2018. (VFC #80625813)

• Environmental Resources Management. *Former Ada’s Place Supplemental Vapor Intrusion Investigation Report*, December 17, 2018. (VFC #82665062)

• Environmental Resources Management. *Results of Vapor Mitigation System Performance Monitoring*, July 9, 2019. (VFC #82807288)

• Environmental Resources Management. *Transmittal of Indoor Air Sample Results*, September 25, 2019. (VFC #82843150)


SITE BACKGROUND

Several addresses are associated with the Bunge North America property, including (but not necessarily limited to): 1160 W. 18th Street, 1160 W. 19th Street, and 1870 Montcalm Street.

Noteworthy historic operations and features found on 1898, 1915, and 1956 Sanborn Fire Insurance maps and a 1941 Baist map (available at maps.indy.gov) associated with the property include:

- American Hominy Co. - oil plant, machine shop, grain elevator, coolers, reservoir
- Gillette - Bent Wood Working
- The Pecoto Packing Co. (portion of this facility was on-Site) - canning room, powerhouse
- Standard Cereals Inc. (manufactured corn products) - machine & oil warehouse, two grain elevators, boiler house
- Auto Warehouse (portion of this facility was on-Site)
- Mach'y warehouse
- Reconstruction Finance Corp.
- Central Soya Company

According to the RFI response (Virtual File Cabinet (VFC) #80506436), Central Soya Company, Inc. (Central Soya) purchased the property in 1960 after leasing the property for a few years, and at the time it was purchased the property included, among other activities, a soybean processing plant. The property contained a vegetable (soybean) oil processing plant, feed mill, elevator, power plant, main office, and two maintenance shops. The vegetable oil processing plant was demolished by October 1996, and the feed mill, office, feed warehouse, and boiler-house were demolished by January 1998. Review of a 1956 Sanborn Fire Insurance map indicates Central Soya was present as early as 1956. Bunge North America (East), Limited Liability Company (L.L.C.) (Bunge), an agribusiness and food ingredient company, is the successor in interest to Central Soya. Since Bunge became the owner of the property in 2003, the business conducted on the property has been as a grain handling facility. The facility currently has the following features: an elevator head house, maintenance shop, a soybean bushel storage building, soybean oil storage, and bins that contain grain (primarily soybeans). Bunge states in the RFI response that no use, purchase, generation, storage, treatment, disposal, or handling of tetrachloroethylene (PCE) or trichloroethylene (TCE) has occurred at the property since 2003.
An Underground Storage Tank (UST) Closure Report dated May 20, 1995 (VFC #21239024) indicates that Central Soya purchased the property from Glidden Paints in 1961. The response to RFI states that "Glidden Company owned and operated the property starting in the early 1940s. Central Soya purchased Glidden Company's Chemurgy Division in 1961, following a three-year lease that started in 1958".

According to the RFI response, environmental audits in 1988 and 1993 indicated the facility's maintenance shop and boiler area generated approximately 33 gallons per month of spent degreasing solvent. It was clarified in the response that these documents contained no reference to the spent solvents containing PCE or TCE. According to a February 12, 1986 IDEM Office Memorandum (VFC #33124754), "The only hazardous waste found on-Site was mineral spirits used for degreasing in the maintenance shop." Hazardous waste manifests from 1991 to 1995, available on the VFC, include disposal of petroleum naphtha, hexane, mineral spirits, and isopropanol.

A Marion County Health Department letter dated March 15, 1995 (VFC #52213945) mentions a former solvent extraction building, however, this is likely referring to the soybean oil extraction processing facility that utilized hexane as a solvent.

The facility does not have any incidents actively managed by a remedial program at the IDEM.

**FIELD ACTIVITIES**

IDEM conducted soil and groundwater sampling at the site on November 4, 2020. No contaminants of concern were detected. Results of the investigation will be filed in the VFC under Site #0000963.

**SUBSURFACE IMPACTS**

No contaminants of concern have been detected in soil or groundwater at the site.

**CURRENT SITE STATUS (as of September 1, 2021)**

IDEM is not requiring any additional investigation at this time.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

No Investigation or Remediation Reports have been submitted in regard to cVOC impacts. Results of the IDEM conducted investigation are in the VFC under document #83123572.
SITE BACKGROUND

According to an Industrial/Hazardous Waste Inspection Report dated March 21, 2014 (VFC #70164986), this facility commenced operations as a Methodist Hospital in 1908. Review of an 1898 Sanborn map indicates a hospital was present as early as 1898 in the southeast portion of the hospital campus. The hospital is presently known as Indiana University Health Methodist Hospital. The hospital campus encompasses 38 acres and includes several outbuildings. The general address for Indiana University Health Methodist Hospital is 1701 N. Senate Avenue, but several other addresses are associated with this large hospital campus. In 1898 the hospital operations covered a much smaller area than the current campus and several other structures/businesses were once present on the current hospital campus. Noteworthy operations found on the 1898 and 1915 Sanborn maps (available at maps.indy.gov) include:

- Hospital
- Indianapolis Light Artillery Co.
- Capitol Steam Carpet Cleaners Works
- Columbit School Supplies Co
- Railroad
- Paint spray booth
- Laundry
- Filling Station
- Machine shop
- Indiana Naval Warehouse
- Flash Petroleum Corp.
- Mid-State Products Co.
- Gas Station
- Auto Repair

The facility does not have any open incidents currently managed by a remedial program at the IDEM.

FIELD ACTIVITIES

Investigations to date conducted for this facility have been for petroleum constituents. However, the most recent investigation associated with SCP #2013-39553 and Leaking Underground Storage Tank (LUST) #201503511, did include analysis of volatile organic compounds (VOCs) in soil and groundwater. During this investigation four soil borings and four temporary wells were installed in the vicinity of a former underground storage tank (UST) located on the south-central portion of the hospital campus. Temporary wells were screened 30-40 feet below grade (ft. bg.)
A Phase II Environmental Investigations report was prepared by Keramida Environmental, Inc. (Keramida) for the City of Indianapolis in 1997 (VFC #22322738). The Phase II included two borings installed in the right of ways, which happen to be in the downgradient direction (across Interstate 65) from the hospital campus. These borings were installed to approximately 58 ft. bg. and included collection of grab groundwater samples from 29 ft. bg., 38-40 ft. bg., 48-50 ft. bg., and 56-58 ft. bg.

**SUBSURFACE IMPACTS**

Soil and groundwater samples collected from the four on-Site soil borings were non-detect for VOCs; however, the groundwater samples collected from the two soil borings installed in the downgradient direction of the hospital campus (across Interstate 65 right of way) contained high levels of trichloroethylene (TCE) in all the samples. Groundwater samples ranged in depth from 29 ft. bg. to 58 ft. bg. TCE concentrations ranged from 22 parts per billion (ppb) to 180 ppb. Generally, TCE concentrations increased with depth.

**CURRENT SITE STATUS (as of September 1, 2021)**

A Phase II Investigation was completed on October 1, 2020 (VFC #83056487). This investigation included advancing 11 soil borings 30-35 ft bgs along the western side of the hospital campus between 16th and 21st Street. Samples from boring SB-1 and SB-2 (near the north end of the complex) contained PCE in groundwater at 48.3 and 13.3 ppb, respectively. IDEM requested a Further Site Investigation Report in a letter dated June 10, 2021 (VFC #83167723). The FSI Report is due to IDEM September 8, 2021. Pending the results of the FSI, additional investigations may be required.

**INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM**

- August Mack Environmental, Inc. *Phase II Subsurface Investigation*, October 1, 2020. (VFC #83056487)
• IDEM *Comment Letter*, June 10, 2021. (VFC #83167732)
SITE SUMMARY

The Site, located at 1160 W. 16th Street, appears to consist of three parcels, which were once owned and operated separately. A Phase I Environmental Site Assessment (ESA) provided information on historical ownership and operation of the property. Historical operations of the property included various uses such as restaurants (late 1940s and again in the early 1970s), a vehicle sales facility (late 1940s until the mid-1960s), an electrical supply distribution warehouse (1940s to the 1980s), a gas station (early 1950s to late 1960s), a glass company (mid 1960s until the early 1970s), and two printing companies (1974 to 2001), including Disc Graphics, Inc. (1997 to 2001). For an undetermined time after 2001, the main parcel was leased to Deering Cleaners Restoration for laundry operations, which according to the Phase I ESA, involved the use of commercial washing machines and clothes dryers, similar to those used in laundromats. According to an IDEM Violation Letter dated June 3, 2011, Awning Partners Sign Group, which manufactured awnings, was operating at the property in May 2011. According to property cards, West 16th Street Phoenix LLC is the current owner of the property.

A Phase II conducted by August Mack Environmental, Inc. (AME), which included 13 soil borings to a maximum depth of 20 feet below grade (ft. bg.), 10 temporary monitoring wells, and three monitoring wells, was conducted in 2002 to investigate the former petroleum sources. During the Phase II, chlorinated solvents were discovered beneath the property. Specifically, tetrachloroethylene (PCE) and trichloroethylene (TCE) were detected above closure levels and associated daughter products were detected below closure levels. The Phase II concluded the source of chlorinated volatile organic compounds (cVOCs) was from an off-Site upgradient source.

After the discovery of chlorinated solvents, the Site owner (then Disc Graphics, Inc.) applied for a Comfort Letter from the IDEM Brownfields Program. The IDEM requested additional investigation to confirm the property was not the source of the chlorinated solvents, prior to issuance of a Comfort Letter. An FSI was conducted in 2003 by AME, during which shallow soil samples for volatile organic compound (VOC) analysis were collected from eight previously drilled boring locations and four new upgradient borings were installed to investigate a potential off-Site source. Results of the FSI indicated low concentrations of PCE and TCE (well below IDEM cleanup criteria) were detected in three shallow soil samples collected in the northeast portion of the Site (most upgradient portion of the property). The FSI concluded the cVOC impacts were from an off-Site upgradient source.
The IDEM issued a Comfort Letter to Disc Graphics, Inc. dated August 5, 2004 (Virtual File Cabinet (VFC) #38734583) in which the IDEM concluded that chlorinated solvents found in the groundwater at the Site are emanating from an off-Site source, probably to the northeast of the Site. The IDEM further concluded that the detections of TCE and PCE at low levels in the soil along the northeast border could be the result of vapor migration from the contaminated groundwater plume and deeper impacted soil beneath the Site and/or the result of some spillage on the surface that migrated to the property. The Comfort Letter states that the IDEM has decided to exercise its enforcement discretion to forego pursuit of Disc Graphics, Inc. or any successor owners and operators for response costs relating to the past release of chlorinated contaminants from the adjacent property. The Comfort Letter discouraged the use of the groundwater at the property for any purpose and prohibited installation or use of drinking water wells at the Site. The IDEM also recommended vapor intrusion into on-Site structures be investigated and addressed (if necessary) prior to any planned use of the property.

The Comfort Letter, along with an Environmental Restrictive Covenant (ERC), restricting the installation and use of drinking water wells on the Site, were recorded on the property deed in August 2005 (VFC #38734645). A Memorandum (VFC #38734645), also recorded in the Marion County Recorder's Office, describes investigation and mitigation activities completed at the Site regarding vapor intrusion. In short, cVOC contaminants were detected in the sub-slab and indoor air samples, therefore, the on-Site building floor and drains were sealed. Post mitigation air samples showed a significant reduction in constituent concentrations, described as below the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits in the Memorandum.

On behalf of the adjacent property to the north (suspected source of the cVOCs in the AME investigations), Patriot Engineering and Environmental, Inc. (Patriot) conducted an independent investigation on the subject Site in February 2005. Patriot's investigation is documented in a Site Investigation Report dated March 24, 2005. During their investigation, 2 hand auger soil borings and 13 direct push borings were installed throughout the on-Site building. Shallow soil samples from nine boring locations contained low levels of cVOCs below IDEM cleanup criteria. Patriot concluded that not all sources of cVOCs has been determined and it appears sources of cVOC beneath Disc Graphics is contributing to the cVOC groundwater impacts.

In an October 13, 2017 letter (VFC #80538993), the IDEM requested Disc Graphics or the current owner of the property to implement additional investigation of potential sources of chlorinated solvents on the Site. In response, the Site Investigation Report (Patriot, 2005) was submitted to the IDEM for review. In an internal IDEM email (VFC # 82543260), the IDEM determined that based on the data submitted, the concentrations of PCE and TCE do not indicate a soil source for groundwater contamination and based on the lack of a soil source and clear gradient of cVOCs over the last 10 years (data from adjacent property investigation) makes the Site an unlikely source of contamination

CURRENT SITE STATUS (as of September 1, 2021)

IDEM concluded no further investigation was warranted unless new information becomes available or conditions change.
INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- August Mack Environmental, Inc. *Phase II Investigation*, November 8, 2002. (VFC #14843101)
- August Mack Environmental, Inc. *Phase I Environmental Site Assessment*, December 2, 2002. (VFC # 14842602)
Site Name: Madame Walker Urban Life Center / Former Raymond Baird Cleaners
Site Address: 617-625 Indiana Avenue ("Site")
Corresponding Figure 6 Map Label ID: 39
State Program: State Cleanup Program (SCP)
Site Number: 0000734
Indiana Department of Environmental Management (IDEM) Project Manager: Haley Faulds
IDEM Priority Rating: Low
Request for Information (RFI) or Notice of Liability (NOL): Request for Information, September 29, 2017; Notice of Liability and Information Request, February 16, 2018

SITE SUMMARY

Raymond Baird Cleaners operated at 625 Indiana Avenue from approximately 1941 to 1986. Circa 1958, Raymond Baird Cleaners used the address of 628 North West Avenue rather than 625 Indiana Avenue. Historical records also indicated that Madame Walker products were manufactured at 617 Indiana Avenue.

In response to historic dry-cleaning operations at the property, the IDEM requested information about the Site, in an Information Request Letter dated September 29, 2017 and a response was submitted to the IDEM on November 27, 2017. The Site was entered into the State Cleanup Program (SCP) in February 2018 when the IDEM sent a Notice of Liability and Information Request letter dated February 16, 2018.

An Initial Site Investigation was conducted at the Site and a total of eight soil borings were advanced. Two soil samples and a grab groundwater sample were collected from each boring. None of the samples collected contained any detectable chlorinated volatile organic compound (cVOC) concentrations.

CURRENT SITE STATUS (as of September 1, 2021)

In a letter dated August 9, 2019 (Virtual File Cabinet (VFC) #82823997), the IDEM determined that the property was not a source of contamination, nor was there significant contamination moving across the property from other sources. In addition, the IDEM concluded that based on the information presently available, the 617-625 Indiana Avenue property did not appear to be contributing to the cVOC contamination detected in the groundwater or in Citizens water production wells.

INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM

- Enviro-Forensics. Initial Site Investigation Report, August 2, 2018. (VFC #82669685)
Site Name: Former Willis Mortuary
Site Address: 632 Dr. Martin Luther King Jr. Street ("Site")
Corresponding Figure 6 Map Label ID: 40
State Program: State Cleanup Program (SCP)
Site Number: 0000724
Indiana Department of Environmental Management (IDEM) Project Manager: Haley Faulds
IDEM Priority Rating: Low
Request for Information (RFI) or Notice of Liability (NOL): Request for Information, September 29, 2017 and April 12, 2018

**SITE SUMMARY**

The Site was first developed as Willis Mortuary in 1914 and continued operation until the late 2000s. In the 1980s, North West Street was renamed Dr. Martin Luther King Jr. Street. A Phase I Environmental Site Assessment (ESA) identified a dry cleaner historically connected to the property.

The IDEM requested information about the Site from two different parties via Information Request Letters dated September 29, 2017 and April 12, 2018. A response to the September 29, 2017 letter, which included a Phase I ESA Report and a Phase II ESA Report, was submitted to the IDEM on October 27, 2017. In response to the April 12, 2018 letter, the IDEM conducted an in-home interview with the former owner/operator of the Willis Mortuary on May 1, 2018 to discuss operating procedures, previous sampling, and adjacent properties. The interview is summarized in a letter dated May 11, 2018. The IDEM provided comments on the Phase I/II reports in a letter dated August 28, 2018, which identified data gaps in the reports and requested additional investigation at the Site. A Further Site Investigation (FSI) was performed at the Site and a FSI report, dated October 2, 2019, was submitted for the Site.

During the Phase II and FSI investigations, a total of five soil borings were completed. Three borings were completed to 20 feet below grade (ft. bg.) and two borings were completed to 40 ft. bg. A total of five soil samples and four grab groundwater samples were collected during the two investigations. None of the samples collected contained any detectable chlorinated volatile organic compound (cVOC) concentrations.

**CURRENT SITE STATUS (as of September 1, 2021)**

In a letter dated November 6, 2019 (Virtual File Cabinet (VFC) #82860181), the IDEM determined that the Site did not appear to be a source of groundwater contamination and could be closed out. In addition, the IDEM concluded that based on the information available, the Site did not appear to be contributing to the cVOC contamination detected in the groundwater and in Citizens water production wells.
INVESTIGATION OR REMEDIATION REPORTS SUBMITTED TO IDEM