

Our ref: 12584838-LTR-29

August 19, 2024

Mr. Jeffrey Kavanaugh
Senior Environmental Manager / Project Manager
Indiana Department of Environmental Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

Work Plan – Supplemental West Side Vapor Intrusion Investigation
Former P.R. Mallory Facility
VRP Project Number 6170902
Indianapolis, Indiana

Dear Mr. Kavanaugh:

On behalf of Battery Properties, Inc. (BPI), GHD has prepared this Supplemental Vapor Intrusion Investigation Work Plan (Work Plan) for structures located west of the former P.R. Mallory (PRM) facility (Site) located at 3005 and 3029 East Washington, and 101 South Parker Streets. PRM is currently enrolled in the Indiana Department of Environmental Management (IDEM) Voluntary Remediation Program (VRP) and has been assigned VRP Number 6170902.

The Site lies adjacent to the Former Contact Metals Welding (CMW) facility located at 70 South Gray Street. BPI enrolled the former CMW Site under a separate VRP (VRP Project #6000101). Additionally, CMW is managing the CMW Site under a separate State Cleanup Program (SCP #000000396). Figures 1 and 2 provide a Site Location Map and Site Plan, respectively. IDEM requested a vapor intrusion (VI) work plan (VFC #83660447) to outline next steps for structures located to the west of the Site that have not previously been able to negotiate access or complete sampling do to restricted access. This work plan outlines how GHD will attempt to gain access and sampling procedures to assess if there is a vapor preferential pathway located west of the Site.

1. Background

Previous groundwater sampling events conducted at the Site have shown that volatile organic compounds (VOCs) are present in the shallow groundwater interval west of the Site. Trichloroethene (TCE) concentrations in groundwater are the primary contaminant of concern (COC) that has driven VI activities west of the Site. GHD developed the *Preferential Pathway Investigation Work Plan* (VFC #82676111) dated September 5, 2018, to assess potential VI at structures overlying and adjacent to the shallow groundwater plume. Findings from the *Preferential Pathway Investigation Work Plan, 2018* are summarized in the following documents:

- Preferential Pathway Investigation Data Transmittal (October 2, 2020)
- West Side Vapor Intrusion Investigation – Summary 2021 (June 29, 2022) (VFC #83339250)
- West Side Vapor Intrusion Summer 2022 Sampling (March 23, 2023) (VFC #83453835)
- West Side Vapor Intrusion Investigation - Winter 2022/2023 (September 19, 2023) (VFC #83540181)

Previous investigation results, accepted by IDEM, concluded utilities were not acting as a preferential pathway for vapors and properties outside the shallow groundwater plume did not need to be evaluated for VI potential. Properties associated with west side investigation activities to date include:

- 41 South Oxford
- 47 South Oxford
- 50 South Oxford
- 51 South Oxford
- 59 South Oxford
- 68 & 70 South Oxford (duplex)
- 50 South Parker (commercial)
- 52 South Parker (commercial)

IDEM agreed in a June 20, 2024 email that based on prior investigation results, no further investigation activities are required at 41 South Oxford, 50 South Parker, 52 South Parker, and 68 South Oxford Streets (VFC #83660447).

2. Scope of Work

As requested by IDEM, this work plan proposes additional access outreach and VI sampling activities at properties west of Site where access has not been provided or property ownership has changed to evaluate the VI pathway. This SOW will consist of:

- Outreach for access to conduct VI sampling investigation activities per IDEM's nonrule outreach policy¹
- Winter VI sampling at select properties, and
- Summer VI sampling at select properties.

Proposed properties for VI sampling and current status of property access are shown on Figure 3. GHD proposes conducting VI sampling at five properties listed below:

- 47 South Oxford
- 50 South Oxford
- 51 South Oxford
- 59 South Oxford
- 70 South Oxford

2.1 Access Outreach

GHD will conduct outreach activities at the properties listed above. These activities will include negotiating access as needed and scheduling vapor sampling.

Based on a review of public records, ownership has recently changed at 47 and 51 South Oxford Street. At these locations, GHD will conduct and document outreach activities following the IDEM's nonrule outreach policy, which include:

- Records review / owner verification,
- In-person visits (2),

¹ *Procedures for Gaining Access to Third Party Properties by Participants Performing Investigation of Remediation (Waste-0065-NPD)* dated November 13, 2015

- Telephone contact (2),
- Door hanging notices with a copy of the access agreement,
- Written letters sent via certified mail, and
- Associated follow-up.

At 50, 59, and 70 South Oxford Street, ownership appears to be unchanged. GHD has previously followed IDEM's outreach policy at these properties without gaining access or not being able to reach them for follow-up sampling. IDEM has also provided letters to these properties and were also unable to coordinate access for sampling. Due to other outreach efforts for the West side, GHD will attempt to contact the owners of these properties to gain access to complete VI sampling activities. If it is determined that new ownership is in place at these locations, GHD will follow the IDEM's procedures outlined above to attempt to obtain access.

If GHD is unsuccessful in obtaining access at any of the properties listed above, a request will be provided to IDEM to assist in facilitating access.

2.2 Vapor Intrusion Sampling

As outlined in IDEM's email request for additional VI investigation, GHD will conduct one additional winter sampling event at five properties and one additional summer sampling event at four properties. Sampling will follow the approved procedures outlined in Attachment A - Field Sampling and Analysis Plan (FSAP) of the *Preferential Pathway Investigation Work Plan* (September 5, 2018). One deviation from the approved FSAP will be the use of a water dam in place of the helium tracer for leak testing sub-slab probes. The use of the water dam leak testing approach was originally discussed with IDEM on November 24, 2020.

In summary, sampling activities will include:

- Complete an inspection of each building to determine the configuration for sampling and identify any potential secondary sources of chemicals that could be present in indoor air.
- Install sub-slab vapor probes, if there is a full foundation slab present.
- Collect one sub-slab vapor sample, contingent on applicability.
- Collect one indoor air sample from each occupied floor and from the basement or crawlspace, as applicable.
- For indoor air samples, GHD will place Summa canisters in the breathing zone 3 to 5 feet above floor level.
- For sub-slab samples, GHD will conduct vacuum and water dam leak testing.
- GHD will collect ambient air (background) samples upwind of the property.

VI samples will be collected over a 24-hour period using laboratory-supplied evacuated 6-liter canisters equipped with a laboratory-supplied, pre-cleaned flow controller. Samples will be shipped under proper chain-of-custody protocol to Pace Analytical Services, Inc. in Mount Juliet, Tennessee for analysis of VOCs consistent with U.S. EPA Compendium Method TO-15.

2.2.1 Winter Vapor Intrusion Sampling

Winter sampling will be completed during the "heating season" (approximately November through March) when indoor temperature is typically at least ten degrees higher than the outdoor temperature.

Properties identified for winter sampling, provided access is granted, include:

- 47 South Oxford
- 50 South Oxford
- 51 South Oxford
- 59 South Oxford
- 70 South Oxford

2.2.2 Summer Vapor Intrusion Sampling

Summer sampling will be conducted during the “dry season” (typically July through mid-September) when the water table is falling during the hot, dry summer months.

Properties identified for summer sampling, provided access is granted, include:

- 47 South Oxford
- 51 South Oxford
- 59 South Oxford
- 70 South Oxford

3. Data Interpretation and Reporting

GHD will complete a reduced validation of the analytical data at the conclusion of each sampling event and provide the analytical data to IDEM via email. GHD will provide a summary of the respective analytical data to each property owner following completed sampling events via a certified letter. Two separate reports will be provided to IDEM after the completion of the summer and winter sampling events, respectively. Reports will include tables and figures summarizing the data and analysis of each event. If the proposed sampling results are below criteria, GHD will recommend that the vapor pathway for the west side is incomplete and further sampling is not required.

Please feel free to contact me with any questions or comments regarding this proposed Work Plan.

Sincerely,



Brynn Einecker
Environmental Scientist
+1 317 409-6242
brynn.einecker@ghd.com



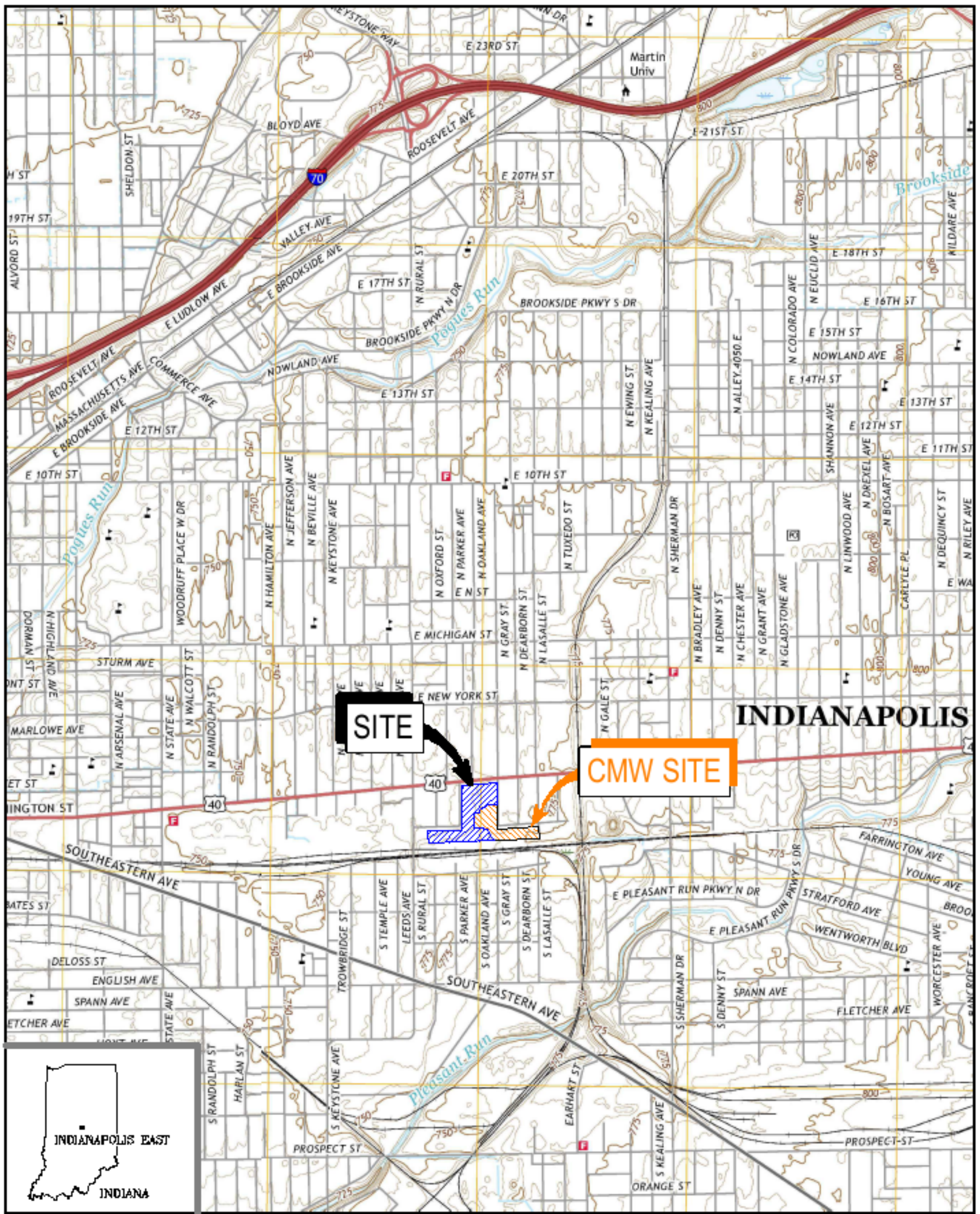
Kyle Amberger, LPG
Project Director
+1 463 203-4120
kyle.amberger@ghd.com

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Encl.

Copy to: Kevin Kyrias-Gann
David Gillay
Jennifer Nijman

Figures

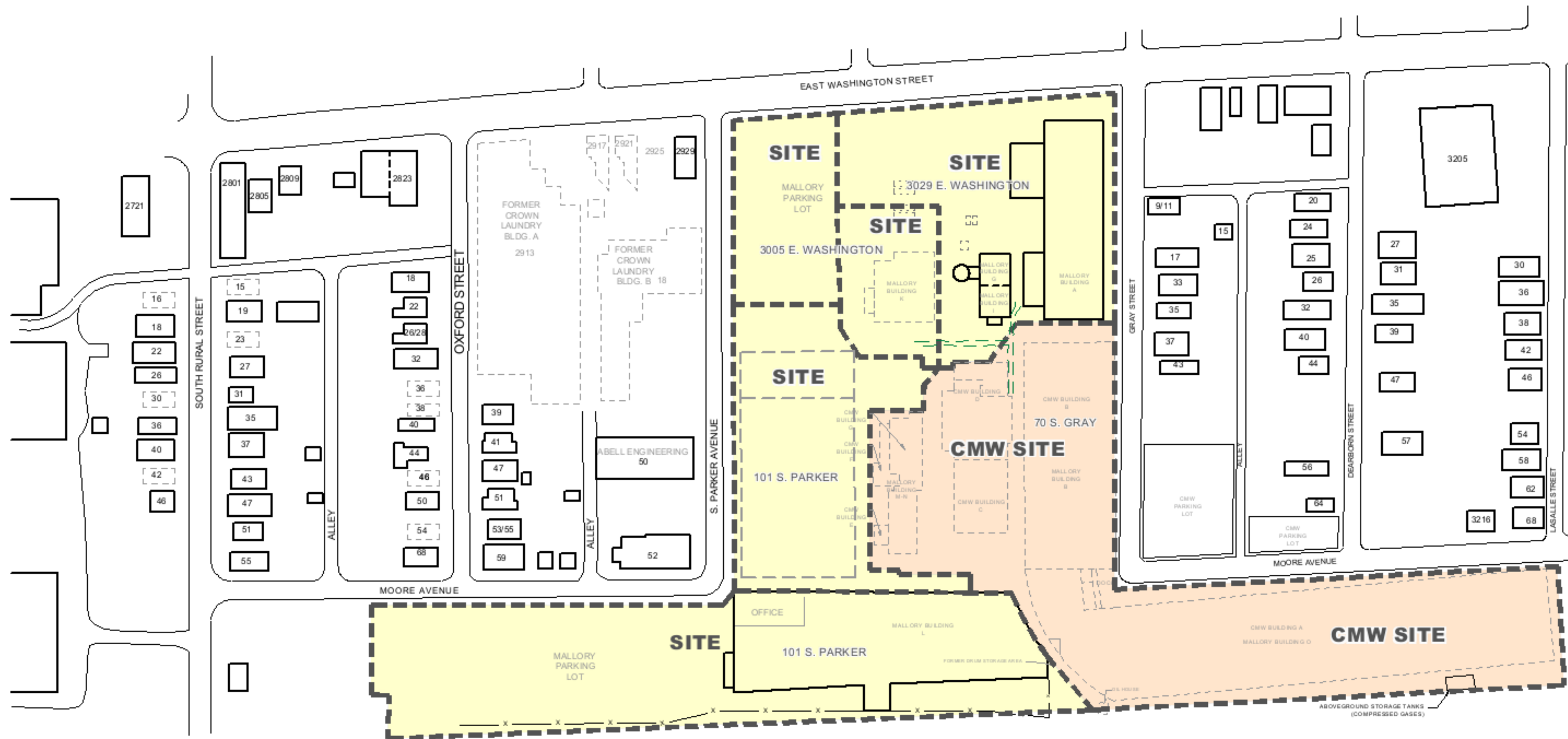


FORMER P.R. MALLORY PROPERTIES
INDIANAPOLIS, INDIANA

Project No. 12584838
Date July 2024

SITE LOCATION

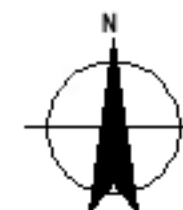
FIGURE 1



LEGEND

- PARCEL BOUNDARY (APPROXIMATE)
- FORMER BUILDING LOCATION (APPROXIMATE)
- SUBSURFACE UTILITY TUNNEL (SURVEYED)
- FORMER P.R. MALLORY SITES VRP #6170902
- CMW SITE - BPI VRP #6000101 AND CMW SCP #000000396

0 75 150 ft



FORMER P.R. MALLORY PROPERTIES
INDIANAPOLIS, INDIANA

Project No. 12584838
Date August 2024

SITE PLAN

FIGURE 2

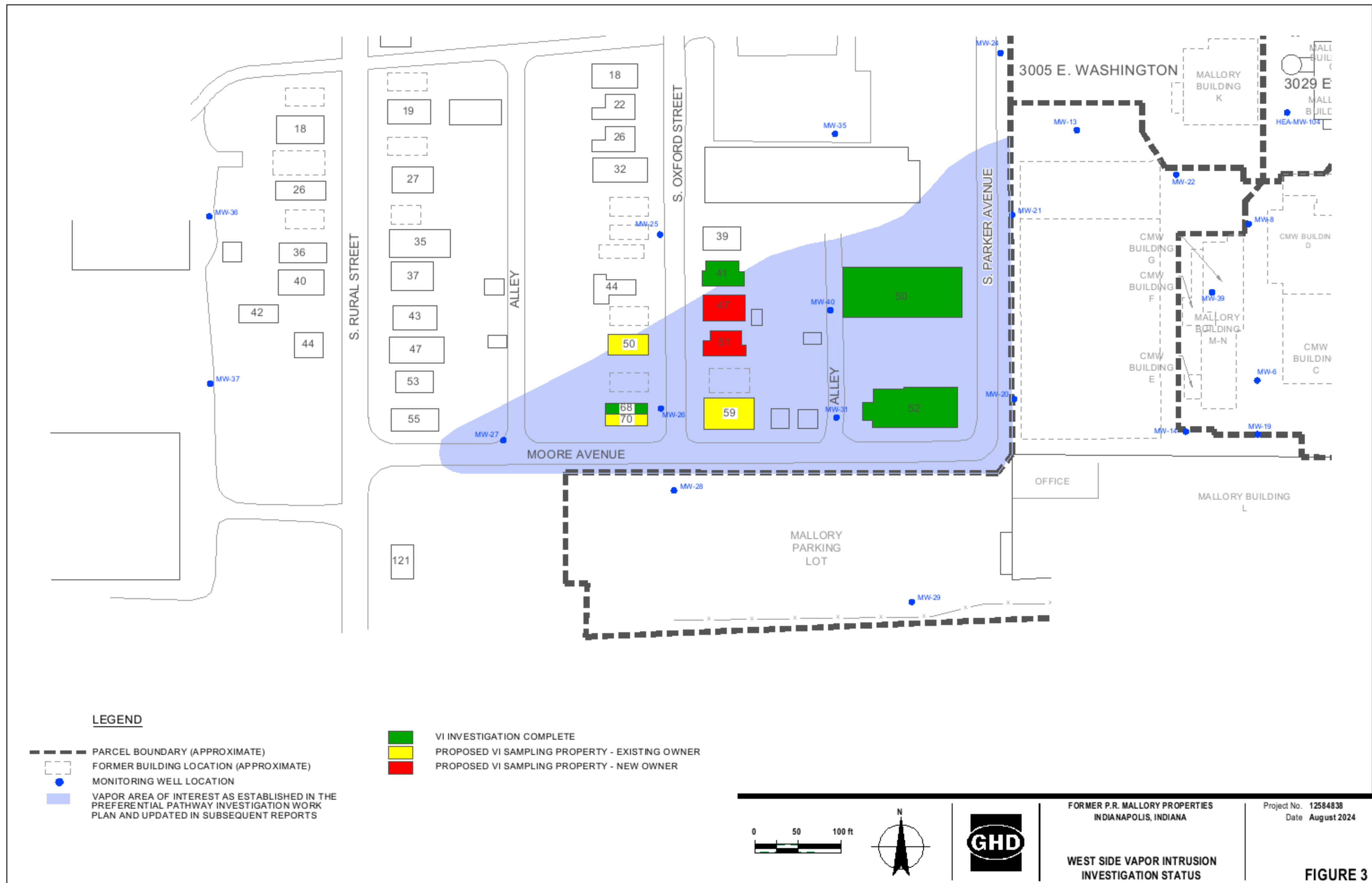


FIGURE 3