Site Investigation Status Report

Oakfield Properties
201 N. Main Street
Oakfield, Wisconsin

WDNR BRRTS #02-20-202459

PREPARED FOR

Wisconsin Department of Natural Resources
Attention: Alyssa Sellwood
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PREPARED BY

THE SIGMA GROUP
Single Source. Sound Solutions.

Project Number – 21801

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Table of Contents

Tables

Figures

1. Site Plan Map
2. 106 E. Church Street Sample Location Map
3. 116 E. Church Street Sample Location Map
4. 206 E. Church Street Sample Location Map
5. 213 N. Main Street Sample Location Map
6. 185 N. First Street Sample Location Map

Appendices

A. Building Checklist Forms
B. Pre-Sampling Site Visit Photographs
C. Sub-Slab Vapor Sampling Field Sheets
D. Sub-Slab Sample Installation Photo Log
E. Indoor Air Sampling Field Sheet
F. Indoor Air Sample Placement Photo Log
G. Sanitary Sewer Sampling Field Sheet
H. Sanitary Sewer Passive Sample Placement Photo Log
I. Sub-Slab Vapor Laboratory Analytical Reports
J. Indoor Air Laboratory Analytical Reports
K. Sewer Gas Laboratory Analytical Reports
L. Sump Water Laboratory Analytical Reports

Executive Summary

The Wisconsin Department of Natural Resources (WDNR), retained The Sigma Group, Inc. (Sigma) to complete vapor intrusion investigation activities to evaluate the vapor intrusion exposure pathway associated with residual chlorinated volatile organic compound (CVOC) impacts to soil and groundwater from the source property at 201 N. Main Street for BRRTS No. 02-20-202459 (the "Site"). The work was completed under the WDNR's Vapor Intrusion Zone Contract. The vapor intrusion investigation activities occurred at five single-family residential properties (106 E. Church Street, 116 E. Church Street, 206 E. Church Street, 213 N. Main Street, and 185 N. First Street) and three sanitary sewer manholes adjacent to the source property.

In May 2023, pre-sampling visits were completed at the five residential properties, which included visits of the homes with homeowners or tenants, completion of a Vapor Intrusion Building Checklist for each building, provided by WDNR, and an inventory of items with the potential to contain CVOCs. Where present, Sigma requested removal of identified items prior to sample collection.

In June 2023, Sigma installed sub-slab vapor sampling points within the basement floor of each of the residential buildings.

Between June 2023 and February 2024, Sigma performed the vapor investigation at these five residences. Sigma collected sub-slab vapor samples from beneath the basement floor slab of each residential home. In addition, indoor air samples were collected from the basements, first floors, and second floors (if present) within each of the residences. Where sumps were present (106 E. Church Street and 206 E. Church Street), sealed sump headspace air and sump water samples were collected. Lastly, sanitary sewer gas samples were collected from select sanitary sewer manholes downgradient, adjacent, and upgradient of the source property. As part of Quality Assurance / Quality Control, outdoor air samples were collected concurrently during three indoor air sampling events.

The sub-slab vapor, indoor air, sump headspace air, outdoor air, and sanitary sewer gas samples were collected utilizing passive samplers provided by Beacon Environmental Laboratory. The sub-slab vapor, indoor air, outdoor air, and sump headspace air samples collected were submitted for laboratory analysis of select CVOCs and the sanitary sewer gas samples were submitted for laboratory analysis of a wider range of volatile organic compounds (VOCs). In addition, sump water samples were collected and submitted for laboratory analysis of select targeted CVOCs.

Based on the results of the sub-slab vapor, indoor air, sump headspace air, sump water, and sanitary sewer gas samples, the presence of complete vapor intrusion pathways were identified at the 106 E. Church Street and 116 E. Church Street properties. Vapor mitigation systems (VMS) were installed as interim actions on each building, which will be documented under separate cover. Conditions creating or posing a potential for vapor intrusion were not identified at the 206 E. Church Street, 213 N. Main Street, and 185 N. First Street properties.

1. Introduction

The WDNR retained Sigma to complete a vapor intrusion investigation for CVOC impacts from the source property located at 201 N. Main Street, Oakfield, Wisconsin (the "Site"). The work was conducted under the WDNR's Vapor Intrusion Zone Contract (VIZC).

Work under VIZC is completed at open sites where tetrachloroethene (PCE) and/or trichloroethene (TCE) are present and a vapor intrusion investigation or mitigation is not moving forward. The focus is typically single-family residential buildings that appear to be at greatest risk for vapor intrusion, and preferential pathways within rights-of-way that present a risk to these residential buildings. This vapor intrusion investigation described herein is not intended to complete the site investigation, as required of the responsible party under Wis. Admin. Code ch. NR 716.

The purpose of the vapor investigation was to evaluate the potential vapor intrusion risk to five residential properties located at 106 E. Church Street, 116 E. Church Street, 206 E. Church Street, 213 N. Main Street, and 185 N. First Street adjacent to the Site. In addition, sanitary sewer gas samples were collected within three sanitary sewer manholes to evaluate the potential vapor intrusion risk associated with historic discharges to the sanitary sewer.

This report documents the sampling activities, which were completed in accordance with Sigma's March 20, 2023, *Consultant Proposal for Vapor Intrusion Investigation* and in general accordance with ch. NR 716 of the Wis. Admin. Code and Sigma's Standard Operating Procedures (SOPs).

This report also discusses the results of the sampling compared to applicable WDNR Vapor Action Levels (VALs) and Vapor Risk Screening Levels (VRSLs) for residential use.

2. Scope of Work

The scope of work for this project included the following investigation activities at the Site:

- Obtained relevant information from the Village of Oakfield public works department relating to the sanitary sewers near the source property (201 N. Main Street).

- Developed a site-specific Health and Safety Plan that was submitted to the WDNR prior to the start of field work.

- Completed pre-sampling visits to each of the residential properties selected for sampling to collect building-specific information, screen for the presence of potential background sources of CVOCs, select potential sampling locations, and provide information on the sampling process and associated requirements to the owners and occupants of each building.

- Collected sub-slab vapor samples at one location within 106 E. Church Street (04A_SSV01), two locations within 116 E. Church Street (04B_SSV01 and 04B_SSV02), one location within 206 E. Church Street (04C_SSV01), one location within 213 N. Main Street (04D_SSV01), and two locations within 185 N. First Street (04E_SSV01 and 04E_SSV02).

- Collected indoor air samples from the basement, first floor, and second floor (if present), crawlspace (106 E. Church Street only) at the following locations (**Figures 2, 3, 4, 5, and 6**):

Address	Basement	Crawlspace	1st Floor	2nd Floor
106 E. Church Street	04A_IAB_01	04A_IAB_03 & 04A_IAB_04	04A_IA1_02	04A_IA2_03
116 E. Church Street	04B_IAB_01	Not present	04B_IA1_02	04B_IA2_03
206 E. Church Street	04C_IAB_01	Not present	04C_IA1_02	No second floor present
213 N. Main Street	04D_IAB_01	Not present	04D_IA1_02	04D_IA2_03
185 N. First Street	04E_IAB01	Not present	04E_IA1_02	04E_IA2_03

- Collected sump headspace samples from sealed sump headspaces within 106 E. Church Street (04A_SUMP01) and 206 E. Church Street (04C_SUMP01).

- Collected sump water samples from 106 E. Church Street (04A_SUMPW) and 206 E. Church Street (04C_SUMPW).

- Collected sanitary sewer gas samples from within the sanitary sewer located within N. Main Street (04R_SSG01, 04R_SSG02, and 04R_SSG03).

- Prepared this report to document field methodologies and to present laboratory results and conclusions.

2.1 Project Team

The following firms and contractors provided services during Sigma's vapor intrusion investigation activities:

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3. Background Information

3.1 Source Property Background

Review of March 23, 2021 *Superfund Preliminary Assessment*[1] completed by the WDNR indicated the source property (201 N. Main Street) has a 100 year history of operating as a metal fabrication facility. Romort Manufacturing Company, Inc. operated from 1917 to 1986 when D. Mueller Industries Inc. bought the source property. Throughout the facility's history, VOCs, CVOCs, and semi-volatile VOCs (SVOCs) have been used and stored at the property. In 1998, a notification of a hazardous substance discharge was submitted to the WDNR on behalf of the owner by the law firm of Michael Best & Friedrich LLP.

Based on the *Superfund Preliminary Assessment*, multiple site investigation efforts have been performed between 1998 and 2006. The site investigation activities identified soil and groundwater impacted with CVOCs and VOCs under and adjacent to the source property building, with depth to shallow groundwater measured between five and ten feet below ground surface (bgs). Review of the investigation findings indicate soil impacts have been relatively defined and impacted groundwater has migrated off-site to the northeast. The residual CVOC impacts to soil and groundwater lead to the potential for contaminant vapors to migrate into nearby structures and create a vapor intrusion risk to occupants of the building.

3.2 Site Description

The Site Map, depicting the extent of the vapor investigation is presented in **Figure 1**. This includes five residential properties with the addresses of 106 E. Church Street, 116 E. Church Street, 206 E. Church Street, 213 N. Main Street, and 185 N. First Street, Oakfield, Wisconsin, which are located between 15 and 145 feet from the source property at 201 N. Main Street, Oakfield, Wisconsin, and three sanitary sewer manholes on Main Street near the source property.

The general layout of the five single-family residential homes are described below and their basement floor plans are presented in **Figures 2, 3, 4, 5,** and **6**.

- The residential building at 106 E. Church Street (**Figure 2**) is located approximately 60 feet northwest of the source property. It is a two-story building with a basement and a sump; the basement floor is approximately six feet below grade and a crawlspace (approximately 250 square feet) is located beneath the northeast portion of the first floor.
- The residential building at 116 E. Church Street (**Figure 3**) is located approximately 70 feet north of the source property. It is a two-story building with a basement; the basement floor is approximately four feet below grade.
- The residential building at 206 E. Church Street (**Figure 4**) is located approximately 145 feet northeast of the source property. It is a single-story building with an attached garage and a basement with a sump; the basement floor is approximately six feet below grade.
- The residential building at 213 N. Main Street (**Figure 5**) is located approximately 15 feet north of the source property. It is a two-story building with a basement; the basement floor is approximately six feet below grade.
- The residential building at 185 N. First Street (**Figure 6**) is located approximately 85 feet northeast of the source property. It is a two-story building with a basement; the basement floor is approximately six feet below grade. A portion of the first floor (east side) is built slab on grade.

[1] *Superfund Preliminary Assessment, Oakfield Properties, Oakfield, Wisconsin U.S. EPA ID: WID006096242,* prepared by Wisconsin Department of Natural Resources Northern Region (dated March 23, 2021)

4. Investigation Procedures

The vapor intrusion investigation was completed between May 2023 and March 2024. The work was completed in accordance with Sigma's March 20, 2023, *Consultant Proposal for Vapor Intrusion Investigation*, and in general accordance with Wis. Admin. Code ch. NR 716 and Sigma's SOPs.

4.1 Pre-Sampling Site Visit

Sigma completed pre-sampling visits to each of the residential homes: 106 E. Church Street, 116 E. Church Street, 206 E. Church Street, 213 N. Main Street, and 185 N. First Street between May 19 and 22, 2023. As part of the pre-sampling visit, Sigma personnel completed the *Building Checklist* document provided by the WDNR for each building, evaluated potential sampling locations, and if potential indoor sources of VOCs were observed, Sigma requested to the owner or occupant that the VOC source be removed prior to sampling each building. Copies of the completed *Building Checklist* for each of the properties are included as **Appendix A**. Photographs from the pre-sampling visits are included as **Appendix B**.

The sanitary sewer manholes targeted for investigation were also inspected (inlets and depths) on May 22, 2023.

Relevant observations for each building and the manholes are summarized as follows:

106 E. Church Street: The property is developed with a two-story residential home with a partial basement. A crawlspace with a dirt floor is located beneath the northeast corner of the first floor. The crawlspace can be accessed on the south side of the exterior of the home. Utility plumbing and HVAC duct work to connect the bedroom/bathroom within the northeast corner of the first floor to the HVAC unit and plumbing within the basement is present within the crawlspace. A basement with a concrete floor and concrete block walls is present below the remainder of the structure. A sump with a sealed cover is located within the east portion of the basement. An approximately one-millimeter joint was observed approximately six inches from the basement wall along all exterior walls of the basement. Joints (approximately one millimeter in width) within the concrete slab were observed within the central portion of the basement. In addition, visible gaps (approximately one quarter inch in width) between select sections of floor slab and what appears to be remnants of wooden forms used during the floor slab construction were visible. Chemicals including laundry detergent, stain spot remover, water softener salt, spray adhesive, and one quart size container of paint were observed within the basement. Chemicals including lime and rust remover and chrome polish were observed on the first floor of the residence. Sigma requested removal of the chemicals which contained VOCs prior to and during the proposed sampling period.

Based on the initial Site visit the recommended sampling points were identified as follows:

- One sub-slab vapor point within the center of the basement.
- One basement indoor air sample within the center of the basement.
- One sump headspace sample within the headspace of the basement sump.
- One first floor indoor air sample within the first-floor bedroom directly above the crawlspace.

116 E. Church Street: The property is developed with a two-story residential home with a full basement. Two approximately 1.5-inch floor drains were observed within the south and west sides of the basement. Based on observations and information provided by the owner/occupant, a portion of the basement floor had been removed and replaced during sewer replacement work completed within the past two years. The basement walls are constructed of stone. The southern portion of the basement floor is elevated approximately 6 inches relative to the rest of the basement. No chemicals were observed within the

basement while household cleaning products were observed on the first floor of the residence. Sigma requested removal of the chemicals which contained VOCs prior to and during the proposed sampling period.

Based on the initial Site visit the recommended sampling points were identified as follows:

- Two sub-slab vapor points within the basement: one within the elevated slab portion of the basement and one further north within the lower slab area.
- One basement indoor air sample within the center of the basement.
- One first floor indoor air sample within the center of the first floor.
- One second floor indoor air sample within the center of the second floor.

206 E. Church Street: The property is developed with a single-story residential home with a full, finished basement and attached garage. The basement is constructed with a concrete floor and block walls. A sump with a partial cover is located within the northwest corner of the basement. A shelf containing chemicals including spray paint, mineral spirits, glass cleaner, glue, and cleaning supplies were located the west portion of the basement. A floor drain is located within the western portion of the basement. Sigma requested removal of the chemicals which contain VOCs prior to and during the proposed sampling period.

Based on the initial Site visit the locations of the sampling points were identified as follows:

- One sub-slab vapor point within the center of the basement.
- One basement indoor air sample within the center of the basement.
- One first floor indoor air sample within the center of the first floor.
- One sump headspace sample within the headspace of the basement sump.

213 N. Main Street: The property is developed with a two-story residential home with a full basement. The basement is constructed with a concrete floor and stone walls. Two approximately 1.5-inch floor drains were observed within the basement on the southeast and southwest sides. Multiple holes in the below grade portion of the basement walls and basement floor were observed and were between one quarter inch to four inches in size. In addition, a quarter inch wide crack was observed on the east side of the basement within the basement floor slab. An empty gas can was observed within the basement. A hole was observed in the first-floor ceiling within the kitchen where the former chimney would have been located. No chemicals were observed within the basement and general household chemicals were observed on the first floor of the residence. Sigma requested removal of the chemicals which contained VOCs prior to and during the proposed sampling period.

Based on the initial Site visit, the locations of the sampling points were identified as follows:

- One sub-slab vapor point near the HVAC system within the basement.
- One basement indoor air sample within the center of the basement.
- One first floor indoor air sample within the center of the first floor.
- One second floor indoor air sample within the center of the second floor.

185 N. First Street: The two-story residential home with a basement is occupied by one male and one female in their 60s. There is a portion of the home located on the east side that is slab on grade. The basement is constructed with a concrete floor with stone and cement block walls. A floor drain is located within the northeast corner of the basement. An approximately quarter inch crack within the basement floor is present north of the staircase. A shelf containing paint was observed within the southern portion of the basement and general household chemicals were observed on the first floor of the residence. Sigma requested removal of the chemicals which contained VOCs prior to and during the proposed sampling period.

Based on the initial Site visit the locations of the sampling points were identified as follows:

- Two sub-slab vapor points within the basement: one near the observed basement floor crack and one near the HVAC system.
- One basement indoor air sample within the center of the basement.
- One first floor indoor air sample within the center of the first floor.
- One second floor indoor air sample within the center of the second floor.

Sanitary Sewer Manholes: Review of available sanitary sewer plans provided by the Village of Oakfield identified three manholes near the source property (**Figure 1**); one downgradient (04R_SSG01), one adjacent (04R_SSG02), and one upgradient (04R_SSG03). During the May 22, 2023 inspection, the manhole adjacent to the source property was observed to have a lateral inlet originating from the source property. This connection was confirmed by flushing a toilet within the source property building and observing inflow from the lateral inlet into the manhole. The manholes located immediately upgradient and downgradient from the manhole located adjacent to the source property were also evaluated. Sigma collected data at each manhole including depth to inflow pipe(s), type of manhole cover, and direction of flow within the invert. The flow within the inspected sanitary sewer manholes is to the north.

4.2 Sub-Slab Vapor Sampling

Sigma personnel mobilized to the 116 E. Church Street and 213 N. Main Street properties on June 9, 2023, and to the 106 E. Church Street, 206 E. Church Street, and 185 N. Main Street properties on June 12, 2023, to install sub-slab vapor samplers. Prior to initiation of the sub-slab vapor sampling activities, Sigma personnel verified that potential background sources of VOCs identified during the pre-sampling visits had been removed from each building.

The sub-slab vapor samples were collected from points installed at the sample locations identified in **Figures 2, 3, 4, 5** and **6**, specifically:

- **106 E. Church Street:**
  One sub-slab vapor sampling point was installed within the basement (04A_SSV01_20230623) and was sampled once between June 12-23, 2023.

- **116 E. Church Street:**
  Two sub-slab sampling points were installed within the basement; one located within the elevated portion of the basement floor (04B_SSV01_20230623) and one within the lower central portion of the basement (04B_SSV02_20230623) and sampled once between June 9-23, 2023.

- **206 E. Church Street:**
  One sub-slab vapor sampling point was installed within the basement (04C_SSV01) and sampled three times on June 12-23, 2023, December 8-22, 2023, and February 16-March 1, 2024.

- **213 N. Main Street:**
  One sub-slab vapor sampling point was installed within the basement (04D_SSV01) and sampled three times on June 9-23,2023, December 8-22, 2023, and February 16-March 1, 2024.

- **185 N. First Street:**
  Two sub-slab vapor sample points were installed within the basement; one located near a crack in the concrete floor to the north of the staircase (04E_SSV01), and one within the west side of the basement (04E_SSV02) and sampled two times on June 12-23, 2023, and December 8-22-2023.

The sub-slab vapor samples were collected using Beacon Passive Soil Gas (PSG) Samplers. The sub-slab samples were submitted to Beacon Environmental for laboratory analysis of cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), PCE, TCE, and vinyl chloride by EPA Method 8260C. The Beacon PSG Samplers were installed and sampled in accordance with the recommendations provided by Beacon. Specifically, installation of the passive vapor samplers was completed as follows:

1. A 1.5-inch diameter drill bit was used to drill through the concrete floor slab at each location until the sub-slab material was encountered. A shop vacuum and hose equipped with a "T" fitting was used to remove concrete debris during drilling. The observed thickness of the concrete floor slab at each sampling location is noted on the field data sheets included in **Appendix C**.

2. Once sub-slab material was encountered, Sigma utilized a 5/8-inch diameter drill bit to drill approximately 4 to 6 inches into the sub-slab material to create the sub-slab vapor pathway.

3. An appropriate length of 1-inch diameter aluminum pipe (supplied by Beacon Environmental) was placed within the hole through the concrete floor slab to rest on top of the sub-slab material. The pipe was cut to length so that the top of the pipe was located approximately one inch below the top of the surrounding floor slab to allow for placement of the aluminum foil cap and temporary concrete patch.

4. A Beacon PSG Sampler was prepared for placement by unwinding the retrieval wire around the sampler and ensuring that the Sampler/wire fit within the aluminum pipe.

5. The Shipping Cap on the Beacon PSG Sampler was removed and replaced with a Sampling Cap provided by Beacon. Once the Sampling Cap was installed, the Beacon PSG Sampler was lowered with the Sampling Cap at the bottom into the aluminum pipe so that the bottom of the Sampler remained within the aluminum pipe and did not contact the sub-slab material.

6. An aluminum foil plug was installed at the top of the aluminum pipe to form a flattened seal and a temporary cement (mixed using dry quick-setting cement) seal was placed over the foil plug.

The PSG samplers were left in place over a sampling period of approximately 14 days. Based on recommendations provided by Beacon, the target reporting limits (below residential VRSLs) would be achieved using this sampling duration. Therefore, Sigma personnel retrieved the passive sub-slab vapor samplers on June 23, 2023, December 22, 2023, and/or March 1, 2024, as follows:

1. The temporary cement seal was removed using a hammer and chisel. The underlying aluminum foil plug was carefully removed using a screwdriver or pliers. The Beacon PSG Sampler was removed from within the aluminum pipe using the retrieval wire.

2. The sides of the Sampler were cleaned with a laboratory provided gauze cloth and the Sampling Cap was removed from the Sampler. The retrieval wire was removed from the Sampler and the vial threads of the Sampler were cleaned using a laboratory-provided piece of gauze cloth.

3. The Shipping Cap was placed on the Sampler and appropriately labeled with the sample identification. The Sampler was placed within an individual Sampler Bag for return shipment to Beacon.

The sub-slab vapor points within 185 N. First Street, 206 E. Church Street, 213 N. Main Street, 106 E. Church Street, and 116 E. Church Street were permanently abandoned on February 16, 2024, April 19, 2024, April 22, 2024, and May 3, 2024, respectively. The vapor points were abandoned by pouring sand into the 5/8-inch drilled hole to the base of the concrete floor slab and then filling the 1.5-inch drilled hole with concrete to the top of the floor slab.

A copy of the field sheet associated with placement and retrieval of the passive sub-slab vapor samplers is included in **Appendix C.** Photographs of the passive sub-slab vapor sampler placement and retrieval are included in **Appendix D**.

4.3 Indoor Air Sampling

Following installation and temporary sealing of the sub-slab vapor samplers, during each sampling event, if applicable, Sigma personnel placed passive samplers for the collection of indoor air and outdoor air samples. The indoor sample locations are illustrated on **Figures 2, 3, 4, 5,** and **6** and the outdoor air samples are illustrated on **Figure 1** and are specifically:

- **106 E. Church Street:**
  Indoor air samples were collected from the basement (04A_IAB_01 and 04A_IAB_02), first floor (04A_IA1_02), and second floor (04A_IAB_03) of the residential home on June 12-23, 2023.

- **116 E. Church Street:**
  Indoor air samples were collected from the basement (04B_IAB_01), first floor (04B_IA1_02), and second floor (04B_IA2_03) of the residential home between June 6-23, 2023.

- **206 E. Church Street:**
  Indoor air samples were collected from the basement (04C_IAB_01) and first floor (04C_IA1_02) of the residential home between June 12-23, 2023, December 8-22, 2023, and February 16 – March 1, 2024.

- **213 N. Main Street:**
  Indoor air samples were collected from the basement (04D_IAB_01), first floor (04D_IA1_02), and second floor (04D_IA2_03) of the residential home between June 12-23, 2023, December 8-22, 2023, and February 16-March 1, 2024.

- **185 N. First Street:**
  Indoor air samples were collected from the basement (04E_IAB_01), first floor (04E_IA1_02), and second floor (04E_IA2_03) of the residential home between June 12-23, 2023, and December 8-22, 2023.

The outdoor air samples were collected in two different locations over the period of the vapor intrusion sampling based on the wind direction. The outdoor air sample collected in June 2023 was placed on a street sign near the intersection of N. Main Street and Hubbard Street and subsequently, near the intersection of Hubbard Street and N. First Street during the December 2023 and March 2024 sampling events. The locations of the outdoor samples are depicted on **Figure 1**.

Sigma utilized Beacon Passive ChloroSorbers Sorbent Tubes (ChloroSorber) to collect indoor air samples. The samples were submitted to Beacon Environmental for laboratory analysis of cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and vinyl chloride by EPA Method TO-17. The ChloroSorbers were handled and installed in

accordance with the recommendations provided by Beacon. Specifically, installation of the passive vapor samplers was completed as follows:

1. At each sampling location, a ChloroSorber was removed from the plastic sample bag it was shipped in from the laboratory and reviewed to confirm the identification on the Tube matched the identification on the sample bag.

2. The ChloroSorber was removed from within the plastic shipping tube and the laboratory provided a disk wrench set used to remove the solid brass cap from the end of the ChloroSorber.

3. A laboratory-provided Diffusion Cap was placed on the open end of the ChloroSorber per the instructions provided by the analytical laboratory.

4. A Hanging Cap (provided by the laboratory) was attached to the end of the ChloroSorber opposite the Diffusion Cap to allow for placement of the ChloroSorber. The ChloroSorber was suspended using new nylon rope at an elevation within the typical breathing zone (approximately 5 feet above the floor).

The outdoor air ChloroSorber was installed beneath a solid PVC cap to protect the ChloroSorber from precipitation. The ChloroSorber and protective cap were secured to street-sign posts at a height within the normal breathing zone (approximately 5 feet above the ground surface).

ChloroSorber were left in place over a sampling period of 11 to 14 days. Based on recommendations provided by Beacon, the target reporting limits (below residential VALs) would be achieved using this sampling duration. To prevent cross contamination between the sub-slab vapor sampling locations and the indoor ChloroSorber, indoor ChloroSorber were retrieved and packaged for return shipment to the analytical laboratory prior to retrieval of the sub-slab samplers described above. In addition, the indoor ChloroSorber within the basement level of the 106 and 206 E. Church Street buildings were retrieved prior to opening of the access port or removal of the temporary sump seal to retrieve the sampler within the headspace of the sump.

Sigma retrieved the ChloroSorber samplers, as follows:

1. The ChloroSorbers were retrieved from their sample location.

2. The Hanging Cap and Diffusion Cap were removed from the ChloroSorber and the corresponding solid brass cap replaced onto the sampling end of the ChloroSorber and finger tightened.

3. The disk wrench set provided by the analytical laboratory was used to further tighten the solid brass cap on the end of the ChloroSorber by an additional 1/8th turn or until tight.

4. The sealed ChloroSorber was replaced within the plastic shipping tube and, subsequently, into the plastic sample bag it was shipped in for return shipment to the analytical laboratory.

A copy of the field sheet associated with placement and retrieval of the passive indoor air samplers is included in **Appendix E.** Photographs of the passive indoor air sampler placement and retrieval are included in **Appendix F**.

4.4 Sump Headspace Sampling

Sigma personnel placed passive samplers within sumps, where present, for the collection of sump headspace air samples.

- **106 E. Church Street:**
  A sample from the basement sump headspace (04A_SUMP01_20230623) was collected between June 12-23, 2023.

- **206 E. Church Street:**
  Basement sump headspace samples (04C_SUMP01) were collected from the basement sump between June 12-23, 2023, December 8-22, 2023, and February 16 – March 1, 2024.

Sample locations are illustrated in **Figures 2** and **4.** Sigma utilized Beacon Passive ChloroSorbers to collect samples from the basement sump headspace. The samples collected were submitted for laboratory analysis of cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and vinyl chloride by EPA Method TO-17. The Beacon ChloroSorbers were handled and installed in accordance with the recommendations provided by Beacon.

Prior to sample collection, each sump was sealed with either a plastic observation window (106 E. Church Street) or with 3-mil polyethylene plastic liner and vapor barrier tape (206 E. Church Street).

The ChloroSorber placed within the sump at 106 E. Church Street was suspended within the sump above the water level and sump pump via a screw-in access port installed by Sigma in the existing plastic cover and new nylon rope. Following placement of the ChloroSorber, the cover of the access port was replaced. The ChloroSorber placed within the sump at 206 E. Church Street was suspended from PVC pipe connected to the sump pump and hung within the sump crock above the water level and sump pump using new nylon rope. The sump was sealed using 3-mil polyethylene plastic liner material and vapor barrier tape.

The installation and retrieval methodology for the Chlorosorbers is described in **Section 4.3.** A copy of the field sheet associated with placement and retrieval of the passive sump headspace samplers is included in **Appendix E.** Photographs of the passive sump headspace sampler placement and retrieval are included in **Appendix F**.

4.5 Sanitary Sewer Sampling

Sigma personnel mobilized to the Site on June 9, 2023, to install passive samplers within three select sanitary sewer manholes. Specifically, the manholes selected for sampling were located within the N. Main Street and Hubard Street intersection and included the manhole which contained the inlet from the lateral associated with the source property, a downgradient manhole from that location (referenced as sample 04R_SSG01_20230623 on **Figure 1**), and an upgradient manhole from that location (referenced as sample 04R_SSG03_20230623 on **Figure 1**). The manholes selected are depicted on **Figure 1**.

Sigma utilized Beacon Passive Samplers to collect sewer gas samples from within the sanitary sewer manholes. The sanitary sewer gas samples collected were submitted to Beacon Environmental for laboratory analysis of select VOCs recommended by Beacon for this type of sampler per WDNR request by EPA Method 8260C. The Beacon Passive Samplers were handled and installed in accordance with the recommendations provided by Beacon. Specifically, installation of the Beacon Passive Sampler was completed as follows:

1. Prior to sample deployment, the depth to liquid within each manhole was measured to allow positioning of the sampler approximately one foot above the liquid.

2. At each sampling location, the Beacon Passive Sampler was removed from the plastic sample bag it was shipped in from the laboratory. The sampler came installed within a plastic shield with a hook.

3. The Shipping Cap on the Beacon Passive Sampler was removed and replaced with a Sampling Cap provided by Beacon.

4. In order to hang the Beacon Passive Sampler, two magnets were mounted to the rim of the manhole cover with bungee cords connected to the magnets. The Passive Sampler was tied to the bungee cords using new nylon rope.

The Beacon Passive Samplers were left in place over a sampling period of 14 days. Based on recommendations provided by Beacon, the target reporting limits (below residential VALs) would be achieved using this sampling duration.

Sigma retrieved the Beacon Passive Samplers on June 23, 2023 as described below:

1. The sides of the Beacon Passive Sampler were cleaned with a laboratory provided gauze cloth and the Sampling Cap was removed from the Beacon Passive Sampler. The retrieval wire was removed from the Beacon Passive Sampler and the vial threads of the Beacon Passive Sampler were cleaned using a laboratory-provided piece of gauze cloth.

2. The Shipping Cap was placed on the Beacon Passive Sampler and appropriately labeled with the sample identification. The Beacon Passive Sampler was placed within an individual Sampler Bag for return shipment to Beacon.

A copy of the field sheet associated with placement and retrieval of the passive sanitary sewer gas samplers is included in **Appendix G.** Photographs of the sampler placement and retrieval are included in **Appendix H**.

4.6 Sump Water Sampling

Prior to collection of sump headspace samples, sump water samples were collected at 106 E. Church Street and 206 E. Church Street. The sump water samples were collected utilizing a new disposable bailer and new disposable bailer rope. A grab water sample was collected by placing the bailer into the water present within the sump. The water sample was then transferred to a preserved laboratory supplied container and were stored/transported on ice to Metiri Group for analysis of CVOCs by EPA Method 8260.

One round of water samples was collected from the sump within 106 E. Church Street on June 12, 2023, and two rounds of water samples were collected from the sump within 206 E. Church Street on June 12, 2023 and December 8, 2023. Upon further inspection of the sump at 106 E. Church Street as part of the vapor intrusion mitigation efforts it was identified that this sump acts as a “grey water” sump and is not connected to a sub-slab drain tile.

5. Investigation Results

5.1 Sub-Slab Vapor Sample Results

Sub-slab vapor analytical results are summarized in **Tables 1A, 1B, 1C, 1D,** and **1E**. The laboratory analytical reports for the sub-slab vapor samples are included as **Appendix I**.

The sub-slab vapor samples were collected using Beacon PSG Samplers and analyzed for cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and vinyl chloride by EPA Method 8260C. There were no discrepancies identified in the Quality Control portion of the laboratory analytical reports. Additional information on laboratory certifications and a detailed quality control summary are presented in the laboratory analytical reports in **Appendix I**.

- **106 E. Church Street:**
  The sub-slab vapor sample collected from beneath the basement floor slab (04A_SSV01_20230623) contained TCE at a concentration greater than residential VRSL. Concentrations of cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride were detected greater than laboratory limits of detection but less than residential VRSLs.

  Three rounds of sub-slab vapor sampling were planned; however, because a vapor intrusion risk was identified in the initial sampling round, a vapor mitigation system (VMS) was installed, and additional investigative sampling was not performed at this residence.

- **116 E. Church Street:**
  The sub-slab vapor sample (04B_SSV01_20230623 (located in the elevated portion of the floor slab) collected from beneath the basement floor slab contained TCE at a concentration greater than large commercial VRSL and cis-1,2-DCE greater than residential VRSL. Concentrations of trans-1,2-DCE and vinyl chloride were detected greater than laboratory limits of detection but less than residential VRSLs.

  The sub-slab vapor sample (04B_SSV02_20230623) collected from beneath the basement floor slab further to the north contained cis-1,2-DCE and TCE at concentrations greater than large commercial VRSLs and trans-1,2-DCE greater than residential VRSL. Vinyl chloride was not detected.

  Three rounds of sub-slab vapor sampling were planned; however, because a vapor intrusion risk was identified in the initial sampling round, a vapor mitigation system (VMS) was installed, and additional investigative sampling was not performed at this residence.

- **206 E. Church Street:**
  <u>June 2023 Sampling</u>
  The sub-slab sample (04C_SSV01_20230623) collected from beneath the basement floor slab contained concentrations of cis-1,2-DCE and TCE greater than laboratory limits of detection but less than residential VRSLs.

  <u>December 2023 Sampling</u>
  The sub-slab sample (04C_SSV01_20231222) collected from beneath the basement floor slab did not contain CVOCs at concentrations greater than the laboratory limits of detection LODs).

March 2024 Sampling
The sub-slab sample (04C_SSV01_20240301) collected from beneath the basement floor slab did not contain CVOCs at concentrations greater than laboratory LODs.

- **213 N. Main Street:**
  June 2023 Sampling
  The sub-slab sample (04D_SSV01_20230623) collected from beneath the basement floor slab did not contain CVOCs greater than laboratory LODs with the exception of cis-1,2-DCE which was reported greater than laboratory LOD.

  December 2023 Sampling
  The sub-slab vapor (04D_SSV01_20231222) collected from beneath the basement floor slab did not contain CVOCs greater than laboratory LODs with the exception of PCE which was reported greater than laboratory LOD.

  March 2024 Sampling
  The sub-slab sample (04D_SSV01_20240301) collected from beneath the basement floor slab did not contain CVOCs at concentrations greater than laboratory LODs.

- **185 N. First Street:**
  June 2023 Sampling
  The sub-slab samples (04E_SSV01_20230623 and 04E_SSV02_20230623) collected from beneath the basement floor slab did not contain CVOCs at concentrations greater than laboratory LODs.

  December 2023 Sampling
  The sub-slab samples (04E_SSV01_20231222 and 04E_SSV02_20231222) collected from beneath the basement floor slab did not contain CVOCs at concentrations greater than laboratory LODs.

  Up to three rounds of sub-slab vapor sampling were planned; however, because CVOCs were not reported greater than laboratory LODs within both of the initial sampling rounds a third round of sub-slab vapor sampling was not performed at this residence

5.2 Indoor Air Sample Results

Indoor air analytical results are summarized in **Table 2A, 2B, 2C, 2D,** and **2E** and laboratory analytical reports for the indoor air samples are included as **Appendix J**.

The indoor air and outdoor air samples were collected using Beacon Chlorosorbers and analyzed for cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and vinyl chloride using EPA Method TO-17. There were no discrepancies identified in the Quality Control portion of the laboratory analytical reports. Additional information on laboratory certifications and a detailed quality control summary are presented in the laboratory analytical reports in **Appendix J**.

- **106 E. Church Street:**
  Indoor air samples were collected from the basement and first floor on June 12-23, 2023.

  June 2023 Sampling
  The indoor air sample (04A_IAB_01_20230623) collected from the basement contained TCE greater than large commercial Vapor Action Limit (VAL) and concentrations of cis-1,2-DCE and trans-1,2-DCE greater than the laboratory limits of detection but less than the residential VALs.

The indoor air sample (04A_IA1_02_20230623) collected from the first floor contained TCE greater than residential VAL and concentrations of cis-1,2-DCE and trans-1,2-DCE greater than the laboratory LODs but less than residential VALs and 25 percent of the residential VALs.

Three rounds of indoor air sampling were planned; however, as discussed above, a VMS was installed based on these initial sampling results and additional investigative sampling was not performed at this residence. Subsequent indoor air sampling was completed to make sure the VMS was effective, and these results will be submitted under a separate cover.

- **116 E. Church Street:**
  Indoor air samples were collected from the basement, first floor, and second floor on June 09-23, 2023.

  June 2023 Sampling
  The indoor air sample (04B_IAB_01_20230623) collected from the basement contained TCE greater than residential VAL and concentrations of cis-1,2-DCE and trans-1,2-DCE greater than the laboratory LODs but less than residential VALs.

  The indoor air sample (04B_IA1_02_20230623) collected from the first floor contained cis-1,2-DCE greater than the laboratory LODs.

  The indoor air sample (04B_IA2_03_20230623) collected from the second floor contained TCE greater than the residential VAL and concentrations of cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride greater than the laboratory LODs but less than residential VALs.

  Three rounds of indoor air sampling were planned; however, as discussed above, a VMS was installed based on these initial sampling results and additional investigative sampling was not performed at this residence. Subsequent indoor air sampling was completed to make sure the VMS was effective, and these results will be submitted under a separate cover.

- **206 E. Church Street:**
  Indoor air samples were collected from the basement and first floor on June 12-23, 2023, December 8-22, 2023, and February 16-March 1, 2024.

  June 2023 Sampling
  The indoor air samples (04C_IAB_01_20230623 and 04C_IA1_02_20230623) collected from the basement and first floor did not contain concentrations of CVOCs greater than laboratory LODs.

  December 2023 Sampling
  The indoor air sample (04C_IAB_01_20231222) collected from the basement contained TCE at a concentration greater than the laboratory LOD but less than the residential VAL.

  The indoor air sample (04C_IA1_02_20231222) collected from the first floor contained TCE at a concentration greater than the laboratory LOD.

  February - March 2024 Sampling
  The indoor air sample (04C_IAB_01_20240301) collected from the basement contained TCE at a concentration greater than the laboratory LOD.

The indoor air sample (04C_IA1_02_20240301) collected from the first floor contained TCE at a concentration greater than the laboratory LOD.

- **213 N. Main Street:**
  Indoor air samples were collected from the basement, first floor, and second floor on June 09-23, 2023, December 8-22, 2023, and February 16-March 1, 2024.

  June 2023 Sampling
  The indoor air samples (04D_IAB_01_20230623, 04D_IA1_02_20230623, and 04D_IA2_03_20230623) collected from the basement, first floor, and second floor did not contain concentrations of CVOCs greater than laboratory LODs.

  December 2023 Sampling
  The indoor air samples (04D_IAB_01_20231222, 04D_IA1_02_20231222, and 04D_IA2_03_20231222) collected from the basement, first floor, and second floor did not contain concentrations of CVOCs greater than laboratory LODs.

  February - March 2024 Sampling
  The indoor air samples (04D_IAB_01_20240301, 04D_IA1_02_20240301, and 04D_IA2_03_202403012) collected from the basement, first floor, and second floor did not contain concentrations of CVOCs greater than laboratory LODs.

- **185 N. First Street:**
  Indoor air samples were collected from the basement, first floor, and second floor on June 12-23, 2023 and December 8-22, 2023.

  June 2023 Sampling
  The indoor air samples (04E_IAB_01_20230623, 04E_IA1_02_20230623, and 04E_IA2_03_20230623) collected from the basement, first floor, and second floor did not contain concentrations of CVOCs greater than laboratory LODs.

  December 2023 Sampling
  The indoor air samples (04E_IAB_01_20231222, 04E_IA1_02_20231222, and 04E_IA2_03_20231222) collected from the basement, first floor, and second floor did not contain concentrations of CVOCs greater than laboratory LODs.

  Outdoor air samples were collected on June 09-23, 2023, December 8-22, 2023, and February 16-March 1, 2024. The samples did not contain CVOC concentrations greater than laboratory LODs.

5.3 Sump Headspace Results

Sump headspace air analytical results are summarized in **Table 2A** and **2C**. The laboratory analytical reports for the sump headspace air samples are included as **Appendix J**.

The sump headspace samples were collected using Beacon Chlorosorbers and analyzed for cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, and vinyl chloride using EPA Method TO-17. There were no discrepancies identified in the Quality Control portion of the laboratory analytical reports. Additional information on laboratory certifications and a detailed quality control summary are presented in the laboratory analytical reports in **Appendix J**.

- **106 E. Church Street:**
  A sump headspace sample was collected from the sealed headspace of the basement sump on June 12-23, 2023.

  The sump headspace sample (04A_SUMP01_20230623) contained a concentration of TCE greater than the residential VAL. Concentrations of cis-1,2-DCE and trans-1,2-DCE were detected greater than the laboratory LODs.

  Three rounds of sump headspace sampling were planned; however, because a vapor intrusion risk was identified in the initial sampling round, a VMS was installed, and additional investigative sampling was not performed at this residence.

- **206 E. Church Street:**
  Sump headspace samples were collected from the sealed headspace of the basement sump on June 12-23, 2023, December 8-22, 2023, and February 16-March 1, 2024.

  The three sump headspace samples (04C_SUMP01_20230623, 04C_SUMP01_20231222, and 04C_SUMP01_20240301) did not contain CVOC concentrations greater than laboratory LODs.

5.4 Sanitary Sewer Gas Results

Sanitary sewer gas analytical results are summarized in **Table 3**. The laboratory analytical report for the sanitary sewer gas samples is included as **Appendix K**.

The sanitary sewer gas samples were collected using Beacon Passive Samplers and analyzed using EPA Method TO-17. There were no discrepancies identified in the Quality Control portion of the laboratory analytical report. Specific results were not qualified by the analytical laboratory. Additional information on laboratory certifications and a detailed quality control summary are presented in the laboratory analytical report in **Appendix K**.

The sanitary sewer gas samples contained VOC concentrations less than residential sewer gas screening levels.

5.5 Sump Water Sample Results

Sump water analytical results are summarized in **Tables 4A and 4C.** The laboratory analytical reports for the sump water samples are included as **Appendix L**.

The sump water samples collected from the sumps at 106 E. Church Street and 206 E. Church Street did not contain concentrations of CVOCs greater than laboratory limit of detections.

6. Conclusions and Recommendations

The vapor intrusion investigation described herein identified a complete vapor intrusion pathway and TCE vapors in indoor air posing a risk to human health at the 106 E. Church Street and 116 E. Church Street residences. The investigation also demonstrated that there is currently not a vapor intrusion risk at the residential buildings located at 206 E. Church Street, 213 N. Main Street, and 185 N. First Street, and that the sanitary sewer is not a potential pathway for contaminant vapor mitigation to other residences outside the area that was tested.

Based on the investigation results, VMSs were installed as interim actions to address the vapor risk at the 106 E. Church Street and 116 E. Church Street residences. The installation and commissioning activities will be documented under separate cover once commissioning activities are completed and the VMSs are determined to be effective.

No additional vapor investigation activities or interim actions for residential properties surrounding the source property (201 E. Main Street) are recommended at this time.

Tables

Table 1A
Sub-slab Vapor Analytical Data
Oakfield Properties - 106 E. Church Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		**Sub-slab Vapor Sample**	Residential Vapor Risk Screening Level [2] (AF=0.03)	Small Commercial Vapor Risk Screening Level [3] (AF = 0.03)	Large Commercial / Industrial Vapor Risk Screening Level [4] (AF = 0.01)
Sample Identification:		04A_SSV01_20230623			
Sample Date(s):		06/12/23-06/23/23			
Sampling/Analysis Method:		EPA 8260C			
Sample Duration (min.):		15,800			
VOCs					
cis-1,2-Dichloroethene	µg/m^3	638	1,400	5,800	18,000
trans-1,2-Dichloroethene	µg/m^3	157	1,400	5,800	18,000
Tetrachloroethene (PCE)	µg/m^3	<1.54	1,400	5,800	18,000
Trichloroethene (TCE)	µg/m^3	{ [**1,240**] }	70	290	880
Vinyl Chloride	µg/m^3	0.80	56	930	2,800

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **residential** setting. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and residential air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **small commercial** setting. VALs for small commercial setting indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and small commercial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Large Commercial / Industrial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **large commercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.01** for the subslab vapor to ambient air pathway in a **large commercial/industrial** setting. VALs for large commerical / industrial indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and large commercial / industrial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Exceedances:
BOLD = concentration greater than residential Vapor Risk Screening Level
[ ] = concentration greater than small commercial Vapor Risk Screening Level
{ } = concentration greater than large commercial / industrial Vapor Risk Screening Level

Data entered / updated by: CLE Date: 3/6/2024
Data checked by: SRM Date: 3/6/2024

Table 1B
Sub-slab Vapor Analytical Data
Oakfield Properties - 116 E. Church Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Sub-slab Vapor Samples		Residential Vapor Risk Screening Level [2] (AF=0.03)	Small Commercial Vapor Risk Screening Level [3] (AF = 0.03)	Large Commercial / Industrial Vapor Risk Screening Level [4] (AF = 0.01)
Sample Identification:		04B_SSV01_20230623	04B_SSV02_20230623			
Sample Date(s):		06/09/23-06/23/23	06/09/23-06/23/23			
Sampling/Analysis Method:		EPA 8260C	EPA 8260C			
Sample Duration (min.):		20,110	20,087			
VOCs						
cis-1,2-Dichloroethene	µg/m^3	**4,000 D**	**{ [21,700 D] }**	1,400	5,800	18,000
trans-1,2-Dichloroethene	µg/m^3	511	**2,360 D**	1,400	5,800	18,000
Tetrachloroethene (PCE)	µg/m^3	<1.21	<1.21	1,400	5,800	18,000
Trichloroethene (TCE)	µg/m^3	**{ [4,330 D] }**	**{ [15,800 D] }**	70	290	880
Vinyl Chloride	µg/m^3	5.33	12.3	56	930	2,800

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **residential** setting. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and residential air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **small commercial** setting. VALs for small commercial setting indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and small commercial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Large Commercial / Industrial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **large commercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.01** for the subslab vapor to ambient air pathway in a **large commercial/industrial** setting. VALs for large commerical / industrial indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and large commercial / industrial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: D = Dilution required to report within calibration limits.

7. Exceedances:
   BOLD = concentration greater than residential Vapor Risk Screening Level
   [ ] = concentration greater than small commercial Vapor Risk Screening Level
   { } = concentration greater than large commercial / industrial Vapor Risk Screening Level

Data entered / updated by: CLE Date: 7/6/2023
Data checked by: SRM Date: 7/6/2023

Table 1C
Sub-slab Vapor Analytical Data
Oakfield Properties - 206 E. Church Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Sub-slab Vapor Samples			Residential Vapor Risk Screening Level [2] (AF=0.03)	Small Commercial Vapor Risk Screening Level [3] (AF = 0.03)	Large Commercial / Industrial Vapor Risk Screening Level [4] (AF = 0.01)
Sample Identification:		04C_SSV01_20230623	04C_SSV01_20231222	04C_SSV01_20240301			
Sample Date(s):		06/12/23-06/23/23	12/8/23-12/22/23	2/16/24-3/01/24			
Sampling/Analysis Method:		EPA 8260C					
Sample Duration (min.):		15,620	20,243	20,126			
VOCs							
cis-1,2-Dichloroethene	µg/m^3	11.2	<0.93	<0.94	1,400	5,800	18,000
trans-1,2-Dichloroethene	µg/m^3	<1.46	<1.12	<1.13	1,400	5,800	18,000
Tetrachloroethene (PCE)	µg/m^3	<1.56	<1.20	<1.21	1,400	5,800	18,000
Trichloroethene (TCE)	µg/m^3	9.51	<1.50	<1.51	70	290	880
Vinyl Chloride	µg/m^3	<0.79	<0.61	<0.61	56	930	2,800

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **residential** setting. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and residential air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **small commercial** setting. VALs for small commercial setting indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1)May 2023] and small commercial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Large Commercial / Industrial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **large commercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.01** for the subslab vapor to ambient air pathway in a **large commercial/industrial** setting. VALs for large commerical / industrial indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and large commercial / industrial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Exceedances:
BOLD = concentration greater than residential Vapor Risk Screening Level
[ ] = concentration greater than small commercial Vapor Risk Screening Level
{ } = concentration greater than large commercial / industrial Vapor Risk Screening Level

Data entered / updated by: CLE Date: 3/15/2024
Data checked by: SM Date: SM

Table 1D
Sub-slab Vapor Analytical Data
Oakfield Properties - 213 N. Main Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Sub-slab Vapor Samples			Residential Vapor Risk Screening Level [2] (AF=0.03)	Small Commercial Vapor Risk Screening Level [3] (AF = 0.03)	Large Commercial / Industrial Vapor Risk Screening Level [4] (AF = 0.01)
Sample Identification:		04D_SSV01_20230623	04D_SSV01_20231222	04D_SSV01_20240301			
Sample Date(s):		06/09/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24			
Sampling/Analysis Method:		EPA 8260C					
Sample Duration (min.):		20,250	20,260	20,017			
VOCs							
cis-1,2-Dichloroethene	µg/m^3	1.45	<0.93	<0.94	1,400	5,800	18,000
trans-1,2-Dichloroethene	µg/m^3	<1.12	<1.12	<1.14	1,400	5,800	18,000
Tetrachloroethene (PCE)	µg/m^3	<1.20	1.33	<1.22	1,400	5,800	18,000
Trichloroethene (TCE)	µg/m^3	<1.50	<1.50	<1.51	70	290	880
Vinyl Chloride	µg/m^3	<0.61	<0.61	<0.62	56	930	2,800

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **residential** setting. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and residential air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **small commercial** setting. VALs for small commercial setting indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and small commercial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Large Commercial / Industrial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **large commercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.01** for the subslab vapor to ambient air pathway in a **large commercial/industrial** setting. VALs for large commerical / industrial indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and large commercial / industrial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Exceedances:
BOLD = concentration greater than residential Vapor Risk Screening Level
[ ] = concentration greater than small commercial Vapor Risk Screening Level
{ } = concentration greater than large commercial / industrial Vapor Risk Screening Level

Data entered / updated by: CLE Date: 3/15/2024
Data checked by: SRM Date: 3/15/2024

Table 1E
Sub-slab Vapor Analytical Data
Oakfield Properties - 185 N. First Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Sub-slab Vapor Samples				Residential Vapor Risk Screening Level [2] (AF=0.03)	Small Commercial Vapor Risk Screening Level [3] (AF = 0.03)	Large Commercial / Industrial Vapor Risk Screening Level [4] (AF = 0.01)
Sample Identification:		04E_SSV01_20230623	04E_SSV01-20231222	04E_SSV02_20230623	04E_SSV02_20231222			
Sample Date(s):		06/12/23-06/23/23	12/8/23-12/22/23	06/12/23-06/23/23	12/8/23-12/22/23			
Sampling/Analysis Method:		EPA 8260C		EPA 8260C				
Sample Duration (min.):		15,803	20,225	15,827	20,233			
VOCs								
cis-1,2-Dichloroethene	µg/m^3	<1.19	<0.93	<1.19	<0.93	1,400	5,800	18,000
trans-1,2-Dichloroethene	µg/m^3	<1.44	<1.12	<1.44	<1.12	1,400	5,800	18,000
Tetrachloroethene (PCE)	µg/m^3	<1.54	<1.20	<1.54	<1.12	1,400	5,800	18,000
Trichloroethene (TCE)	µg/m^3	<1.92	<1.50	<1.91	<1.50	70	290	880
Vinyl Chloride	µg/m^3	<0.78	<0.61	<0.78	<0.61	56	930	2,800

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. Residential Vapor Risk Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **residential** setting. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and residential air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. Small Commercial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **small commercial** air which has been adjusted with an **Attenuation Factor of 0.03** for the subslab vapor to ambient air pathway in a **small commercial** setting. VALs for small commercial setting indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and small commercial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. Large Commercial / Industrial Vapor Risk Screening Level = Risk-based concentrations based on VALs for **large commercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.01** for the subslab vapor to ambient air pathway in a **large commercial/industrial** setting. VALs for large commerical / industrial indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and large commercial / industrial air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Exceedances:
BOLD = concentration greater than residential Vapor Risk Screening Level
[ ] = concentration greater than small commercial Vapor Risk Screening Level
{ } = concentration greater than large commercial / industrial Vapor Risk Screening Level

Data entered / updated by: ZM Date: 1/5/2024
Data checked by: SRM Date: 1/5/2024

Table 2A
Indoor Air Analytical Data
Oakfield Properties - 106 E. Church St., Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Indoor Air Samples		Sump Headspace	Outdoor Air	VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04A_IA01_20230623	04A_IA02_20230623	04A_SUMP01_20230623	04_OA01_20230623			
Sample Date(s):		06/12/23-06/23/23	06/12/23-06/23/23	06/12/23-06/23/23	6/9/23-6/23/23			
Sampling/Analysis Method:		TO-17 (Passive)	TO-17 (Passive)	TO-17 (Passive)	TO-17 (Passive)			
Sample Duration (minutes):		15,758	15,755	15,775	20,340			
VOCs								
cis-1,2-Dichloroethene	µg/m^3	8.63	2.42	17.6	<0.173	42	180	180
trans-1,2-Dichloroethene	µg/m^3	0.892 J	0.256 J	1.97	<0.173	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<0;285	<0.285	<0.285	<0.220	42	180	180
Trichloroethene (TCE)	µg/m^3	{ [**10.2**] }	**2.57**	{ [**16.2**] }	<0.187	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<0.280	<0.280	<0.280	<0.216	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2024] and **residential** air in July 2024 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2024] and **small commercial** air in July 2024 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2024] and **large commerical / industrial** air in July 2024 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: J = Value reported below limit of quantitation (LOQ)
   U = Analyte was not detected and is reported less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

7. Exceedances:
   BOLD = concentration greater than r = concentration greater than residential Vapor Action Level
   [ ] = concentration greater than s = concentration greater than small commercial Vapor Action Level
   { } = concentration greater than l = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CLE Date: 8/1/2024
Data checked by: SRM Date: 8/1/2024

Table 2B
Indoor Air Analytical Data
Oakfield Properties - 116 E. Church Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Indoor Air Samples			Outdoor Air	VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04B_IA01_20230623	04B_IA02_20230623	04B_IA03_20230623	04_OA01_20230623			
Sample Date(s):		06/09/23-06/23/23	06/09/23-06/23/23	06/09/23-06/23/23	6/9/23-6/23/23			
Sampling/Analysis Method:		TO-17 (Passive)	TO-17 (Passive)	TO-17 (Passive)	TO-17 (Passive)			
Sample Duration (minutes):		20,100	20,060	20,045	20,340			
VOCs								
cis-1,2-Dichloroethene	µg/m^3	12.9	1.90	13.7	<0.173	42	180	180
trans-1,2-Dichloroethene	µg/m^3	0.495 J	<0.176	0.540 J	<0.173	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<0.224	<0.224	<0.225	<0.220	42	180	180
Trichloroethene (TCE)	µg/m^3	**4.70**	<0.190	**5.02**	<0.187	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<0.220	<0.220	0.537 J	<0.216	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: J = Value reported below limit of quantitation (LOQ)
U = Analyte was not detected and is reported less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

7. Exceedances: **BOLD** = concentration greater than | = concentration greater than | = concentration greater than residential Vapor Action Level
[ ] = concentration greater than | = concentration greater than | = concentration greater than small commercial Vapor Action Level
{ } = concentration greater than | = concentration greater than | = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CLE Date: 5/20/2024
Data checked by: SRM Date: 5/20/2024

Table 2C
Indoor Air Analytical Data
Oakfield Properties - 206 E. Church St., Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Indoor Air Samples						Sump Headspace			VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04C_IA01_20230623	04C_IAB01_20231222	04C_IAB01_20240301	04C_IA02_20230623	04C_IA102_20231222	04C_IA102_20240301	04C_SUMP01_20230623	04C_SUMP01_20231222	04C_SUMP01_20240301			
Sample Date(s):		06/12/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24	06/12/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24	06/12/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24			
Sampling/Analysis Method:		TO-17 (Passive)			TO-17 (Passive)			TO-17 (Passive)					
Sample Duration (minutes):		15,595	20,235	20,100	15,585	20,235	20,086	15,605	20,234	20,044			
VOCs													
cis-1,2-Dichloroethene	µg/m^3	<2.23 D2, U, D	<0.177 U	<0.177 U	<2.23 D2, U, D	<0.177 U	<0.177 U	<2.23 D2, U, D	<0.177 U	<0.178 U	42	180	180
trans-1,2-Dichloroethene	µg/m^3	<2.23 D2, U, D	<0.177 U	<0.177 U	<2.23 D2, U, D	<0.177 U	<0.177 U	<2.23 D2, U, D	<0.177 U	<0.178 U	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<2.84 D2, U, D	<0.225 U	<0.226 U	<2.84 D2, U, D	<0.225 U	<0.226 U	<2.83 D2, U, D	<0.225 U	<0.226 U	42	180	180
Trichloroethene (TCE)	µg/m^3	<2.40 D2, U, D	1.13	0.994	<2.40 D2, U, D	0.716 J	0.585 J	<2.40 D2, U, D	<0.190 U	<0.191 U	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<2.79 D2, U, D	<0.221 U	<0.222 U	<2.79 D2, U, D	<0.221 U	<0.222 U	<2.78 D2, U, D	<0.221 U	<0.222 U	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags:
D = Dilution required to report within calibration Limits
D2 = Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
U = Analyte was not detected and is reported less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.
J= Value reported below limit of quantitation

7. Exceedances:
BOLD = concentration greater than residential Vapor Action Level
[ ] = concentration greater than small commercial Vapor Action Level
{ } = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CLE Date: 3/18/2024
Data checked by: SRM Date: 3/19/2024

Table 2C
Indoor Air Analytical Data
Oakfield Properties - 206 E. Church St., Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Outdoor Air			VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04_OA01_20230623	04_OA01_20231222	04_OA01_20240301			
Sample Date(s):		6/9/23-6/23/23	12/8/23-12/22/23	2/16/24-3/1/24			
Sampling/Analysis Method:		TO-17 (Passive)					
Sample Duration (minutes):		20,340	20,228	20,210			
VOCs							
cis-1,2-Dichloroethene	µg/m^3	<0.173 U	<0.180 U	<0.182 U	42	180	180
trans-1,2-Dichloroethene	µg/m^3	<0.173 U	<0.180 U	<0.182 U	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<0.220 U	<0.230 U	<0.232 U	42	180	180
Trichloroethene (TCE)	µg/m^3	<0.187 U	<0.194 U	<0.196 U	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<0.216 U	<0.225 U	<0.228 U	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags:
D = Dilution required to report within calibration Limits
D2 = Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
U = Analyte was not detected and is reported less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.
J= Value reported below limit of quantitation

7. Exceedances:
BOLD = concentration greater than residential Vapor Action Level
[ ] = concentration greater than small commercial Vapor Action Level
{ } = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CLE Date: 3/18/2024
Data checked by: srmn Date: 3/19/2024

Table 2D
Indoor Air Analytical Data
Oakfield Properties - 213 N. Main Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Indoor Air Samples									VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04D_IA01_20230623	04D_IAB01_20231222	04D_IAB01_20240301	04D_IA02_20230623	04D_IA102_20231222	04D_IA102_20240301	04D_IA03_20230623	04D_IA203_20231222	04D_IA203_20240301			
Sample Date(s):		06/09/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24	06/09/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24	06/09/23-06/23/23	12/8/23-12/22/23	2/16/24-3/1/24			
Sampling/Analysis Method:		TO-17 (Passive)			TO-17 (Passive)			TO-17 (Passive)					
Sample Duration (minutes):	Duration:	20,220	20,247	19,977	20,215	20,235	19,967	20,207	20,226	19,972			
VOCs													
cis-1,2-Dichloroethene	µg/m^3	<1.72 D2, U, D	<0.176 U	<0.178 U	<1.71 D2, U, D	<0.176 U	<0.178 U	<0.175 U	<0.176 U	<0.177 U	42	180	180
trans-1,2-Dichloroethene	µg/m^3	<1.72 D2, U, D	<0.176 U	<0.178 U	<1.71 D2, U, D	<0.176 U	<0.178 U	<0.175 U	<0.176 U	<0.177 U	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<2.18 D2, U, D	<0.224 U	<0.227 U	<2.18 D2, U, D	<0.224 U	<0.226 U	<0.222 U	<0.224 U	<0.226 U	42	180	180
Trichloroethene (TCE)	µg/m^3	<1.85 D2, U, D	<0.189 U	<0.192 U	<1.84 D2, U, D	<0.189 U	<0.191 U	<0.188 U	<0.189 U	<0.191 U	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<2.14 D2, U, D	<0.220 U	<0.223 U	<2.14 D2, U, D	<0.220 U	<0.222 U	<0.218 U	<0.220 U	<0.222 U	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: D = Dilution required to report within calibration Limits
D2 = Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
U = Analyte was not detected and is reported less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

7. Exceedances: **BOLD** = concentration greater than residential Vapor Action Level
[ ] = concentration greater than small commercial Vapor Action Level
{ } = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CLE Date: 3/18/2024
Data checked by: SRM Date: 3/19/2024

Table 2D
Indoor Air Analytical Data
Oakfield Properties - 213 N. Main Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Outdoor Air			VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04_OA01_20230623	04_OA01_20231222	04_OA01_20240301			
Sample Date(s):		6/9/23-6/23/23	12/8/23-12/22/23	2/16/24-3/1/24			
Sampling/Analysis Method:		TO-17 (Passive)					
Sample Duration (minutes):	Duration:	20,340	20,228	20,210			
VOCs							
cis-1,2-Dichloroethene	µg/m^3	<0.173 U	<0.180 U	<0.182 U	42	180	180
trans-1,2-Dichloroethene	µg/m^3	<0.173 U	<0.180 U	<0.182 U	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<0.220 U	<0.230 U	<0.232 U	42	180	180
Trichloroethene (TCE)	µg/m^3	<0.187 U	<0.194 U	<0.196 U	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<0.216 U	<0.225 U	<0.228 U	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: D = Dilution required to report within calibration Limits
D2 = Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
U = Analyte was not detected and is reported less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

7. Exceedances: **BOLD** = concentration greater than residential Vapor Action Level
[ ] = concentration greater than small commercial Vapor Action Level
{ } = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CLE Date: 3/18/2024
Data checked by: SRM Date: 3/19/2024

Table 2E
Indoor Air Analytical Data
Oakfield Properties - 185 N. First Street, Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Indoor Air Samples						Outdoor Air		VAL for Residential Indoor Air [2]	VAL for Small Commercial Indoor Air [3]	VAL for Large Commercial / Industrial Indoor Air [4]
Sample Identification:		04E_IA01_20230623	04E_IAB01_20231222	04E_IA02_20230623	04E_IA102_20231222	04E_IA03_20230623	04E_IA203_20231222	04_OA01_20230623	04_OA01_20231222			
Sample Date(s):		06/12/23-06/23/23	12/8/23-12/22/23	06/12/23-06/23/23	12/8/23-12/22/23	06/12/23-06/23/23	12/8/23-12/22/23	6/9/23-6/23/23	12/8/23-12/22/23			
Sampling/Analysis Method:		TO-17 (Passive)		TO-17 (Passive)		TO-17 (Passive)		TO-17 (Passive)				
Sample Duration (minutes):		15,815	20,215	15,806	20,200	15,803	20,199	20,340	20,228			
VOCs												
cis-1,2-Dichloroethene	µg/m^3	<0.223	<0.177	<0.224	<0.177	<0.224	<0.177	<0.173	<0.180	42	180	180
trans-1,2-Dichloroethene	µg/m^3	<0.223	<0.177	<0.224	<0.177	<0.224	<0.177	<0.173	<0.180	42	180	180
Tetrachloroethene (PCE)	µg/m^3	<0.284	<0.226	<0.285	<0.225	<0.285	<0.226	<0.220	<0.230	42	180	180
Trichloroethene (TCE)	µg/m^3	<0.241	<0.191	<0.241	<0.190	<0.241	<0.191	<0.187	<0.194	2.1	8.8	8.8
Vinyl Chloride	µg/m^3	<0.279	<0.222	<0.280	<0.221	<0.280	<0.222	<0.216	<0.225	1.7	28	28

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. VAL for Residential Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **residential** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **residential** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. VAL for Small Commercial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **small commercial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

4. VAL for Large Commercial / Industrial Indoor Air = Vapor Action Level described in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for **industrial** air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) May 2023] and **large commerical / industrial** air in August 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Laboratory flags: Enter flags as necessary

7. Exceedances:
   BOLD = concentration greater than residential Vapor Action Level
   [ ] = concentration greater than small commercial Vapor Action Level
   { } = concentration greater than large commercial / industrial Vapor Action Level

Data entered / updated by: CRD Date: 1/5/2024

Data checked by: CLE Date: 1/5/2024

Table 3
Sewer Gas Analytical Results
Oakfield VIZC - Oakfield, Wisconsin
Sigma Project No. 21801

Sample Type:		Sewer Gas Samples			Residential Sanitary Sewer Gas Screening Level [2] (AF=0.03)	Commercial/Industrial Sanitary Sewer Gas Screening Level [3] (AF = 0.03)
Manhole:		105	104	103		
Sample Identification:		**04R_SSG01_20230623**	**04R_SSG02_20230623**	**04R_SSG03_20230623**		
Sample Date(s):		06/09/2023-06/23/2023	06/09/2023-06/23/2023	06/09/2023-06/23/2023		
Sampling/Analysis Method:		TO-17 (Passive)	TO-17 (Passive)	TO-17 (Passive)		
Sample Duration:		20,130	20,110	20,080		
VOCs						
Benzene	µg/m^3	<2.30	<2.30	<2.30	120	520
Carbon Tetrachloride	µg/m^3	<1.13	<1.13	<1.13	160	680
Chlorobenzene	µg/m^3	<0.572	<0.573	<0.574	1,733	7,333
Chloroform	µg/m^3	2.38	1.55	19.6	41	180
1,2-Dibromoethane (EDB)	µg/m^3	<1.25	<1.25	<1.25	1.567	6.7
1,2-Dichlorobenzene	µg/m^3	<0.649	<0.649	<0.650	7,000	29,333
1,3-Dichlorobenzene	µg/m^3	<0.649	<0.649	<0.650	NS	NS
1,4-Dichlorobenzene	µg/m^3	<0.649	0.651	<0.650	87	367
1,1-Dichloroethane	µg/m^3	<0.572	<0.573	<0.574	590	2,600
1,2-Dichloroethane	µg/m^3	<0.869	<0.870	<0.871	36	160
1,1-Dichloroethene	µg/m^3	<1.47	<1.48	<1.48	7,000	29,000
cis-1,2-Dichloroethene	µg/m^3	<0.918	<0.919	<0.920	1,400	5,800
trans-1,2-Dichloroethene	µg/m^3	<1.11	<1.11	<1.11	1,400	5,800
1,4-Dioxane	µg/m^3	<1.19	<1.19	<1.19	187	833
Ethylbenzene	µg/m^3	<1.43	<1.43	<1.47	370	1,600
Isopropylbenzene	µg/m^3	<1.47	<1.47	<1.47	NS	NS
Methylene Chloride	µg/m^3	<1.39	1.68	6.7	21,000	88,000
2-Methylnaphthalene	µg/m^3	<1.60	<1.60	<1.60	NS	NS
Methyl-tert-butyl ether	µg/m^3	<2.43	<2.44	<2.44	3,600	16,000
Naphthalene	µg/m^3	<1.52	<1.52	<1.52	28	120
1,1,2,2-Tetrachloroethane	µg/m^3	<1.19	<1.19	<1.19	16	70
Tetrachloroethene (PCE)	µg/m^3	<1.19	<1.19	<1.19	1,400	5,800
Toluene	µg/m^3	<3.04	<3.04	<3.05	170,000	730,000
1,2,3-Trichlorobenzene	µg/m^3	<1.25	<1.25	<1.25	NS	NS
1,2,4-Trichlorobenzene	µg/m^3	<1.25	<1.25	<1.25	70	293
1,1,1-Trichloroethane	µg/m^3	<0.463	<0.464	<0.465	170,000	730,000
1,1,2-Trichlororethane	µg/m3	<1.47	<1.48	<1.48	60	257
Trichloroethene (TCE)	µg/m^3	<1.47	<1.48	<1.48	70	290
1,2,3-Trichloropropane	µg/m^3	<0.649	<0.649	<0.650	10	43
1,1,2-Trichlorotrifluoroethane	µg/m^3	<0.547	<0.547	<0.548	173,333	733,333
1,2,4-Trimethylbenzene	µg/m^3	<1.47	<1.47	<1.47	2,100	8,800
1,3,5-Trimethylbenzene	µg/m^3	<1.47	<1.47	<1.47	2,100	8,800
Vinyl Chloride	µg/m^3	<0.601	<0.601	<0.602	56	930
Xylenes, total	µg/m^3	<2.76	<2.76	4.88	3,500	15,000

Notes:

1. Analytical units: µg/m^3 = micrograms per cubic meter

2. Residential Sanitary Sewer Gas Screening Level = Risk-based concentrations based on VALs for **residential** air which has been adjusted with an **Attenuation Factor of 0.03** for the sanitary sewer to ambient air pathway in a **residential** setting. VALs for residential indoor air based on WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for residential air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2022] and residential air in January 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

3. Commercial/Industrial Sanitary Sewer Gas Screening Level = Risk-based concentrations based on VALs for **ommercial/industrial** air which has been adjusted with an **Attenuation Factor of 0.03** for the sanitary sewer gas to ambient air pathway in a **commerical/industrial** setting. VALs for commercial/industrial setting indoor air based on WDNR publication PUB-RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" (dated January 2018) which in turn references EPA Region 3 Risk-Based Concentrations for industrial air [Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1) November 2022] and commercial/industrial air in January 2023 "Wisconsin Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels And Vapor Risk Screening Levels" publication RR-0136. VAL adjusted to 1-in-100,000 increase in lifetime cancer risk for carcinogens per WDNR publication RR-800; VAL is not adjusted for non-carcinogens (i.e., hazard index = 1).

5. NA = not analyzed

6. Exceedances: **BOLD** = concentration greater than residential Sanitary Sewer Gas Screening Level
[ ] = concentration greater than commercial/industrial Sanitary Sewer Gas Screening Level

Data entered / updated by: KAL Date: 7/6/2023

Data checked by: SRM Date: 7/6/2023

Table 4A

Sump Water Analytical Results

Oakfield Properties - 106 E. Church St., Oakfield, Wisconsin

Sigma Project No. 21801

Well Location:		04A_SUMPW_20230612	NR 140 ES	NR 140 PAL
Date:		6/12/23		
Water Elevation* (feet MSL):		NA		
VOCs				
1,1-Dichloroethene	µg/L	<0.43	7	0.7
cis-1,2-Dichloroethene	µg/L	<0.32	70	7
trans-1,2-Dichloroethene	µg/L	<0.5	100	20
Tetrachloroethene	µg/L	<0.47	5	0.5
Trichloroethene (TCE)	µg/L	<0.38	5	0.5
Vinyl Chloride	µg/L	<0.15	0.2	0.02

Notes:

1. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
2. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
3. NS = no standard NA = Not Analyzed
4. µg/L = micrograms per liter (equivalent to parts per billion, ppb)
5. Laboratory flags: "J" = Analyte detected between Limit of Detection and Limit of Quantitation.
6. Trip blank results: 6/12/23: All VOCs reported less than laboratory Limits of Detection.
7. Equipment blank results: 6/12/23: All VOCs reported less than laboratory Limits of Detection.
8. Exceedances: **BOLD** = Concentration greater than NR 140 ES
   ITALICS = Concentration greater than NR 140 PAL
9. Special notes: * = monitoring well screen submerged below water table
   ** = not an NR 140 ES or PAL exceedance per NR 140.14(3)(c)

Data entered / updated by: CLE

Data checked by: SRM

Date: 6/22/2023

Date: 6/22/2023

Table 4C

Sump Water Analytical Results

Oakfield Properties - 206 E. Church St., Oakfield, Wisconsin

Sigma Project No. 21801

Well Location:		04C_SUMPW_20230612	04C_SUMPW_20231208	NR 140 ES	NR 140 PAL
Date:		6/12/23	12/8/23		
Water Elevation* (feet MSL):		NA	NA		
VOCs					
1,1-Dichloroethene	µg/L	<0.43	<0.43	7	0.7
cis-1,2-Dichloroethene	µg/L	<0.32	<0.32	70	7
trans-1,2-Dichloroethene	µg/L	<0.5	<0.5	100	20
Tetrachloroethene	µg/L	<0.47	<0.47	5	0.5
Trichloroethene (TCE)	µg/L	<0.38	<0.38	5	0.5
Vinyl Chloride	µg/L	<0.15	<0.15	0.2	0.02

Notes:

1. NR 140 ES = Wisconsin Administrative Code, Chapter NR 140 Enforcement Standard
2. NR 140 PAL = Wisconsin Administrative Code, Chapter NR 140 Preventive Action Limit
3. NS = no standard NA = Not Analyzed
4. µg/L = micrograms per liter (equivalent to parts per billion, ppb)
5. Laboratory flags: "J" = Analyte detected between Limit of Detection and Limit of Quantitation.
6. Trip blank results: 6/12/23: All VOCs reported less than laboratory Limits of Detection.
7. Equipment blank results: 6/12/23: All VOCs reported less than laboratory Limits of Detection.
8. Exceedances: **BOLD** = Concentration greater than NR 140 ES
   ITALICS = Concentration greater than NR 140 PAL
9. Special notes: * = monitoring well screen submerged below water table
   ** = not an NR 140 ES or PAL exceedance per NR 140.14(3)(c)

Data entered / updated by: CLE

Data checked by: SRM

Date: 12/20/2023

Date: 12/20/2023

Figures

1. Site Plan Map
2. 106 E. Church Street Sample Location Map
3. 116 E. Church Street Sample Location Map
4. 206 E. Church Street Sample Location Map
5. 213 N. Main Street Sample Location Map
6. 185 N. First Street Sample Location Map

LEGEND

- PROPERTIES TO BE SAMPLED
- SITE
- OUTDOOR AIR SAMPLE
- SEWER GAS SAMPLE
- SEWER GAS LATERAL

E. CHURCH STREET

106 E. CHURCH STREET

116 E. CHURCH STREET

206 E. CHURCH STREET

185 N. FIRST STREET

213 N. MAIN STREET

201 N. MAIN STREET

N. MAIN STREET

N. FIRST STREET

HUBBARD STREET

04R_SSG01_20230623

04_OA01_20230623

04R_SSG02_20230623

04_OA01_20231222 & 04_OA01_20240301

04R_SSG03_20230623

0 60 FT. 120 FT.

GRAPHIC SCALE

NOTE:
1. 2022 AERIAL PHOTOGRAPH FROM FOND DU LAC COUNTY GIS WEBSITE

THE SIGMA GROUP
Single Source. Sound Solutions.

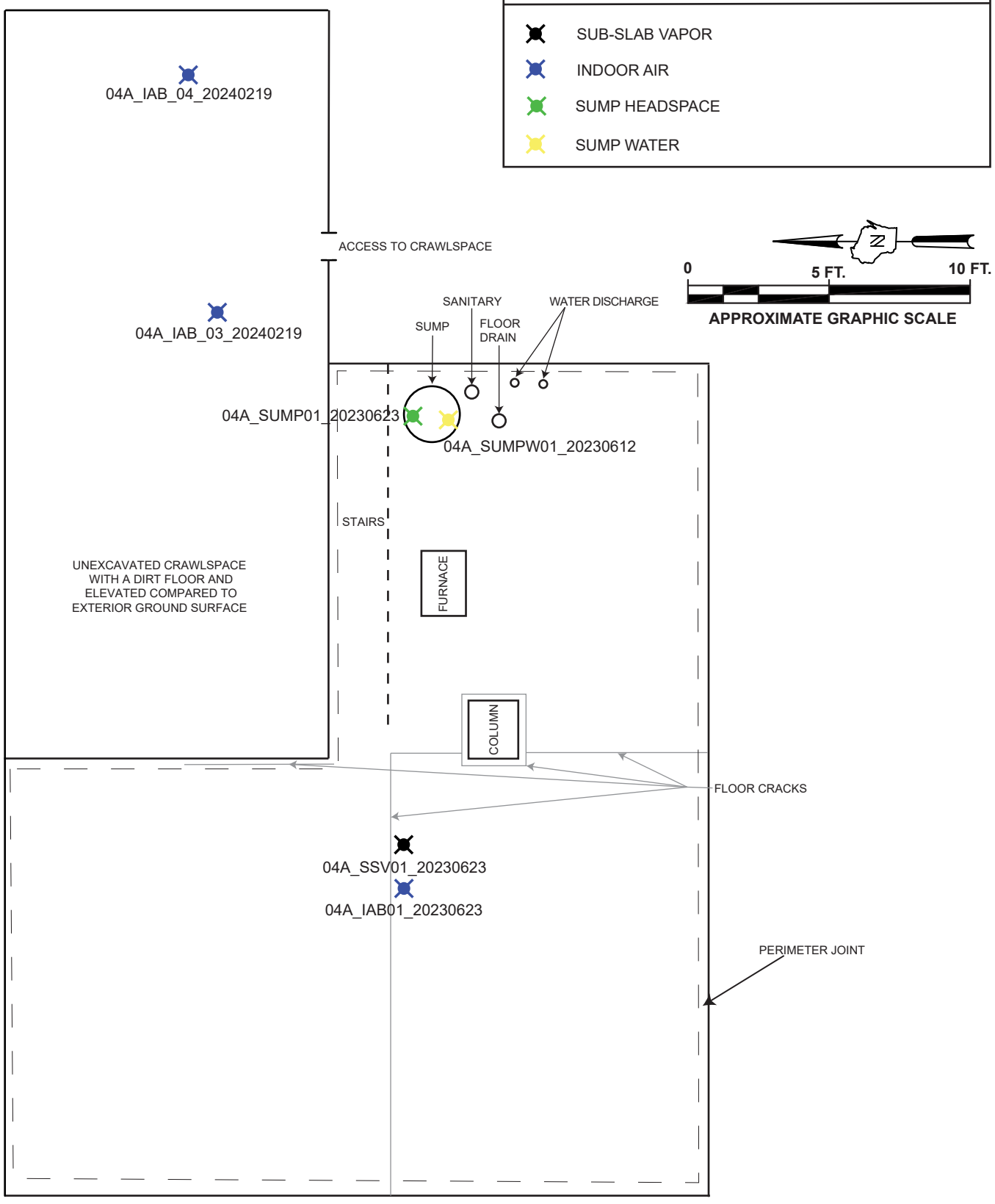
SITE LOCATION MAP

OAKFIELD PROPERTIES DNR BRRTS #02-20-202459
201 N. MAIN STREET, OAKFIELD, WISCONSIN

FIGURE 1

PROJECT: 21801 | FILE FOLDER: 060 CAD - 200_Env | FILENAME: 21801_Master Map_vertical 11x17.ai | CREATED BY: CLE | DATE: 07/10/2023 | MODIFIED BY: CLE | DATE: 05/06/2024

FILE PATH: 21801 - Oakfield VIZC\090 Reports\VI Investigation Report\Figures\Figure 1 SPM



PROJECT: 21801 | FILE FOLDER: 060 CAD - 200_Env | FILENAME: 21801_Master Map_vertical 11x17.ai | CREATED BY: CLE | DATE: 07/10/2023 | MODIFIED BY: CLE | DATE: 04/10/2024

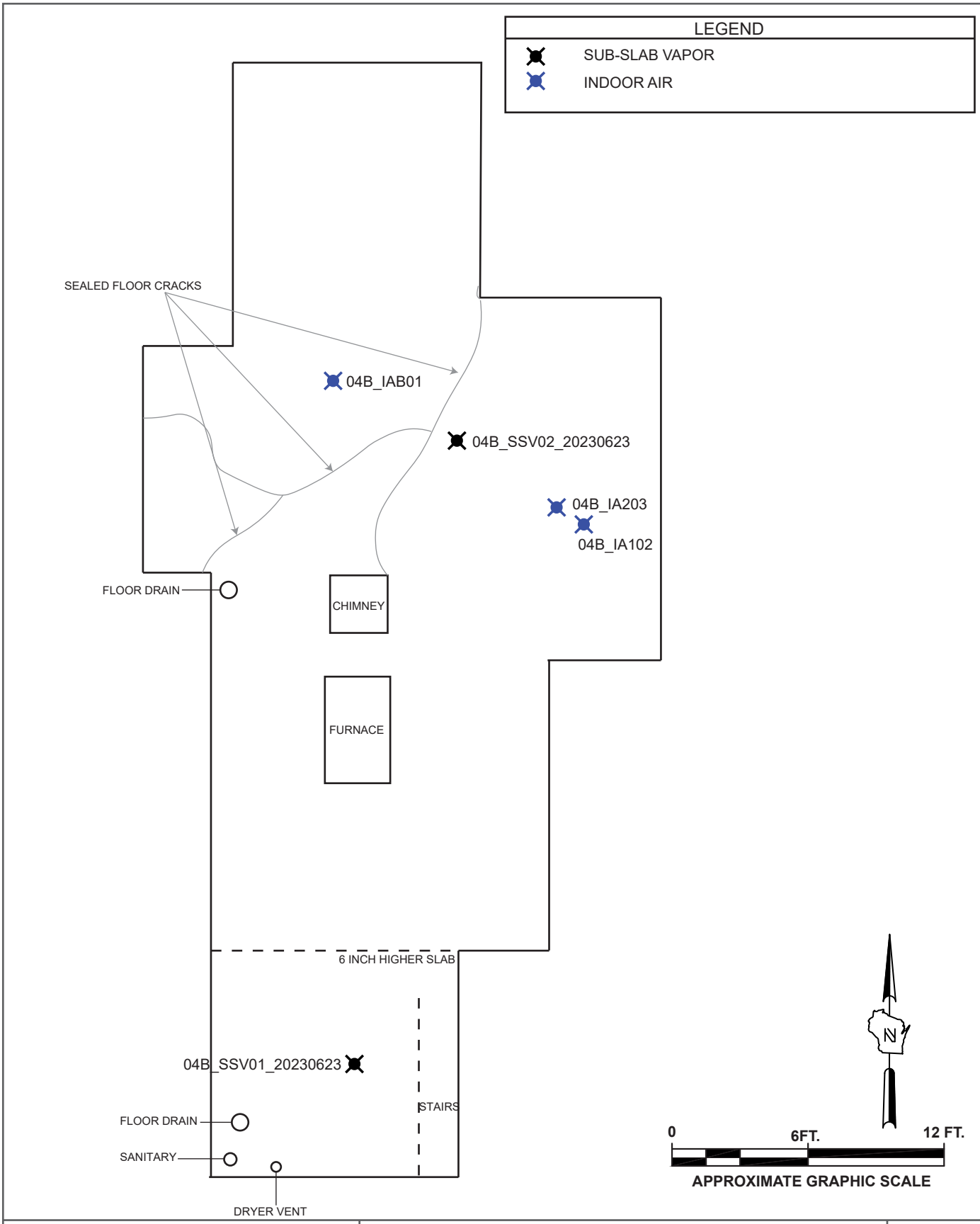
THE SIGMA GROUP
Single Source. Sound Solutions.

106 E. CHURCH STREET SAMPLE LOCATION MAP

OAKFIELD PROPERTIES DNR BRRTS #02-20-202459
201 N. MAIN, STREET, OAKFIELD, WISCONSIN

FIGURE
2

FILE PATH: 21801 - Oakfield VIZC\090 Reports\VI Investigation Report\Figures\Figure 2 Sample Location Map



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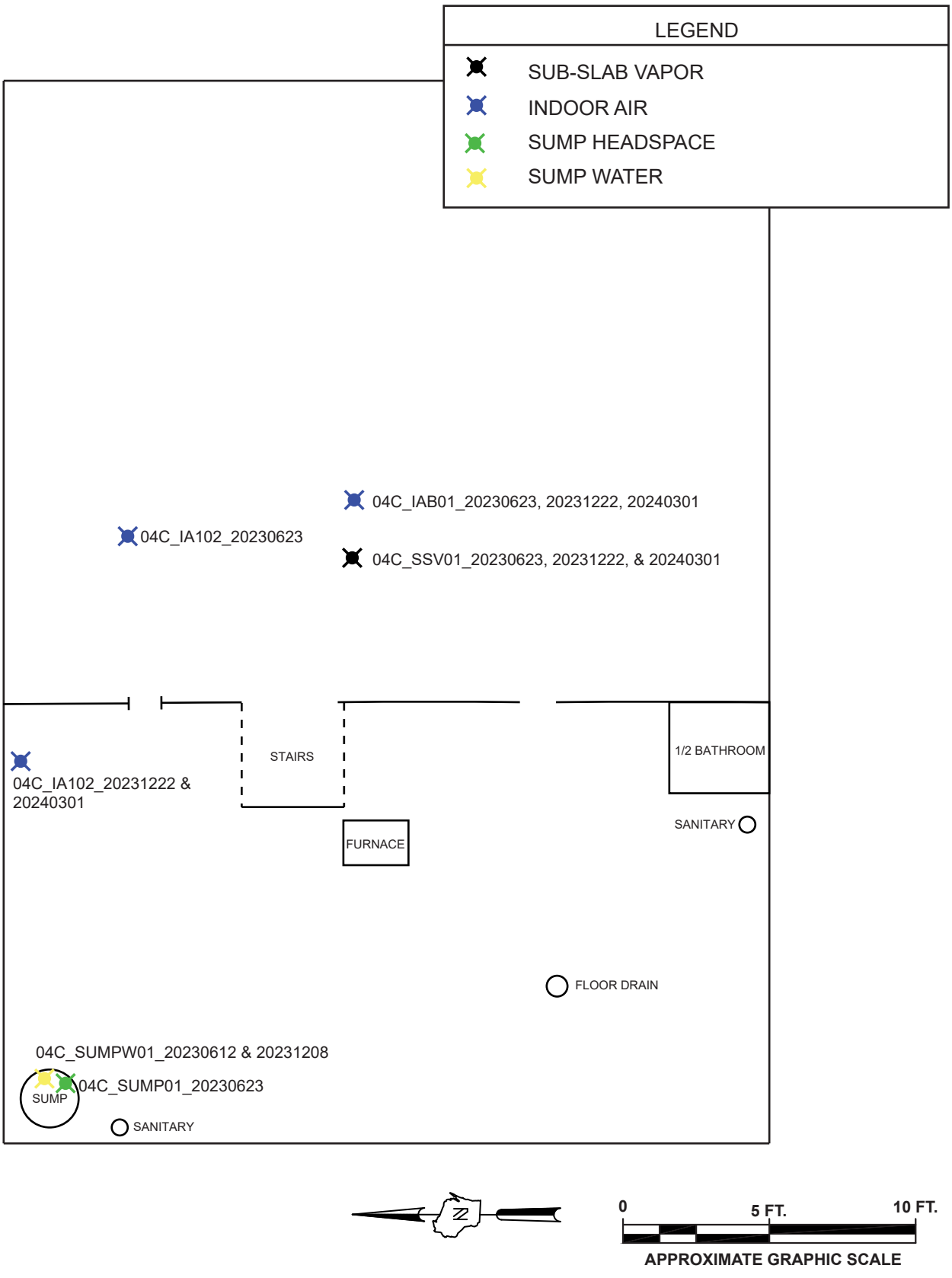
THE SIGMA GROUP
Single Source. Sound Solutions.

116 E. CHURCH STREET SAMPLE LOCATION MAP

OAKFIELD PROPERTIES DNR BRRTS #02-20-202459
201 N. MAIN STREET, OAKFIELD, WISCONSIN

FIGURE
3

FILE PATH: I:\Wisconsin Dept of Natural Resources\21801 - Oakfield VIZC\060 CAD\200_Environmental



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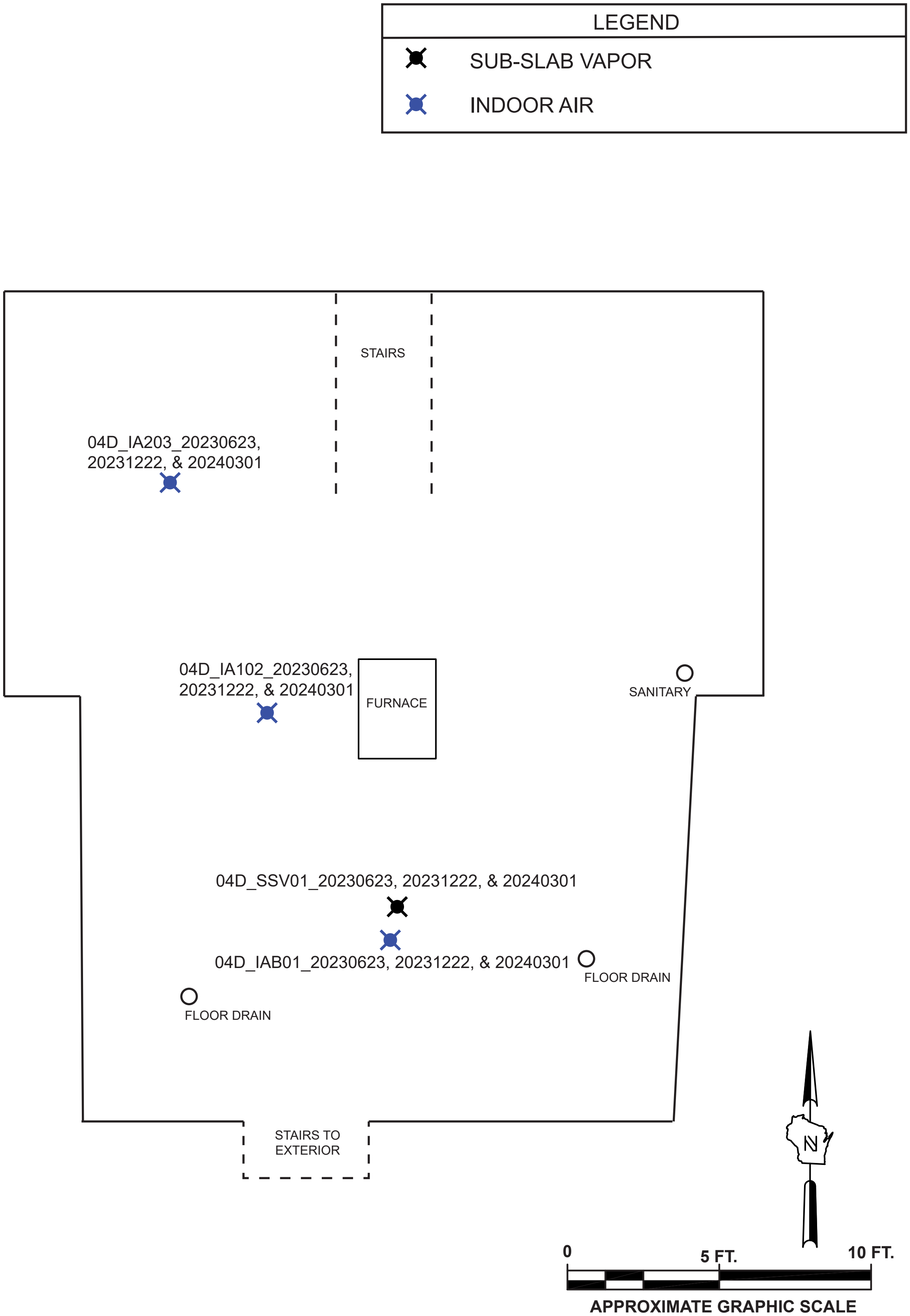
THE SIGMA GROUP
Single Source. Sound Solutions.

206 E. CHURCH STREET SAMPLE LOCATION MAP

OAKFIELD PROPERTIES DNR BRRTS #02-20-202459
201 N. MAIN STREET, OAKFIELD, WISCONSIN

FIGURE
4

FILE PATH: 21801 - Oakfield VIZC\090 Reports\VI Investigation Report\Figures\Figure 4 Sample Location Map



THE SIGMA GROUP
Single Source. Sound Solutions.

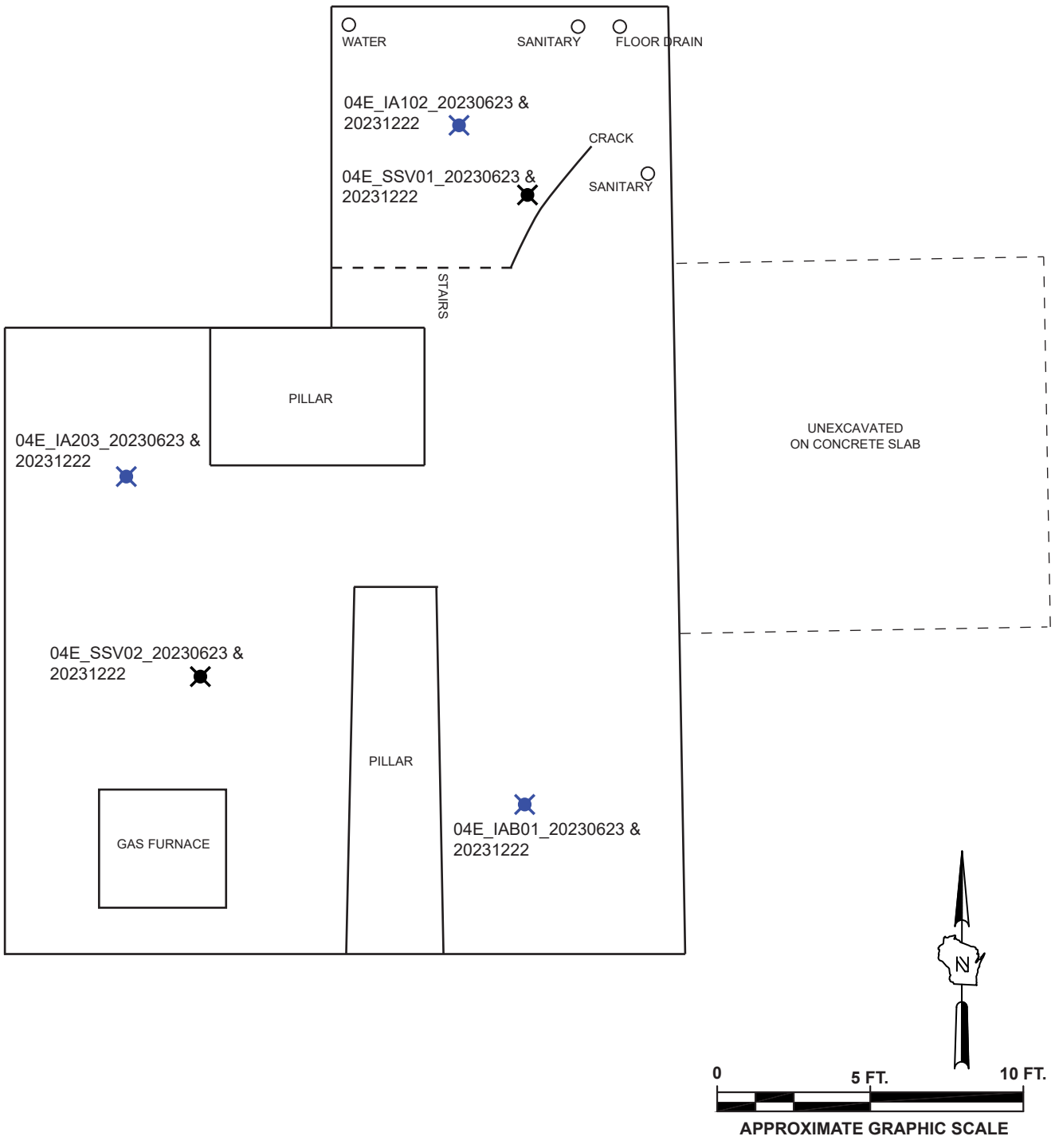
213 N. MAIN STREET SAMPLE LOCATION MAP

OAKFIELD PROPERTIES DNR BRRTS #02-20-202459
201 N. MAIN STREET, OAKFIELD, WISCONSIN

FIGURE
5

PROJECT: 21801 | FILE FOLDER: 060 CAD - 200_Env | FILENAME: 21801_Master Map_vertical 11x17.ai | CREATED BY: CLE | DATE: 07/10/2023 | MODIFIED BY: CLE | DATE: 04/10/2024

FILE PATH: 21801 - Oakfield VIZC\090 Reports\VI Investigation Report\Figures\Figure 5 Sample Location Map



PROJECT: 21801 | FILE FOLDER: 060 CAD - 200_Env | FILENAME: 21801_Master Map_vertical 11x17.ai | CREATED BY: CLE | DATE: 07/10/2023 | MODIFIED BY: CLE | DATE: 04/10/2024

THE SIGMA GROUP
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185 N. FIRST STREET SAMPLE LOCATION MAP

OAKFIELD PROPERTIES DNR BRRTS #02-20-202459
201 N. MAIN STREET, OAKFIELD, WISCONSIN

FIGURE
6

FILE PATH: 21801 - Oakfield VIZC\090 Reports\VI Investigation Report\Figures\Figure 6 Sample Location Map

Appendix A

Building Checklist Forms

106 E. Church Street

Building Checklist

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Stephen Meer	1300 W. Canal St., Milwauk	The Sigma Group, Inc	4146434124	smeer@thesigmagroup.com	NA	NA
Building Owner	Billy Livingston	W12599 Sunny Knoll Rd., Brandon, WI 53919		9209047739		Yes	05/23/23
Building Contact							
Occupant	Mark Haasch	106 E. Church Street, Oakfi	tenant	9206020071		Yes	05/22/23
Occupant							

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
106 E. Church St.	Occupied	2		rebuilt in 2002	No		720	Residential Single Family	2	Wood Frame	Public	Public	10	

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Basement - partial	Concrete	6	None	Unknown			Uniform	Dry	Block hollow	No	No	Yes - Seale	Unknown	InteriorDrain	Sanitary Sewer	No	No	Yes	1	1	Plastic	sump appears to serve interior drain tile, floor drain, clothes washer, other? Return duct to furnace runs through block wall to below floor of unexcavated portion of area below first floor (NE portion of house), board used to form part of concrete floor slab still in place

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy	No	Concrete				No	7.50	0.00	Good		Not energy efficient			
First	Occupied	Yes	Carpet				No	8.00	1.00	Good		Not energy efficient	Yes		
2nd	Occupied	Yes	NA						0.00			Not energy efficient	Yes		

Feature	Observed	Comment
Ditching		
Drain Tiles		
Dry Well		
Sanitary Sewers		
Storm Sewers		
Trenches		
Tunnels		
Other		

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	No	No	No	No		occupants are smokers

116 E. Church Street

Building Checklist

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Stephen Meer	1300 W. Canal St., Milwauk	The Sigma Group, Inc	4146434124	smeer@thesigmagroup.com	NA	NA
Building Owner	William F. Schaefer	116 E. Church St., Oakfield,	owner	9209791354		Yes	05/19/23
Building Contact	William F. Schaefer	116 E. Church St., Oakfield,	owner	9209791354		Yes	05/19/23
Occupant	William F. Schaefer	116 E. Church St., Oakfield,	owner	9209791354		Yes	05/19/23
Occupant							

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
116 E. Church St., Oakfield, W	Occupied	1		more than 100 y	No		731	Residential Single Family	2	Wood Frame	Public	Public	15	

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Basement - full	Concrete	4.5-5	None	None			Uniform	Dry	Field Stone	No	No	No				No	No	No	2	1	Plastic	occupant reports that a portion of the basement slab was removed and replaced during installation of a new sanitary lateral in the past year

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy	No	Concrete				No	7.00	0.00			Not energy efficient			
First	Occupied	Yes	Vinyl				No	9.00	1.00	Good		Not energy efficient	Yes		
2nd	Occupied	Yes	NA				No					Not energy efficient	Yes		

Feature	Observed	Comment
Ditching		
Drain Tiles		
Dry Well		
Sanitary Sewers		
Storm Sewers		
Trenches		
Tunnels		
Other		

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	No	No	No	No		

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure?	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Forced Air Furnace	1	Natural Gas	B	Central Air	B		No	1					Yes	No			1 bathroom vent, dryer is vented to basement, gas water heater

206 E. Church Street

Building Checklist

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Stephen Meer	1300 W. Canal St., Milwauk	The Sigma Group, Inc	4146434124	smeer@thesigmagroup.com	NA	NA
Building Owner	Chris Feavel	206 E. Church St., Oakfield, WI 53065		9205833160	ckajfeavel@charter.net	Yes	05/19/23
Building Contact	Chris Feavel	206 E. Church St., Oakfield, WI 53065		9205833160	ckajfeavel@charter.net	Yes	05/19/23
Occupant	Chris Feavel	206 E. Church St., Oakfield, WI 53065		9205833160	ckajfeavel@charter.net	Yes	05/19/23
Occupant	Kerri Feavel	206 E. Church St., Oakfield, WI 53065		9205833160	ckajfeavel@charter.net	No	

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
206 E. Church St., Oakfield, W	Occupied	3	F	1967	No		952	Residential Single Family	1	Wood Frame	Public	Public	25	

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?
Basement - full	Concrete	5	None

Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Unknown			Uniform	Dry	Block hollow	No	No	Yes - Concı	Yes	InteriorDrain	Ground Surface	No	No	No	1	2	Cast Iron	plumbing stack is a mix of CI and PVC, sump does not dishcarge during winter, occupant indicates water infiltrates through cracks in side of sump (roots visible), pipe running into sump does not appear to be drain tile (1.5 inch diameter)

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy	No	Vinyl				No	7'4"	0.50	Good		Not energy efficient			
First	Occupied	Yes	Carpet				No	8'	1.00	Good		Not energy efficient	Yes		
2nd			NA												

Feature	Observed	Comment
Ditching		
Drain Tiles		
Dry Well		
Sanitary Sewers		
Storm Sewers		
Trenches		
Tunnels		
Other		

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	No	No	Yes	No		paints, various cleaners sealed and stored on shelf in basement

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure?	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Forced Air Furnace	1	Natural Gas	B	Central Air	O		No		0				No	Yes	No	No	

213 N. Main Street

Building Checklist

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Stephen Meer	1300 W. Canal St., Milwauk	The Sigma Group, Inc	4146434124	smeer@thesigmagroup.com	NA	NA
Building Owner	Timothy Gallitz	213 N. Main St., Oakfield, WI 53065		9205174281	tmgallitz@hotmail.com	Yes	05/19/23
Building Contact	Mary Gallitz	213 N. Main St., Oakfield, WI 53065		9205174281	tmgallitz@hotmail.com	No	
Occupant	Timothy Gallitz	213 N. Main St., Oakfield, WI 53065		9205174281	tmgallitz@hotmail.com	Yes	05/19/23
Occupant	Mary Gallitz	213 N. Main St., Oakfield, WI 53065		9205174281	tmgallitz@hotmail.com	No	

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
213 N. Main St., Oakfield, WI	Occupied	2		1880	No		610	Residential Single Family	2	Wood Frame	Public	Public	15	

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?	Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
Basement - full	Concrete	4.5	None	None			Poor(cracking, settlement)	Damp	Field Stone	Yes	No	No				No	No	No	2	1	Plastic	holes present in floor/walls at select locations, water enters during heavy rains acccording to occupant

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy	No	Concrete				No	6.50	0.00	Deficient		Not energy efficient			
First	Occupied	Yes	Vinyl				No	7.50	1.00	Unknown		Not energy efficient	Yes		occupant states house is very drafty
2nd	Occupied	Yes	NA				No		1.00	Unknown		Not energy efficient	Yes		

Feature	Observed	Comment
Ditching		
Drain Tiles		
Dry Well		
Sanitary Sewers		
Storm Sewers		
Trenches		
Tunnels		
Other		

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	No	No	No	No		kersosene heater and kerosene can in basement

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure?	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Forced Air Furnace	1	Natural Gas	B	Central Air	B		No	2					No	Yes	No	No	vent fans are limited to bathroom vent fans, occupant states house is very drafty

185 N. First Street

Building Checklist

Entity	Name	Address	Affiliation	Phone #	Email	Inteviewed?	Date Interviewed
Preparer	Stephen Meer	1300 W. Canal St., Milwauk	The Sigma Group, Inc	4146434124	smeer@thesigmagroup.com	NA	NA
Building Owner	Peter Haen	185 N. First St., Oakfield, WI 53065		9205790744	petehaen@gmail.com	Yes	05/19/23
Building Contact	Peter Haen	185 N. First St., Oakfield, WI 53065		9205790744	petehaen@gmail.com	Yes	05/19/23
Occupant	Peter Haen	185 N. First St., Oakfield, WI 53065		9205790744	petehaen@gmail.com	Yes	05/19/23
Occupant	Deanna Haen	185 N. First St., Oakfield, WI 53065		9205790744		No	

Address	Occupancy	Number of Occupants	Sensitive Demographics	Initial Year Constructed	Contaminant Source Property?	Zoning-Local Designation	Footprint (sq ft)	Primary Use of Building	# Floors Above Grade	Construction Materials	Water Supply Type	Sewage Disposal Method	Surrounding Ground Cover	General Building Comments
185 N. First St., Oakfield, WI 5	Occupied	2		1925	No		572	Residential Single Family	2	Wood Frame	Public	Public	30	

Foundation Type	Foundation Material	Basement Depth?	Vapor Mitigation System (VMS) Present?	Vapor Barrier Present?	Sub-grade Material?
Basement - full	Concrete	4	None	Unknown	

Foundation Thickness	Foundation Condition	Foundation Wetness	Foundation Wall Material	Foundation Floor or wall joints, gaps or other holes?	Concrete sealed?	Sump Present?	Sump Water Present?	Sump Serves?	Sump Discharge Location?	Elevator Pit (s) Present?	Visible Gaps around Utility Penetrations?	Sub-Foundation ductwork, chases or oversize conduits?	Floor Drains? (number)	Cleanouts? (number)	Plumbing Vent Stack Materials	Foundation Comments
	Moderate(some cracking)	Dry	Field Stone	Yes	No	No				No	No	No	1	2	Plastic	foundation walls are mix of block and field stone, clothes washer and furnace discharge to floor drain, new sanitary lateral recenty installed, spots on east foundation wall sealed with flex seal pain - leaks during heavy rain, sizeable crack present in northern portion of basement floor

Floor	Occupancy	Bedrooms?	Floor Covering/type?	If Multifamily Residential # Units	If Commercial - Primary Use?	If Commercial Enclosed Offices?	Overhead Doors?	Ceiling Height	Bathrooms? (number)	Condition of P Traps?	Window Area? (sq. ft.)	Window Condition?	Windows Openable?	Electrical Outlets Weatherized?	Comments - Floor
Basement	Low Frequency Occupancy	No	Concrete				No	5.50	0.00			Not energy efficient	Yes		
First	Occupied	Yes	Other				No	8.00	1.00	Good		Not energy efficient	Yes		
2nd	Occupied	Yes					No	8.00	0.00			Not energy efficient	Yes		

Feature	Observed	Comment
Ditching	No	
Drain Tiles	No	
Dry Well	No	
Sanitary Sewers	No	
Storm Sewers	No	
Trenches	No	
Tunnels	No	
Other		

COC Currently Used in Building?	Historical Solvent Use in Building?	Occupant Use COC at Another Location?	COC Source Nearby?	Remodelling Within 6 months?	Attached Garage?	History of Fire?	COC Removed Prior to Sampling?	Comments - Potential Vapor Sources
No	No	No	No	No	No	No		paints, PVC solvent and cement, various cleaners sealed in shelf in basement

Primary Heating System Type	Number of HVAC Zones?	Heating Fuel Source	Location of heating unit	Primary Cooling System Type	Location of cooling unit?	HVAC Use Outside Replacement Air?	Building Designed to Maintain Positive Pressure?	Number of Ventilation Fans	Total Capacity of Ventilation Fans	AER (if known)	Energy Audit?	ELA (if known)	Vented Hot Water Heater?	Vented Clothes Dryer?	Vented Fireplace?	Whole House Fan?	Comments - HVAC
Forced Air Furnace	1	Natural Gas	B	Window Air	1st		No		1				No	Yes	No	No	bathroom vent fan present

Appendix B

Pre-Sampling Site Visit Photographs

206 E. Church Street Pre-Sampling Photo Log

Photo 1: North side of residential home. View to the southeast; photograph taken on May 19, 2023.

Photo 2: South side of residential home. View to the northwest; photograph taken on May 19, 2023.

206 E. Church Street Pre-Sampling Photo Log

Photo 1: Basement sump within northeast corner of basement. Photograph taken on May 19, 2023.

Photo 2: Floor drain within east portion of the basement. Photograph taken on May 19, 2023.

206 E. Church Street Pre-Sampling Photo Log

Photo 3: Chemical storage within the basement. Photograph taken on May 19, 2023.

185 N. First Street Pre-Sampling Photo Log

Photo 1: West side of residential home. View to the southeast; photograph taken on May 19, 2023.

Photo 2: East side of residential home. View to the northwest; photograph taken on May 19, 2023.

185 N. First Street Pre-Sampling Photo Log

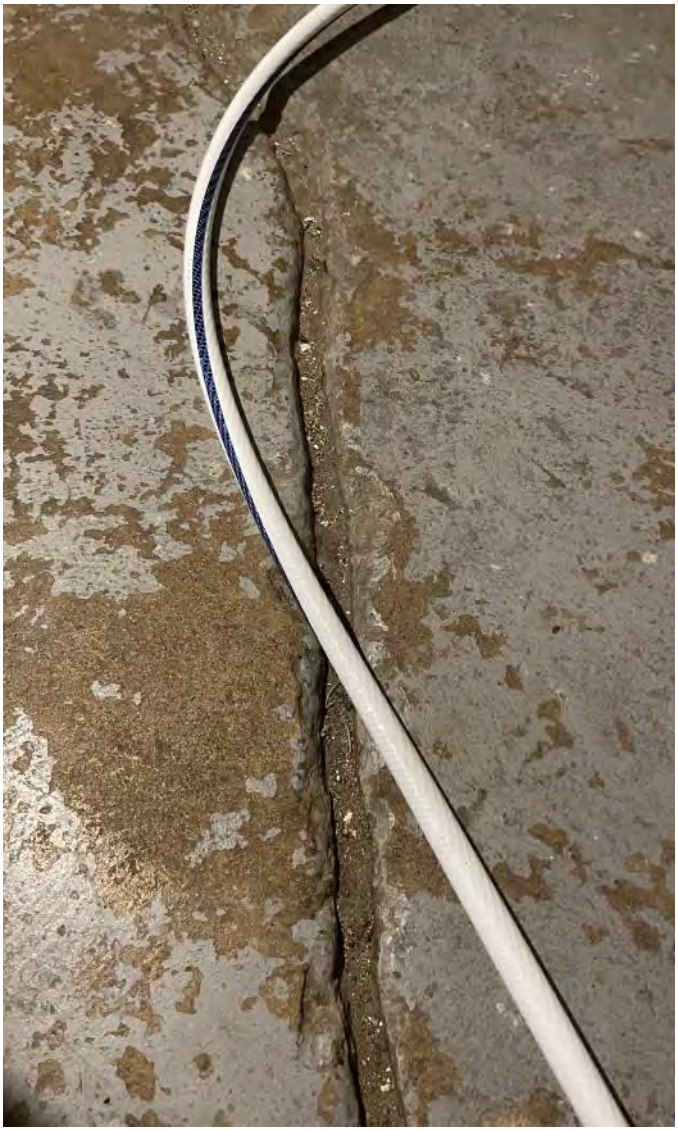

Photo 1: Crack within the basement floor located to the north of the staircase. Photograph taken on May 19, 2023.

Photo 2: Floor drain located within the basement. Photograph taken on May 19, 2023.

185 N. First Street Pre-Sampling Photo Log

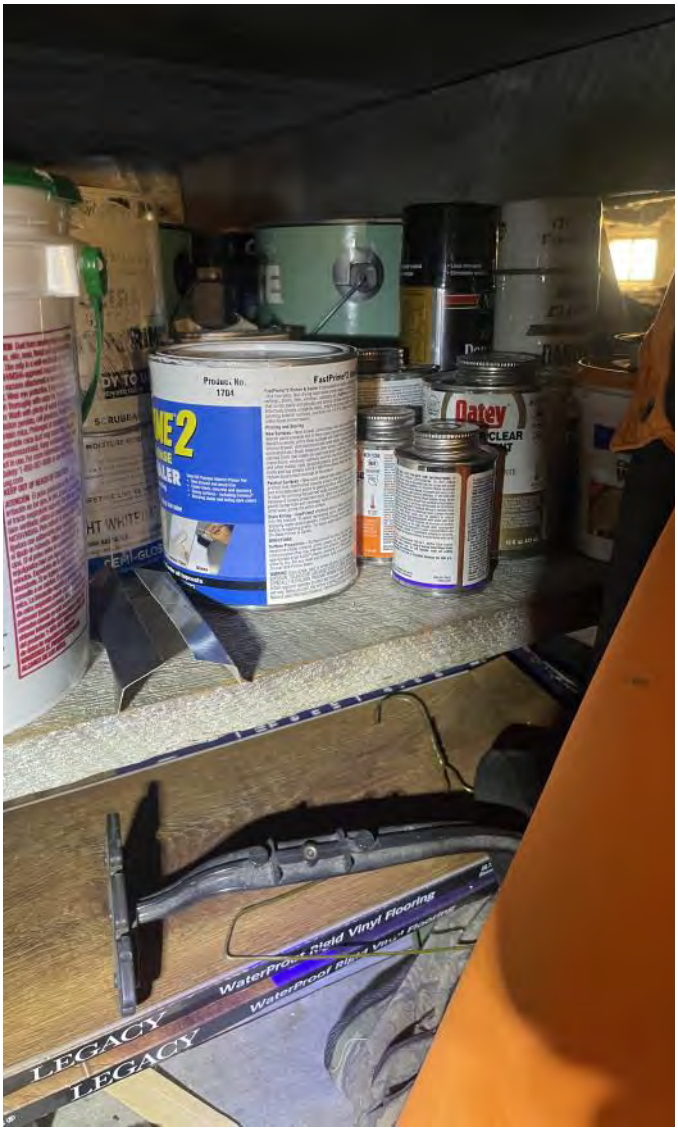

Photo 3: Chemical storage within the basement. Photograph taken on May 19, 2023.

Photo 4: Stone basement walls. Photograph taken on May 19, 2023.

213 N. Main Street Pre-Sampling Photo Log

Photo 1: West side of residential home. View to the southeast; photograph taken on May 19, 2023.

Photo 2: South side of residential home. View to the east; photograph taken on May 19, 2023.

213 N. Main Street Pre-Sampling Photo Log

Photo 3: Stone wall with basement. Photograph taken on May 19, 2023.

Photo 4: Wooden beams within basement of home. Photograph taken on May 19, 2023.

213 N. Main Street Pre-Sampling Photo Log

Photo 1: Hole in floor within the basement. Photograph taken on May 19, 2023.

Photo 2: Floor drain within basement. Photograph taken on May 19, 2023.

213 N. Main Street Pre-Sampling Photo Log

Photo 3: Crack in the floor within the basement. Photograph taken on May 19, 2023.

Photo 4: Location of former chimney on the first floor. Photograph taken on May 19, 2023.

116 E. Church Street Pre-Sampling Photo Log

Photo 1: East side of home. View to the west; photograph taken on May 19, 2023.

Photo 2: West side of home. View to the southeast; photograph taken on May 19, 2023.

116 E. Church Street Pre-Sampling Photo Log

Photo 3: Stone wall located on the north portion of the home. Photograph taken on May 19, 2023.

116 E. Church Street Pre-Sampling Photo Log

Photo 1: One floor drain located within the west side of the basement. Photograph taken on May 19, 223.

Photo 2: Brick column located within the central portion of the basement. Photograph taken on May 19, 2023.

116 E. Church Street Pre-Sampling Photo Log

Photo 3: Floor drain located on the south side of the basement. Photograph taken on May 19, 2023.

Photo 4: Elevated portion of the basement floor located on the south side of the basement. Photograph taken on May 19, 2023.

206 E. Church Street Pre-Sampling Photo Log

Photo 1: West side of home. View to the east; photograph taken on May 22, 2023.

Photo 2: North side of home. Photograph taken on May 22, 2023.

206 E. Church Street Pre-Sampling Photo Log

Photo 3: HVAC supply duct entering the crawlspace. Photograph taken on May 22, 2023.

Photo 4: Block wall within the basement with the crawlspace on the other side. Holes were observed within the block wall. Photograph taken on May 22, 2023.

106 E. Church Street Pre-Sampling Photo Log

Photo 1: Basement sump with sealed cover located within the east side of the basement. Photograph taken on May 22,

Photo 2: Perimeter joint around the exterior walls of the basement. Photograph taken on May 22, 2023.

106 E. Church Street Pre-Sampling Photo Log

Photo 3: Floor drain located on the east side of the basement. Photograph taken on May 22, 2023.

Photo 4: Perimeter joint around the exterior walls of the basement. Photograph taken on May 22, 2023.

106 E. Church Street Pre-Sampling Photo Log

Photo 5: Wooden forms left in place when the basement floor was poured. Photograph taken on May 22, 2023.

Appendix C

Sub-Slab Vapor Sampling Field Sheets

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel CLE/RJA

Project Location 106 E. Church Street, Oakfield, WI

Notes in Field Book #

Address City State

Date of Service:	6/12/2023	Temperature:	65 F	☑ Sunny	☐ Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.15 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	2:00	Wind (speed/direction):	WNW 10 mph	☐ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	2.5									
Subslab Material	S&G									
Surface Seal Test/Results*	---									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	0.3									
Purge Time (minutes)	3									
Test Start Date/Time	6/12/23 11:30									
Initial Can Pressure	---									
Test End Date/Time	6/23/23 10:50									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

SSV01 was installed within center of basement

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 116 E. Church Street, Oakfield, WI

Notes in Field Book #:

Address | City | State

Date of Service: 6/9/2023

Temperature: 80 F

☑ Sunny ☐ Cloudy

Arrival Time: 8:45

Barometric Pressure: 29.89 "Hg

☐ Partly Sunny ☐ Rain

Departure Time: 2:00

Wind (speed/direction): WNW 8 mph

☐ Overcast ☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01	**SSV02**								
Can/Sampler ID	---	---								
Slab Thickness (in.)	2.5	2.5								
Subslab Material	S&G	S&G								
Surface Seal Test/Results*	---	---								
Micromanometer Reading	---	---								
Shut-In Test Results*	---	---								
PID Readings (prior to sampling)	0	0.2								
Purge Time (minutes)	3	3								
Test Start Date/Time	6/9/23 11:00	6/9/23 11:20								
Initial Can Pressure	---	---								
Test End Date/Time	6/23/23 10:10	6/23/23 10:07								
Final Can Pressure	---	---								
Duplicate Sample Location	---	---								

Comments:

SSV01 was installed on the elevated slab

SSV02 was installed in the north portion of the basement

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 185 N. First Street, Oakfield, WI

Notes in Field Book #:

Address | City | State

Date of Service:	6/12/2023	Temperature:	72 F	☑ Sunny	☐ Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.15 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	2:30	Wind (speed/direction):	WNW 10 mph	☐ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01	**SSV02**								
Can/Sampler ID	---	---								
Slab Thickness (in.)	3.5	3.5								
Subslab Material	S&G	S&G								
Surface Seal Test/Results*	---	---								
Micromanometer Reading	---	---								
Shut-In Test Results*	---	---								
PID Readings (prior to sampling)	0.3	0.3								
Purge Time (minutes)	3	3								
Test Start Date/Time	6/12/23 9:40	6/12/23 9:50								
Initial Can Pressure	---	---								
Test End Date/Time	6/23/23 9:33	6/23/23 9:37								
Final Can Pressure	---	---								
Duplicate Sample Location	---	---								

Comments:

SSV01 was installed near the floor crack

SSV02 was installed on the south side of the basement near the furnace and pilar

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel CLE

Project Location 185 N. First Street, Oakfield, WI

Notes in Field Book #

Address City State

Date of Service:	12/8/2023	Temperature:	55 F	☐ Sunny	☐ Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01	**SSV02**								
Can/Sampler ID	---	---								
Slab Thickness (in.)	3.5	3.5								
Subslab Material	S&G	S&G								
Surface Seal Test/Results*	--	---								
Micromanometer Reading	---	----								
Shut-In Test Results*	---	---								
PID Readings (prior to sampling)	0.3	0.3								
Purge Time (minutes)	3	3								
Test Start Date/Time	12/8/23 9:30	12/8/23 9:35								
Initial Can Pressure	---	---								
Test End Date/Time	12/22/23 11:05	12/22/23 10:48								
Final Can Pressure	---	---								
Duplicate Sample Location	---	---								

Comments:

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel CLE

Project Location 206 E. Church Street, Oakfield, WI

Notes in Field Book #

Address City State

Date of Service:	2/16/2024	Temperature:	21 F	☐ Sunny	☐ Cloudy
Arrival Time:	8:35	Barometric Pressure:	30.22 "Hg	☑ Partly Sunny	☐ Rain
Departure Time:	12:30	Wind (speed/direction):	NW 8 mph	☐ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	3.5									
Subslab Material	S&G									
Surface Seal Test/Results*	--									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	---									
Purge Time (minutes)	---									
Test Start Date/Time	2/16/24 10:02									
Initial Can Pressure	---									
Test End Date/Time	3/1/24 9:28									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel CLE

Project Location 206 E. Church Street, Oakfield, WI

Notes in Field Book #

Address City State

Date of Service:	12/8/2023	Temperature:	55 F	☐ Sunny	☐ Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	3.5									
Subslab Material	S&G									
Surface Seal Test/Results*	--									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	0.3									
Purge Time (minutes)	3									
Test Start Date/Time	12/8/23 8:25									
Initial Can Pressure	---									
Test End Date/Time	12/22/23 9:48									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 206 E. Church Street, Oakfield, WI

Notes in Field Book #:

Address | City | State

Date of Service:	6/12/2023	Temperature:	70 F	☑ Sunny	☐ Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.15 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	2:30	Wind (speed/direction):	WNW 10 mph	☐ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	3.5									
Subslab Material	G									
Surface Seal Test/Results*	---									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	0.1									
Purge Time (minutes)	3									
Test Start Date/Time	6/12/23 12:50									
Initial Can Pressure	---									
Test End Date/Time	6/23/23 9:10									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

SSV01 was installed to the east of the staircase

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel CLE

Project Location 213 N Main Street, Oakfield, WI

Notes in Field Book #

Address City State

Date of Service:	2/16/2024	Temperature:	21 F	☐ Sunny	☐ Cloudy
Arrival Time:	8:35	Barometric Pressure:	30.22 "Hg	☑ Partly Sunny	☐ Rain
Departure Time:	12:30	Wind (speed/direction):	NW 8 mph	☐ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	2.5									
Subslab Material	S&G									
Surface Seal Test/Results*	--									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	---									
Purge Time (minutes)	---									
Test Start Date/Time	2/16/24 11:28									
Initial Can Pressure	---									
Test End Date/Time	3/1/24 9:05									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR | Phase / Task

Project Name Oakfield Properties | Personnel CLE

Project Location 213 N. Main Street, Oakfield, WI | Notes in Field Book #

Address | City | State

Date of Service:	12/8/2023	Temperature:	55 F	☐ Sunny	☐ Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	2.5									
Subslab Material	S&G									
Surface Seal Test/Results*	--									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	0.2									
Purge Time (minutes)	3									
Test Start Date/Time	12/8/23 10:15									
Initial Can Pressure	---									
Test End Date/Time	12/22/23 11:55									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

***Refer to Sigma SOP 22**

SUB-SLAB VAPOR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 213 N. Main Street, Oakfield, WI

Notes in Field Book #:

Address | City | State

Date of Service:	6/9/2023	Temperature:	80 F	☑ Sunny	☐ Cloudy
Arrival Time:	8:45	Barometric Pressure:	29.89 "Hg	☐ Partly Sunny	☐ Rain
Departure Time:	2:00	Wind (speed/direction):	WNW 8 mph	☐ Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) previously collected ☑

Occupant Demographics and Material Storage: previously collected

Attach Scaled Map with Sample Locations (Mandatory) attached ☑

Sub-Slab Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon PSG

	Sample Point IDs									
	SSV01									
Can/Sampler ID	---									
Slab Thickness (in.)	2.5									
Subslab Material	S&G									
Surface Seal Test/Results*	---									
Micromanometer Reading	---									
Shut-In Test Results*	---									
PID Readings (prior to sampling)	0.2									
Purge Time (minutes)	3									
Test Start Date/Time	6/9/23 9:40									
Initial Can Pressure	---									
Test End Date/Time	6/23/23 11:10									
Final Can Pressure	---									
Duplicate Sample Location	---									

Comments:

SSV01 was installed south of the furnace

***Refer to Sigma SOP 22**

Appendix D

Sub-Slab Sample Installation Photo Log

106 E. Church Street Sub-Slab Sample Photo Log

Photo 1: 1 1/2” diameter hole drilled through the concrete floor slab and the 5/8” diameter hole drilling approximately 4 to 6” into the base material. Photograph taken on June 12, 2023.

Photo 2: Installation of aluminum pipe into the drilled hole. Installation of passive sampler within the aluminum pipe. Photograph taken on June 12, 2023.

106 E. Church Street Sub-Slab Sample Photo Log

Photo 3: Aluminum foil cap installed on top of the passive sampler with retrieval wire present outside of the hole. Photograph taken on June 12, 2023.

Photo 4: Temporary cement seal installed over the sample point. Photograph taken on June 12, 2023.

116 E. Church Street Sub-Slab Sample Photo Log

Photo 1: 1 1/2” diameter hole drilled through the concrete floor slab. Photograph taken on June 9, 2023.

Photo 2: 5/8” diameter hole drilled approximately 4 to 6” into the base material. Photograph taken on June 9, 2023.

116 E. Church Street Sub-Slab Sample Photo Log

Photo 3: T-fitting installed on a shop vacuum used during drilling. Photograph taken on June 9, 2023.

Photo 4: Temporary cement seal installed over sampling point with retrieval wire present out side of the hole. Photograph taken on June 9, 2023.

206 E. Church Street Sub-Slab Sample Photo Log

Photo 1: 1 1/2” diameter hole drilled through the concrete floor slab. Photograph taken on June 12, 2023.

Photo 2: Installation of aluminum pipe into the drilling hole. Installation of passive sampler within the aluminum pipe. Photograph taken on June 12, 2023.

206 E. Church Street Sub-Slab Sample Photo Log

Photo 3: Aluminum foil cap installed on top of the passive sampler with retrieval wire present out side of the hole. Photograph taken on June 12, 2023.

Photo 4: Temporary cement seal installed over the sample point. Photograph taken on June 12, 2023.

206 E. Church Street Sub-Slab Sample Photo Log

Photo 5: Abandoned sub-slab sample point on April 19, 2024.

213 N. Main Street Sub-Slab Sample Photo Log

Photo 1: Drilling 1 1/2” diameter hole through the concrete floor slab using a hammer drill and a t-fitting installed on to the shop vacuum. Photograph taken on June 9, 2023.

Photo 2: Aluminum foil cap installed on top of the passive sampler with retrieval wire present out side of the hole. Photograph taken on June 9, 2023.

213 N. Main Street Sub-Slab Sample Photo Log

Photo 3: Temporary cement seal installed over the sample point. Photograph taken on June 9, 2023.

Photo 4: Sub-slab sample point abandoned on April 22, 2024.

185 N. First Street Sub-Slab Sample Photo Log

Photo 1: 1/5” diameter hole drilled through the concrete floor slab and the 5/8” diameter hole drilled approximately 4 to 6 inches into the base material. Location near floor crack. Photograph taken on June 12, 2023.

Photo 2: 1/5” diameter hole drilled through the concrete floor slab and the 5/8” diameter hole drilled approximately 4 to 6 inches into the base material. Location on the west side of the basement. Photograph taken on June 12, 2023.

185 N. First Street Sub-Slab Sample Photo Log

Photo 3: Aluminum foil cap installed on top of the passive Sampler near the floor crack with retrieval wire present outside of the hole. Photograph taken on June 12, 2023.

Photo 4: Temporary cement seal installed over the sample point located near the floor crack. Photograph taken on June 12, 2023.

185 N. First Street Sub-Slab Sample Photo Log

Photo 5: Aluminum foil cap installed on top of the passive Sampler on the west side of the basement with retrieval wire present outside of the hole. Photograph taken on June 12, 2023.

Photo 6: Temporary cement seal installed over the sample point located on the west side of the basement. Photograph taken on June 12, 2023.

185 N. First Street Sub-Slab Sample Photo Log

Photo 7: Abandonment of sample point on west side of basement. Photograph taken on February 16, 2024.

Photo 8: Abandonment of sample point near the floor crack. Photograph taken on February 16, 2024.

Appendix E

Indoor Air Sampling Field Sheet

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR
Phase / Task:
Project Name: Oakfield Properties
Personnel: CLE/RJA
Project Location: 106 E. Church Street, Oakfield
Notes in Field Book #:
Address / City / State

Date of Service:	6/12/2023	Outdoor Temperature:	65F	☑	Sunny	☐ Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.15 "Hg	☐		☐ Rain
Departure Time:	2:30	Wind (speed/direction):	WNW 10 mph	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04A_IAB_01	**04A_IA1_02**	**04A_SUMP01**							Outdoor Control (Ambient Air)
Can/Sampler ID	1181278	1179481	1181000							1183660
Indoor Temp (F)/Humidity(%):	68F 39%	68F 39%	68F 39%							80 F
Location In Room	basement	1st floor bed	basement							light pole on Main
Sample Intake Height (above floor):	5'	5'								5'
Test Start Date/Time	6/12/23 11:55	6/12/23 12:00	6/12/23 11:45							6/9/23 9:00
Initial Can Pressure	---	---	---							---
Test End Date/Time	6/23/23 10:33	6/23/23 10:35	6/23/23 10:40							6/23/23 12:00
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE

Project Location: 106 E. Church Street, Oakfield (Address / City / State)

Notes in Field Book #:

Date of Service:	8/25/2023	Outdoor Temperature:	75F	☐	Sunny	☐ Cloudy
Arrival Time:	8:45	Barometric Pressure:	29.95 "Hg	☐		☐ Rain
Departure Time:	11:00	Wind (speed/direction):	3 mph NE	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04A_IAB_01	**04A_IA1_02**	**04A_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	**1179392**	**1181000**	1141717							1066573
Indoor Temp (F)/Humidity(%):	**75F / 55%**	**75F / 55%**	**75F / 55%**							75F/58%
Location In Room	basement	1st floor bed	2nd floor bed							stop sign
Sample Intake Height (above floor):	5'	4'	4'							5'
Test Start Date/Time	8/25/2023 10:36	8/25/2023 10:42	8/25/2023 10:39							8/25/2023 9:50
Initial Can Pressure	---	---	---							'---
Test End Date/Time	9/17/2023 9:17	9/17/2023 9:20	9/17/2023 9:23							9/7/2023 9:50
Final Can Pressure	---	---	---							'---
Duplicate Sample Location:	---	---	---							'---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel RJA

Project Location 106 E. Church Street, Oakfield

Notes in Field Book #

Address | City | State

Date of Service:	12/26/2023	Outdoor Temperature:	40F	☐	Sunny	☑	Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.95 "Hg	☐		☑	Rain
Departure Time:	11:00	Wind (speed/direction):	10 mph SSW	☐	Overcast	☐	Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04A_IAB_01	**04A_IA1_02**	**04A_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	CS0911	CS1017	CS1001							1156657
Indoor Temp (F)/Humidity(%):	64F / 42%	72F / 40%	68F / 37%							40F / 30%
Location In Room	basement	1st floor bed	2nd floor bed							stop sign
Sample Intake Height (above floor):	5'	4.5'	4.5'							5'
Test Start Date/Time	12/26/2023 9:35	12/26/2023 9:55	12/26/2023 9:48							12/8/2023 8:10
Initial Can Pressure	---	---	---							'---
Test End Date/Time	1/5/2024 9:00	1/5/2024 8:56	1/5/2024 8:50							12/22/2023 9:18
Final Can Pressure	---	---	---							'---
Duplicate Sample Location:	---	---	---							'---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR
Phase / Task:
Project Name: Oakfield Properties
Personnel: CLE
Project Location: 106 E. Church Street, Oakfield
Notes in Field Book #:
Address | City | State

Date of Service:	2/5/2024	Outdoor Temperature:	32F	☐	Sunny	☐ Cloudy
Arrival Time:	10:50	Barometric Pressure:	30.19 "Hg	☐		☐ Rain
Departure Time:	1:30	Wind (speed/direction):	7 mph NNE	☑	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04A_IAB_01	**04A_IAB_02**	**04A_IA1_02**	**04A_IAB_03**	**04A_IAB_04**	**04A_HDS_01**	**04A_HDR_01**			Outdoor Control (Ambient Air)
Can/Sampler ID	CS0645	CS0772	CS0607	CS0332	CS0357	PSG	PSG			
Indoor Temp (F)/Humidity(%):	58F / 33%	58F / 33%	58F / 33%	58F / 33%	58F / 33%	58F / 33%	58F / 33%			
Location In Room	basement	basement	1st floor bed	crawlspace	crawlspace	supply duct	return duct			
Sample Intake Height (above floor):	5'	5'	5'	---	---	---	---			
Test Start Date/Time	2/12/2024 11:10	2/12/2024 11:00	2/12/2024 10:47	2/12/2024 11:35	2/12/2024 11:25	2/5/2024 11:45	2/5/2024 11:53			
Initial Can Pressure	---	---	---	---	---	---	---			
Test End Date/Time	2/19/2024 11:15	2/19/2024 11:14	2/19/2024 11:12	2/19/2024 11:50	2/19/2024 11:55	2/19/2024 11:00	2/19/2024 11:10			
Final Can Pressure	---	---	---	---	---	---	---			
Duplicate Sample Location:	---	---	---	---	---	---	---			

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR
Phase / Task:
Project Name: Oakfield Properties
Personnel: CLE/RJA
Project Location: 116 E. Church Street, Oakfield
Notes in Field Book #:
Address | City | State

Date of Service:	6/9/2023	Outdoor Temperature:	80 F	☑	Sunny	☐ Cloudy
Arrival Time:	8:45	Barometric Pressure:	29.89 " Hg	☐		☐ Rain
Departure Time:	2:00	Wind (speed/direction):	WNW 8 mph	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04B_IAB_01	**04B_IA1_02**	**04B_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	1181090	1141932	1078629							1183660
Indoor Temp (F)/Humidity(%):	66-79F 39-40%	66-79F 39-44%	66-79F 39-44%							80 F
Location In Room	basement	1st floor dining	2nd floor bed							light pole on Main
Sample Intake Height (above floor):	4'	5'	5'							5'
Test Start Date/Time	6/9/23 11:00	6/9/23 11:30	6/9/23 11:45							6/9/23 9:00
Initial Can Pressure	---	---	---							---
Test End Date/Time	6/23/23 10:00	6/23/23 9:30	6/23/23 9:50							6/23/23 12:00
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

INDOOR AIR SAMPLING FIELD LOG

Project Number: 21801

Client Name: WDNR
Phase / Task:
Project Name: Oakfield Properties
Personnel: CLE
Project Location: 116 E. Church Street, Oakfield
Notes in Field Book #:
Address | City | State

Date of Service:	8/25/2023	Outdoor Temperature:	75F	☐	Sunny	☑ Cloudy
Arrival Time:	8:45	Barometric Pressure:	29.95 "Hg	☐		☐ Rain
Departure Time:	11:00	Wind (speed/direction):	NE 3 mph	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04B_IAB_01	**04B_IA1_02**	**04B_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	1100098	1101357	1183776							1066573
Indoor Temp (F)/Humidity(%):	71F/50%	71F/50%	71F/50%							75F/58%
Location In Room	basement	1st floor dining	2nd floor bed							stop sign
Sample Intake Height (above floor):	4'	5.5'	5'							5'
Test Start Date/Time	8/25/2023 10:10	8/25/2023 10:13	8/25/2023 10:18							8/25/2023 9:50
Initial Can Pressure	---	---	---	---	---	---	---			---
Test End Date/Time	9/7/2023 9:40	9/7/2023 9:30	9/7/2023 9:35							9/7/2023 9:50
Final Can Pressure	---	---	---	---	---	---	---			---
Duplicate Sample Location:	---	---	---	---	---	---	---			---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number 21801

Client Name WDNR | Phase / Task

Project Name Oakfield Properties | Personnel CLE

Project Location 116 E. Church Street, Oakfield | Notes in Field Book #

Address | City | State

Date of Service:	12/8/2023	Outdoor Temperature:	55F	☐	Sunny	☐	Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐		☐	Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑	Overcast	☐	Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04B_IAB_01	**04B_IA1_02**	**04B_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	1183480	1183682	118062							1156657
Indoor Temp (F)/Humidity(%):	56F/43%	65F/43%	65F/43%							40F/30%
Location In Room	basement	1st floor dining	2nd floo bed							stop sign
Sample Intake Height (above floor):	5'	5'	5'							5'
Test Start Date/Time	12/8/2023 11:48	12/8/2023 11:35	12/8/2023 11:40							12/8/2023 8:10
Initial Can Pressure	---	---	---	---	---	---	---			---
Test End Date/Time	12/22/2023 11:16	12/22/2023 11:22	12/22/2023 11:26							12/22/2023 9:18
Final Can Pressure	---	---	---	---	---	---	---			---
Duplicate Sample Location:	---	---	---	---	---	---	---			---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR | Phase / Task:

Project Name: Oakfield Properties | Personnel: CLE/RJA

Project Location: 206 E. Church Street, Oakfield | Notes in Field Book #:

Address | City | State

Date of Service:	6/12/2023	Outdoor Temperature:	70 F	☑	Sunny	☐ Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.15 "Hg	☐		☐ Rain
Departure Time:	2:30	Wind (speed/direction):	WNW 10 mph	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04C_IAB_01	**04C_IA1_02**	**04C_SUMP01**							Outdoor Control (Ambient Air)
Can/Sampler ID	1181109	1183785	1181074							1183660
Indoor Temp (F)/Humidity(%):	67-69F 31-32%	67-69F 31-32%	67-69F 31-32%							80 F
Location In Room	basement	1st floor kitchen	sump							light pole on Main
Sample Intake Height (above floor):	5'	5'								5'
Test Start Date/Time	6/12/23 1:05	6/12/23 1:10	6/12/23 1:00							6/9/23 9:00
Initial Can Pressure	---	---	---							---
Test End Date/Time	6/23/23 9:00	6/23/23 8:55	6/23/23 9:05							6/23/23 12:00
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 206 E. Church Street, Oakfield

Notes in Field Book #:

Address | City | State

Date of Service:	12/8/2023	Outdoor Temperature:	55 F	☐	Sunny	☐ Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐		☐ Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04C_IAB_01	**04C_IA1_02**	**04C_SUMP01**							Outdoor Control (Ambient Air)
Can/Sampler ID	1181109	1183785	1181074							1156657
Indoor Temp (F)/Humidity(%):	61F 38%	61F 38%	61F 38%							40F/30%
Location In Room	basement	1st floor kitchen	sump							stop sign
Sample Intake Height (above floor):	5'	5'								5'
Test Start Date/Time	12/8/23 8:55	12/8/23 9:00	12/8/23 8:50							12/8/2023 8:10
Initial Can Pressure	---	---	---							'---
Test End Date/Time	12/22/23 10:10	12/22/23 10:15	12/22/23 10:04							12/22/2023 9:18
Final Can Pressure	---	---	---							'---
Duplicate Sample Location:	---	---	---							'---

Comments:

INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR | Phase / Task:

Project Name: Oakfield Properties | Personnel: CLE/RJA

Project Location: 206 E. Church Street, Oakfield | Notes in Field Book #:

Address | City | State

Date of Service:	2/16/2024	Outdoor Temperature:	21 F	☐	Sunny	☐	Cloudy
Arrival Time:	8:35	Barometric Pressure:	30.22 "Hg	☐		☐	Rain
Departure Time:	12:30	Wind (speed/direction):	NW 8 mph	☑	Overcast	☐	Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04C_IAB_01	**04C_IA1_02**	**04C_SUMP01**							Outdoor Control (Ambient Air)
Can/Sampler ID	CS0661	CS0665	CS0655							cs0689
Indoor Temp (F)/Humidity(%):	65-67F 15-24%	67-69F 15-24%	65-67F 1524%							21-42 F
Location In Room	basement	1st floor kitchen	sump						stop sign 1st and Hubbard	
Sample Intake Height (above floor):	5'	5'								6'
Test Start Date/Time	2/16/24 10"20	2/16/24 10:27	2/16/24 11:23							2/16/23 8:45
Initial Can Pressure	---	---	---							---
Test End Date/Time	3/1/24 9:20	3/1/24 9:15	3/1/24 9:27							3/1/23 9:35
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 213 N. Main Street, Oakfield

Notes in Field Book #:

Address | City | State

Date of Service:	6/9/2023	Outdoor Temperature:	80 F	☑	Sunny	☐ Cloudy
Arrival Time:	8:45	Barometric Pressure:	29.89 "Hg	☐		☐ Rain
Departure Time:	2:00	Wind (speed/direction):	WNW 8 mph	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04D_IAB_01	**04D_IA1_02**	**04D_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	1141846	1179327	1099745							1183660
Indoor Temp (F)/Humidity(%):	67-78F 37-39%	67-82 F 37-42%	67-82 F 37-42%							80 F
Location In Room	basement	1st floor living	2nd floor bed							light pole on Main
Sample Intake Height (above floor):	4'	4'	5'							5'
Test Start Date/Time	6/9/23 10:00	6/9/23 10:10	6/9/23 10:20							6/9/23 9:00
Initial Can Pressure	---	---	---							---
Test End Date/Time	6/23/23 11:00	6/23/23 11:05	6/23/23 11:07							6/23/23 12:00
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

INDOOR AIR SAMPLING FIELD LOG

Project Number	210801		
Client Name	WDNR	Phase / Task	
Project Name	Oakfield Properties	Personnel	CLE/RJA
Project Location	213 N. Main Street, Oakfield	Notes in Field Book #	
	Address / City / State		

Date of Service:	12/8/2023	Outdoor Temperature:	55 F	☐	Sunny	☐ Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐		☐ Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04D_IAB_01	**04D_IA1_02**	**04D_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	1101383	1183580	CS0964							1156657
Indoor Temp (F)/Humidity(%):	66F 45%	66F 47%	66F 47%							40F/30%
Location In Room	basement	1st floor living	2nd floor bed							stop sign
Sample Intake Height (above floor):	4'	4'	5'							5'
Test Start Date/Time	12/8/23 10:25	12/8/23 10:30	12/8/23 10:35							12/8/2023 8:10
Initial Can Pressure	---	---	---							---
Test End Date/Time	12/22/23 11:52	12/22/23 11:45	12/22/23 11:41							12/22/2023 9:18
Final Can Pressure	---	---	---							'--
Duplicate Sample Location:	---	---	---							---

Comments:

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR | Phase / Task:

Project Name: Oakfield Properties | Personnel: CLE/RJA

Project Location: 213 N. Main Street, Oakfield | Notes in Field Book #:

Address | City | State

Date of Service:	2/16/2024	Outdoor Temperature:	21 F	☐	Sunny	☐	Cloudy
Arrival Time:	8:35	Barometric Pressure:	30.22 "Hg	☐		☐	Rain
Departure Time:	12:30	Wind (speed/direction):	NW 8 mph	☑	Overcast	☐	Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04D_IAB_01	**04D_IA1_02**	**04D_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	CS0998	CS0783	1078789							CS0689
Indoor Temp (F)/Humidity(%):	64-65F 15-23%	69-71F 15-29%	68-69F 15-27%							21-42 F
Location In Room	basement	1st floor living	2nd floor bed						stop sign 1st and Hubbard	
Sample Intake Height (above floor):	4'	4'	5'							6'
Test Start Date/Time	2/16/24 11:58	2/16/24 12:11	2/16/24 12:05							2/16/24 8:45
Initial Can Pressure	---	---	---							---
Test End Date/Time	3/1/24 8:55	3/1/24 8:58	3/1/24 8:57							3/1/24 9:35
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

3/1/24 Outdoor Temp 42 F, 30.14 "Hg, 17mph S wind, sunny

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INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR

Phase / Task:

Project Name: Oakfield Properties

Personnel: CLE/RJA

Project Location: 185 N. First Street, Oakfield

Notes in Field Book #:

Address | City | State

Date of Service:	6/12/2023	Outdoor Temperature:	72F	☑	Sunny	☐ Cloudy
Arrival Time:	8:50	Barometric Pressure:	29.15 "Hg	☐		☐ Rain
Departure Time:	2:30	Wind (speed/direction):	WNW 10 mph	☐	Overcast	☐ Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04E_IAB_01	**04E_IA1_02**	**04E_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	1183702	1183776	1141943							1183660
Indoor Temp (F)/Humidity(%):	70-77F 34-41%	70-74F 34-41%	70-74F 34%							80 F
Location In Room	basement	1st floor kitchen	2nd floor bed							light pole on Main
Sample Intake Height (above floor):	4'	5'	5'							5'
Test Start Date/Time	6/12/23 9:50	6/12/23 10:00	6/12/23 10:05							6/9/23 9:00
Initial Can Pressure	---	---	---							---
Test End Date/Time	6/23/23 9:30	6/23/23 9:26	6/23/23 9:28							6/23/23 12:00
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

INDOOR AIR SAMPLING FIELD LOG

Project Number: 210801

Client Name: WDNR | Phase / Task:

Project Name: Oakfield Properties | Personnel: CLE/RJA

Project Location: 185 N. First Street, Oakfield | Notes in Field Book #:

Address | City | State

Date of Service:	12/8/2023	Outdoor Temperature:	55F	☐	Sunny	☐	Cloudy
Arrival Time:	8:00	Barometric Pressure:	29.90 "Hg	☐		☐	Rain
Departure Time:	12:50	Wind (speed/direction):	NW 8 mph	☑	Overcast	☐	Snow

Complete Building Features Checklist Sheet (Mandatory) ☑

Occupant Demographics: previously collected

Attach Scaled Map with Sample Locations (Mandatory) ☑

Indoor Air Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Chlorosorber

	Sample Point IDs									
	04E_IAB_01	**04E_IA1_02**	**04E_IA2_03**							Outdoor Control (Ambient Air)
Can/Sampler ID	CS0923	CS0932	1119856							1156657
Indoor Temp (F)/Humidity(%):	58F 45%	63F 48%	58F 45%							40F/30%
Location In Room	basement	1st floor kitchen	2nd floor bed							stop sign
Sample Intake Height (above floor):	4'	5'	5'							5'
Test Start Date/Time	12/8/23 9:45	12/8/23 9:50	12/8/23 9:55							12/8/2023 8:10
Initial Can Pressure	---	---	---							---
Test End Date/Time	12/22/23 10:40	12/22/23 10:30	12/22/23 10:34							12/22/2023 9:18
Final Can Pressure	---	---	---							---
Duplicate Sample Location:	---	---	---							---

Comments:

Appendix F

Indoor Air Sample Placement Photo Log

106 E. Church Street Indoor Air Sample Photo Log

Photo 1: Indoor air sample located on the westside of the basement. Photograph taken on June 12, 2023.

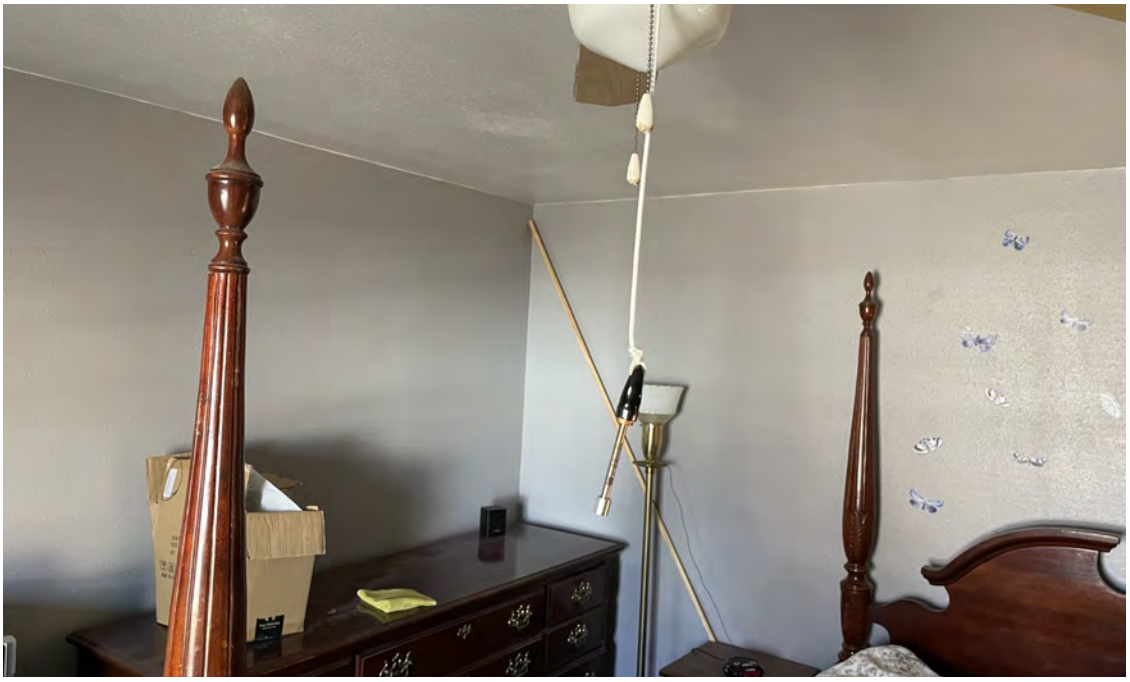

Photo 2: Indoor air sample located on the northeast side of the first floor. Photograph taken on June 12, 2023.

106 E. Church Street Indoor Air Sample Photo Log

Photo 3: Indoor air sample located on the second floor of the residence. Photograph taken on December 26, 2023.

Photo 4: Sump headspace sample collected from within the sump located in the basement. Photograph taken on June 12, 2023.

116 E. Church Street Indoor Air Sample Photo Log

Photo 1: Indoor air sample located on the north side of the first floor. Photograph taken on June 9, 2023.

Photo 2: Indoor air sample located on the north side of the second floor. Photograph taken on June 9, 2023.

116 E. Church Street Indoor Air Sample Photo Log

Photo 3: Indoor air sample located on the north side of the basement. Photograph taken on June 9, 2023.

206 E. Church Street Indoor Air Sample Photo Log

Photo 1: Indoor air sample located on the east side of the basement. Photograph taken on December 22, 2023.

Photo 2: Indoor air sample located on the north side of the first floor. Photograph taken on December 22, 2023.

206 E. Church Street Indoor Air Sample Photo Log

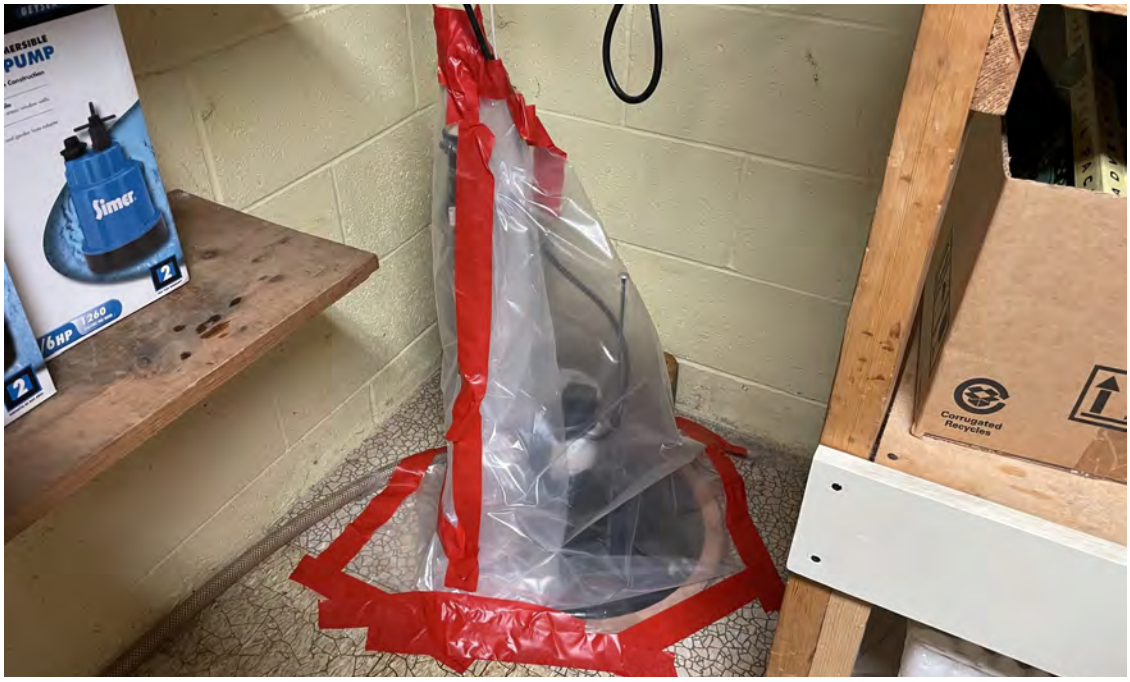

Photo 3: Sump headspace sample collected from within the sump located in the basement. Photograph taken on June 12, 2023.

213 N. Main Street Indoor Air Sample Photo Log

Photo 1: Indoor air sampler located on the south side of the basement. Photograph taken on June 9, 2023.

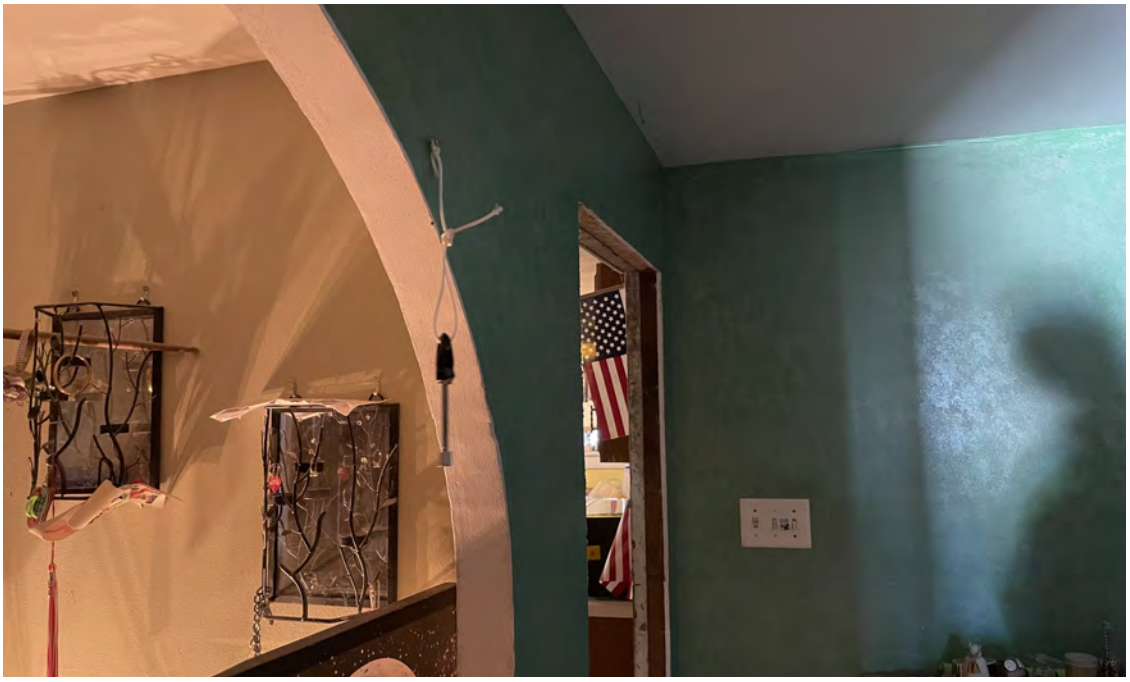

Photo 2: Indoor air sampler located on the west side adjacent to the living room on the first floor. Photograph taken on June 9, 2023.

213 N. Main Street Indoor Air Sample Photo Log

Photo 3: Indoor air sample located on the west side of the second floor. Photograph taken on June 9, 2023.

185 N. First Street Indoor Air Sample Photo Log

Photo 1: Indoor air sample located on the south side of the basement. Photograph taken on June 12, 2023.

Photo 2: Indoor air sample located on the west side of the first floor. Photograph taken on June 12, 2023.

185 N. First Street Indoor Air Sample Photo Log

Photo 3: Indoor air sample located on the west side of the second floor . Photograph taken on June 12, 2023.

Appendix G

Sanitary Sewer Sampling Field Sheet

SEWER GAS SAMPLING FIELD LOG

Project Number 210801

Client Name WDNR

Phase / Task

Project Name Oakfield Properties

Personnel CLE/RJA

Project Location

Notes in Field Book #

Address City State

Date of Service: 6/9/2023

Temperature: 80F

☑ Sunny ☐ Cloudy

Arrival Time: 8:45

Barometric Pressure: 29.89 in Hg

☐ Partly Sunny ☐ Rain

Departure Time: 2:00

Wind (speed/direction): WNW 8 mph

☐ Overcast ☐ Snow

Attach Scaled Map with Sample Locations (Mandatory)

Sewer Gas Sample Type (e.g. summa canister/size, passive vapor sampler/type): Beacon Passive Samplers

	Sample Point IDs								
	SSG01 (105)	**SSG02 (104)**	**SSG03(103)**						
Can/Sampler ID	---	---	---						
Sewer Type	sanitary	sanitary	sanitary						
Manhole Type (solid/vented)/Size	solid 24"	solid 24"	solid 24"						
Depth to Liquid in Sewer (feet below rim)	13.4'	8.2'	8.1'						
Sampler Depth (feet below rim)	12'	7'	7'						
Sampler Hanger	magnets	magnets	magnets						
PiD Readings (prior to sample start)	---	---	---						
Test Start Date/Time	6/9/23 12:20	6/9/23 12:30	6/9/23 12:50						
Initial Can Pressure	---	---	---						
Test End Date/Time	6/23/23 11:50	6/23/23 11:40	6/23/23 11:30						
Final Can Pressure	---	---	---						

Comments:

Appendix H

Sanitary Sewer Passive Sample Placement Photo Log

Sanitary Sewer Sample Photo Log

Photo 1: Sanitary sewer manhole sampler placement within the northern most manhole (105) using magnets and bungee cords. Photograph taken on June 9, 2023.

Photo 2: Sanitary sewer manhole sampler placement within the northern most manhole (105). Photograph taken on June 9, 2023.

Sanitary Sewer Sample Photo Log

Photo 3: Sanitary sewer manhole sampler placement within the middle manhole (104) using magnets and bungee cords. Photograph taken on June 9, 2023.

Photo 4: Sanitary sewer manhole sampler placement within the middle manhole (104). Photograph taken on June 9, 2023.

Sanitary Sewer Sample Photo Log

Photo 5: Sanitary sewer manhole sampler placement within the southern most manhole (103) using magnets and bungee cords. Photograph taken on June 9, 2023.

Appendix I

Sub-Slab Vapor Laboratory Analytical Reports

Beacon Environmental
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230317R01

Laboratory Work Order: 0007050

Project Description:
Oakfield Propertes
Oakfield, WI

Client PO No.: 21801

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

July 06, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

Table of Contents (continued)

BEACON ENVIRONMENTAL

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007050-01	04A_SSVO1_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007050-02	04B_SSVO1_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007050-03	04B_SSVO2_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007050-04	04C_SSVO1_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007050-05	04D_SSVO1_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007050-06	04E_SSVO1_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007050-07	04E_SSVO2_20230623	06/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 7
Samples Analyzed: 7

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Case Narrative

U.S. EPA Method 8260C

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ($\mu g/m^3$). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

Passive Soil-Gas Survey Notes

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

Reporting Limits

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

Project Details

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

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Analytical Results

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Mass

Lab Sample ID: 0007050-01 — **04A_SSVO1_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Vinyl Chloride	75-01-4	**10**		1.454	10	C23070315.D
trans-1,2-Dichloroethene	156-60-5	**1,090**		2.488	10	C23070315.D
cis-1,2-Dichloroethene	156-59-2	**5,340**		3.147	10	C23070315.D
Trichloroethene	79-01-6	**6,450**		4.300	10	C23070315.D

Lab Sample ID: 0007050-02 — **04B_SSVO1_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Vinyl Chloride	75-01-4	**87**		1.464	10	C23070316.D
trans-1,2-Dichloroethene	156-60-5	**4,520**		2.488	10	C23070316.D
cis-1,2-Dichloroethene	156-59-2	**42,600**	D	3.144	233	C23070505.D
Trichloroethene	79-01-6	**28,800**	D	4.300	233	C23070505.D

Lab Sample ID: 0007050-03 — **04B_SSVO2_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Vinyl Chloride	75-01-4	**199**		1.464	10	C23070317.D
trans-1,2-Dichloroethene	156-60-5	**20,900**	D	2.485	233	C23070506.D
cis-1,2-Dichloroethene	156-59-2	**231,000**	D	3.144	233	C23070506.D
Trichloroethene	79-01-6	**105,000**	D	4.300	233	C23070506.D

Lab Sample ID: 0007050-04 — **04C_SSVO1_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
cis-1,2-Dichloroethene	156-59-2	**93**		3.144	10	C23070318.D
Trichloroethene	79-01-6	**49**		4.297	10	C23070318.D

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Mass

Lab Sample ID: 0007050-05

04D_SSVO1_20230623
Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
cis-1,2-Dichloroethene	156-59-2	**16**		3.147	10	C23070319.D

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Concentration

Lab Sample ID: 0007050-01 — **04A_SSVO1_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Vinyl Chloride	75-01-4	**0.80**		1.454	0.78	C23070315.D
trans-1,2-Dichloroethene	156-60-5	**157**		2.488	1.44	C23070315.D
cis-1,2-Dichloroethene	156-59-2	**638**		3.147	1.19	C23070315.D
Trichloroethene	79-01-6	**1,240**		4.300	1.92	C23070315.D

Lab Sample ID: 0007050-02 — **04B_SSVO1_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Vinyl Chloride	75-01-4	**5.33**		1.464	0.61	C23070316.D
trans-1,2-Dichloroethene	156-60-5	**511**		2.488	1.13	C23070316.D
cis-1,2-Dichloroethene	156-59-2	**4,000**	D	3.144	21.8	C23070505.D
Trichloroethene	79-01-6	**4,330**	D	4.300	35.0	C23070505.D

Lab Sample ID: 0007050-03 — **04B_SSVO2_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Vinyl Chloride	75-01-4	**12.3**		1.464	0.61	C23070317.D
trans-1,2-Dichloroethene	156-60-5	**2,360**	D	2.485	26.3	C23070506.D
cis-1,2-Dichloroethene	156-59-2	**21,700**	D	3.144	21.8	C23070506.D
Trichloroethene	79-01-6	**15,800**	D	4.300	35.1	C23070506.D

Lab Sample ID: 0007050-04 — **04C_SSVO1_20230623** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**11.2**		3.144	1.21	C23070318.D
Trichloroethene	79-01-6	**9.51**		4.297	1.94	C23070318.D

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Concentration

Lab Sample ID: 0007050-05

04D_SSVO1_20230623
Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**1.45**		3.147	0.93	C23070319.D

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Data Summary Table- Mass

Compound	Frequency	LOQ (ng)	Max Value (ng)
Vinyl Chloride	3	10	199
trans-1,2-Dichloroethene	3	10	20,900
cis-1,2-Dichloroethene	5	10	231,000
Trichloroethene	4	10	105,000

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Data Summary Table- Concentration

Compound	Frequency	LOQ (µg/m³)	Max Value (µg/m³)
Vinyl Chloride	3	0.610	12.3
trans-1,2-Dichloroethene	3	1.13	2,360
cis-1,2-Dichloroethene	5	0.930	21,700
Trichloroethene	4	1.51	15,800

2203A Commerce Road, Suite 1
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Detailed Analytical Results

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Detailed Analytical Results- Mass

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-01

04A_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	**10**		10	07/03/2023 19:37	C23070315.D
trans-1,2-Dichloroethene	156-60-5	**1,090**		10	07/03/2023 19:37	C23070315.D
cis-1,2-Dichloroethene	156-59-2	**5,340**		10	07/03/2023 19:37	C23070315.D
Trichloroethene	79-01-6	**6,450**		10	07/03/2023 19:37	C23070315.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 19:37	C23070315.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*130%*	*70-130*		*07/03/2023 19:37*	*C23070315.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 19:37*	*C23070315.D*
Surrogate: Bromofluorobenzene	460-00-4	*114%*	*70-130*		*07/03/2023 19:37*	*C23070315.D*

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-02

04B_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	**87**		10	07/03/2023 20:09	C23070316.D
trans-1,2-Dichloroethene	156-60-5	**4,520**		10	07/03/2023 20:09	C23070316.D
cis-1,2-Dichloroethene	156-59-2	**42,600**	D	233	07/05/2023 13:24	C23070505.D
Trichloroethene	79-01-6	**28,800**	D	233	07/05/2023 13:24	C23070505.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 20:09	C23070316.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*129%*	*70-130*		*07/03/2023 20:09*	*C23070316.D*
Surrogate: 1,2-DCA-d4	17060-07-0	*126%*	*70-130*		*07/05/2023 13:24*	*C23070505.D*
Surrogate: Toluene-d8	2037-26-5	*113%*	*70-130*		*07/05/2023 13:24*	*C23070505.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 20:09*	*C23070316.D*
Surrogate: Bromofluorobenzene	460-00-4	*101%*	*70-130*		*07/05/2023 13:24*	*C23070505.D*
Surrogate: Bromofluorobenzene	460-00-4	*112%*	*70-130*		*07/03/2023 20:09*	*C23070316.D*

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-03

04B_SSVO2_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	**199**		10	07/03/2023 20:40	C23070317.D
trans-1,2-Dichloroethene	156-60-5	**20,900**	D	233	07/05/2023 14:02	C23070506.D
cis-1,2-Dichloroethene	156-59-2	**231,000**	D	233	07/05/2023 14:02	C23070506.D
Trichloroethene	79-01-6	**105,000**	D	233	07/05/2023 14:02	C23070506.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 20:40	C23070317.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*148%*	*70-130*		*07/03/2023 20:40*	*C23070317.D*
Surrogate: 1,2-DCA-d4	17060-07-0	*123%*	*70-130*		*07/05/2023 14:02*	*C23070506.D*
Surrogate: Toluene-d8	2037-26-5	*100%*	*70-130*		*07/03/2023 20:40*	*C23070317.D*
Surrogate: Toluene-d8	2037-26-5	*109%*	*70-130*		*07/05/2023 14:02*	*C23070506.D*
Surrogate: Bromofluorobenzene	460-00-4	*113%*	*70-130*		*07/03/2023 20:40*	*C23070317.D*
Surrogate: Bromofluorobenzene	460-00-4	*103%*	*70-130*		*07/05/2023 14:02*	*C23070506.D*

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CERTIFICATE OF ANALYSIS

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-04

04C_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	07/03/2023 21:12	C23070318.D
trans-1,2-Dichloroethene	156-60-5	<10		10	07/03/2023 21:12	C23070318.D
cis-1,2-Dichloroethene	156-59-2	**93**		10	07/03/2023 21:12	C23070318.D
Trichloroethene	79-01-6	**49**		10	07/03/2023 21:12	C23070318.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 21:12	C23070318.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*128%*	*70-130*		*07/03/2023 21:12*	*C23070318.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 21:12*	*C23070318.D*
Surrogate: Bromofluorobenzene	460-00-4	*109%*	*70-130*		*07/03/2023 21:12*	*C23070318.D*

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-05

04D_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	07/03/2023 21:43	C23070319.D
trans-1,2-Dichloroethene	156-60-5	<10		10	07/03/2023 21:43	C23070319.D
cis-1,2-Dichloroethene	156-59-2	**16**		10	07/03/2023 21:43	C23070319.D
Trichloroethene	79-01-6	<10		10	07/03/2023 21:43	C23070319.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 21:43	C23070319.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*125%*	*70-130*		*07/03/2023 21:43*	*C23070319.D*
Surrogate: Toluene-d8	2037-26-5	*105%*	*70-130*		*07/03/2023 21:43*	*C23070319.D*
Surrogate: Bromofluorobenzene	460-00-4	*111%*	*70-130*		*07/03/2023 21:43*	*C23070319.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-06

04E_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	07/03/2023 22:15	C23070320.D
trans-1,2-Dichloroethene	156-60-5	<10		10	07/03/2023 22:15	C23070320.D
cis-1,2-Dichloroethene	156-59-2	<10		10	07/03/2023 22:15	C23070320.D
Trichloroethene	79-01-6	<10		10	07/03/2023 22:15	C23070320.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 22:15	C23070320.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*119%*	*70-130*		*07/03/2023 22:15*	*C23070320.D*
Surrogate: Toluene-d8	2037-26-5	*101%*	*70-130*		*07/03/2023 22:15*	*C23070320.D*
Surrogate: Bromofluorobenzene	460-00-4	*114%*	*70-130*		*07/03/2023 22:15*	*C23070320.D*

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-07

04E_SSVO2_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	07/03/2023 22:47	C23070321.D
trans-1,2-Dichloroethene	156-60-5	<10		10	07/03/2023 22:47	C23070321.D
cis-1,2-Dichloroethene	156-59-2	<10		10	07/03/2023 22:47	C23070321.D
Trichloroethene	79-01-6	<10		10	07/03/2023 22:47	C23070321.D
Tetrachloroethene	127-18-4	<10		10	07/03/2023 22:47	C23070321.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*120%*	*70-130*		*07/03/2023 22:47*	*C23070321.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 22:47*	*C23070321.D*
Surrogate: Bromofluorobenzene	460-00-4	*107%*	*70-130*		*07/03/2023 22:47*	*C23070321.D*

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Detailed Analytical Results- Concentration

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-01

04A_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	**0.80**		0.78	07/03/2023 19:37	C23070315.D
trans-1,2-Dichloroethene	156-60-5	**157**		1.44	07/03/2023 19:37	C23070315.D
cis-1,2-Dichloroethene	156-59-2	**638**		1.19	07/03/2023 19:37	C23070315.D
Trichloroethene	79-01-6	**1,240**		1.92	07/03/2023 19:37	C23070315.D
Tetrachloroethene	127-18-4	<1.54		1.54	07/03/2023 19:37	C23070315.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*130%*	*70-130*		*07/03/2023 19:37*	*C23070315.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 19:37*	*C23070315.D*
Surrogate: Bromofluorobenzene	460-00-4	*114%*	*70-130*		*07/03/2023 19:37*	*C23070315.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-02

04B_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	**5.33**		0.61	07/03/2023 20:09	C23070316.D
trans-1,2-Dichloroethene	156-60-5	**511**		1.13	07/03/2023 20:09	C23070316.D
cis-1,2-Dichloroethene	156-59-2	**4,000**	D	21.8	07/05/2023 13:24	C23070505.D
Trichloroethene	79-01-6	**4,330**	D	35.0	07/05/2023 13:24	C23070505.D
Tetrachloroethene	127-18-4	<1.21		1.21	07/03/2023 20:09	C23070316.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*126%*	*70-130*		*07/05/2023 13:24*	*C23070505.D*
Surrogate: 1,2-DCA-d4	17060-07-0	*129%*	*70-130*		*07/03/2023 20:09*	*C23070316.D*
Surrogate: Toluene-d8	2037-26-5	*113%*	*70-130*		*07/05/2023 13:24*	*C23070505.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 20:09*	*C23070316.D*
Surrogate: Bromofluorobenzene	460-00-4	*101%*	*70-130*		*07/05/2023 13:24*	*C23070505.D*
Surrogate: Bromofluorobenzene	460-00-4	*112%*	*70-130*		*07/03/2023 20:09*	*C23070316.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-03

04B_SSVO2_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	**12.3**		0.61	07/03/2023 20:40	C23070317.D
trans-1,2-Dichloroethene	156-60-5	**2,360**	D	26.3	07/05/2023 14:02	C23070506.D
cis-1,2-Dichloroethene	156-59-2	**21,700**	D	21.8	07/05/2023 14:02	C23070506.D
Trichloroethene	79-01-6	**15,800**	D	35.1	07/05/2023 14:02	C23070506.D
Tetrachloroethene	127-18-4	<1.21		1.21	07/03/2023 20:40	C23070317.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*148%*	*70-130*		*07/03/2023 20:40*	*C23070317.D*
Surrogate: 1,2-DCA-d4	17060-07-0	*123%*	*70-130*		*07/05/2023 14:02*	*C23070506.D*
Surrogate: Toluene-d8	2037-26-5	*109%*	*70-130*		*07/05/2023 14:02*	*C23070506.D*
Surrogate: Toluene-d8	2037-26-5	*100%*	*70-130*		*07/03/2023 20:40*	*C23070317.D*
Surrogate: Bromofluorobenzene	460-00-4	*113%*	*70-130*		*07/03/2023 20:40*	*C23070317.D*
Surrogate: Bromofluorobenzene	460-00-4	*103%*	*70-130*		*07/05/2023 14:02*	*C23070506.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-04

04C_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.79		0.79	07/03/2023 21:12	C23070318.D
trans-1,2-Dichloroethene	156-60-5	<1.46		1.46	07/03/2023 21:12	C23070318.D
cis-1,2-Dichloroethene	156-59-2	**11.2**		1.21	07/03/2023 21:12	C23070318.D
Trichloroethene	79-01-6	**9.51**		1.94	07/03/2023 21:12	C23070318.D
Tetrachloroethene	127-18-4	<1.56		1.56	07/03/2023 21:12	C23070318.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*128%*	*70-130*		*07/03/2023 21:12*	*C23070318.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 21:12*	*C23070318.D*
Surrogate: Bromofluorobenzene	460-00-4	*109%*	*70-130*		*07/03/2023 21:12*	*C23070318.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-05

04D_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	07/03/2023 21:43	C23070319.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	07/03/2023 21:43	C23070319.D
cis-1,2-Dichloroethene	156-59-2	**1.45**		0.93	07/03/2023 21:43	C23070319.D
Trichloroethene	79-01-6	<1.50		1.50	07/03/2023 21:43	C23070319.D
Tetrachloroethene	127-18-4	<1.20		1.20	07/03/2023 21:43	C23070319.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*125%*	*70-130*		*07/03/2023 21:43*	*C23070319.D*
Surrogate: Toluene-d8	2037-26-5	*105%*	*70-130*		*07/03/2023 21:43*	*C23070319.D*
Surrogate: Bromofluorobenzene	460-00-4	*111%*	*70-130*		*07/03/2023 21:43*	*C23070319.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-06

04E_SSVO1_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.78		0.78	07/03/2023 22:15	C23070320.D
trans-1,2-Dichloroethene	156-60-5	<1.44		1.44	07/03/2023 22:15	C23070320.D
cis-1,2-Dichloroethene	156-59-2	<1.19		1.19	07/03/2023 22:15	C23070320.D
Trichloroethene	79-01-6	<1.92		1.92	07/03/2023 22:15	C23070320.D
Tetrachloroethene	127-18-4	<1.54		1.54	07/03/2023 22:15	C23070320.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*119%*	*70-130*		*07/03/2023 22:15*	*C23070320.D*
Surrogate: Toluene-d8	2037-26-5	*101%*	*70-130*		*07/03/2023 22:15*	*C23070320.D*
Surrogate: Bromofluorobenzene	460-00-4	*114%*	*70-130*		*07/03/2023 22:15*	*C23070320.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007050-07

04E_SSVO2_20230623

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.78		0.78	07/03/2023 22:47	C23070321.D
trans-1,2-Dichloroethene	156-60-5	<1.44		1.44	07/03/2023 22:47	C23070321.D
cis-1,2-Dichloroethene	156-59-2	<1.19		1.19	07/03/2023 22:47	C23070321.D
Trichloroethene	79-01-6	<1.91		1.91	07/03/2023 22:47	C23070321.D
Tetrachloroethene	127-18-4	<1.54		1.54	07/03/2023 22:47	C23070321.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*120%*	*70-130*		*07/03/2023 22:47*	*C23070321.D*
Surrogate: Toluene-d8	2037-26-5	*103%*	*70-130*		*07/03/2023 22:47*	*C23070321.D*
Surrogate: Bromofluorobenzene	460-00-4	*107%*	*70-130*		*07/03/2023 22:47*	*C23070321.D*

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

QC Information/Summary

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23E012 - Instrument: C System - File ID: C23050329.D

B23E012-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	52.0	10	ng	50.0		104	70-130			
trans-1,2-Dichloroethene	55.6	10	ng	50.0		111	70-130			
cis-1,2-Dichloroethene	50.9	10	ng	50.0		102	70-130			
Trichloroethene	53.2	10	ng	50.0		106	70-130			
Tetrachloroethene	54.7	10	ng	50.0		109	70-130			
Surrogate: 1,2-DCA-d4	*52.8*		*ng*	50.0		*106*	*70-130*			
Surrogate: Toluene-d8	*54.2*		*ng*	50.0		*108*	*70-130*			
Surrogate: Bromofluorobenzene	*52.7*		*ng*	50.0		*105*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23E012 - Instrument: C System - File ID: C23050330.D

B23E012-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*104*		*ng*	100		*104*	*70-130*			
Surrogate: Toluene-d8	*105*		*ng*	100		*105*	*70-130*			
Surrogate: Bromofluorobenzene	*100*		*ng*	100		*100*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23G006 - Batch: 23G0005 - Instrument: C System - File ID: C23070302.D

23G0005-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.8	10	ng	50.0		102	80-120			
trans-1,2-Dichloroethene	53.8	10	ng	50.0		108	80-120			
cis-1,2-Dichloroethene	51.6	10	ng	50.0		103	80-120			
Trichloroethene	47.9	10	ng	50.0		95.8	80-120			
Tetrachloroethene	51.9	10	ng	50.0		104	80-120			
Surrogate: 1,2-DCA-d4	*65.4*		*ng*	50.0		*131*	*70-130*			
Surrogate: Toluene-d8	*53.9*		*ng*	50.0		*108*	*70-130*			
Surrogate: Bromofluorobenzene	*55.5*		*ng*	50.0		*111*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B23G006 - Batch: 23G0005 - Instrument: C System - File ID: C23070303.D

23G0005-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.610	0.610	µg/m³							U
trans-1,2-Dichloroethene	<1.12	1.12	µg/m³							U
cis-1,2-Dichloroethene	<0.932	0.932	µg/m³							U
Trichloroethene	<1.50	1.50	µg/m³							U
Tetrachloroethene	<1.20	1.20	µg/m³							U
Surrogate: 1,2-DCA-d4	*131*		*ng*	100		*131*	*70-130*			
Surrogate: Toluene-d8	*111*		*ng*	100		*111*	*70-130*			
Surrogate: Bromofluorobenzene	*103*		*ng*	100		*103*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23G006 - Batch: 23G0005 - Instrument: C System - File ID: C23070303.D

23G0005-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*131*		*ng*	100		*131*	*70-130*			
Surrogate: Toluene-d8	*111*		*ng*	100		*111*	*70-130*			
Surrogate: Bromofluorobenzene	*103*		*ng*	100		*103*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23G006 - Instrument: C System - File ID: C23070304.D

B23G006-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	55.7	10	ng	50.0		111	70-130			
trans-1,2-Dichloroethene	56.4	10	ng	50.0		113	70-130			
cis-1,2-Dichloroethene	50.9	10	ng	50.0		102	70-130			
Trichloroethene	51.3	10	ng	50.0		103	70-130			
Tetrachloroethene	55.0	10	ng	50.0		110	70-130			
Surrogate: 1,2-DCA-d4	*65.9*		*ng*	50.0		*132*	*70-130*			
Surrogate: Toluene-d8	*54.2*		*ng*	50.0		*108*	*70-130*			
Surrogate: Bromofluorobenzene	*53.1*		*ng*	50.0		*106*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23G013 - Batch: 23G0013 - Instrument: C System - File ID: C23070502.D

23G0013-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	45.2	10	ng	50.0		90.3	80-120			
trans-1,2-Dichloroethene	54.9	10	ng	50.0		110	80-120			
cis-1,2-Dichloroethene	49.7	10	ng	50.0		99.4	80-120			
Trichloroethene	47.5	10	ng	50.0		95.1	80-120			
Tetrachloroethene	50.7	10	ng	50.0		101	80-120			
Surrogate: 1,2-DCA-d4	*61.9*		*ng*	50.0		*124*	*70-130*			
Surrogate: Toluene-d8	*55.3*		*ng*	50.0		*111*	*70-130*			
Surrogate: Bromofluorobenzene	*55.5*		*ng*	50.0		*111*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B23G013 - Batch: 23G0013 - Instrument: C System - File ID: C23070503.D

23G0013-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.610	0.610	µg/m³							U
trans-1,2-Dichloroethene	<1.12	1.12	µg/m³							U
cis-1,2-Dichloroethene	<0.932	0.932	µg/m³							U
Trichloroethene	<1.50	1.50	µg/m³							U
Tetrachloroethene	<1.20	1.20	µg/m³							U
Surrogate: 1,2-DCA-d4	*123*		*ng*	100		*123*	*70-130*			
Surrogate: Toluene-d8	*112*		*ng*	100		*112*	*70-130*			
Surrogate: Bromofluorobenzene	*104*		*ng*	100		*104*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23G013 - Batch: 23G0013 - Instrument: C System - File ID: C23070503.D

23G0013-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*123*		*ng*	100		*123*	*70-130*			
Surrogate: Toluene-d8	*112*		*ng*	100		*112*	*70-130*			
Surrogate: Bromofluorobenzene	*104*		*ng*	100		*104*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23G013 - Instrument: C System - File ID: C23070504.D

B23G013-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.6	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	55.0	10	ng	50.0		110	70-130			
cis-1,2-Dichloroethene	52.2	10	ng	50.0		104	70-130			
Trichloroethene	49.0	10	ng	50.0		98.0	70-130			
Tetrachloroethene	51.9	10	ng	50.0		104	70-130			
Surrogate: 1,2-DCA-d4	*60.9*		*ng*	50.0		*122*	*70-130*			
Surrogate: Toluene-d8	*54.3*		*ng*	50.0		*109*	*70-130*			
Surrogate: Bromofluorobenzene	*52.3*		*ng*	50.0		*105*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Additional QC Information

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007050-01 **Sample Name:** 04A_SSVO1_20230623						
Vinyl Chloride	15,800	1.00	0.810	10.28	0.80	C23070315.D
trans-1,2-Dichloroethene	15,800	1.00	0.440	1089.54	157	C23070315.D
cis-1,2-Dichloroethene	15,800	1.00	0.530	5342.68	638	C23070315.D
Trichloroethene	15,800	1.00	0.330	6452.86	1,240	C23070315.D
Tetrachloroethene	15,800	1.00	0.410	U	U	C23070315.D
Lab ID: 0007050-02 **Sample Name:** 04B_SSVO1_20230623						
Vinyl Chloride	20,110	1.00	0.810	86.89	5.33	C23070316.D
trans-1,2-Dichloroethene	20,110	1.00	0.440	4517.32	511	C23070316.D
cis-1,2-Dichloroethene	20,110	23.25	0.530	1833.24	4,000	C23070505.D
Trichloroethene	20,110	23.25	0.330	1236.62	4,330	C23070505.D
Tetrachloroethene	20,110	1.00	0.410	U	U	C23070316.D
Lab ID: 0007050-03 **Sample Name:** 04B_SSVO2_20230623						
Vinyl Chloride	20,087	1.00	0.810	199.48	12.3	C23070317.D
trans-1,2-Dichloroethene	20,087	23.25	0.440	897.19	2,360	C23070506.D
cis-1,2-Dichloroethene	20,087	23.25	0.530	9949.15	21,700	C23070506.D
Trichloroethene	20,087	23.25	0.330	4501.27	15,800	C23070506.D
Tetrachloroethene	20,087	1.00	0.410	U	U	C23070317.D
Lab ID: 0007050-04 **Sample Name:** 04C_SSVO1_20230623						
Vinyl Chloride	15,620	1.00	0.810	U	U	C23070318.D
trans-1,2-Dichloroethene	15,620	1.00	0.440	U	U	C23070318.D
cis-1,2-Dichloroethene	15,620	1.00	0.530	92.54	11.2	C23070318.D
Trichloroethene	15,620	1.00	0.330	49.02	9.51	C23070318.D
Tetrachloroethene	15,620	1.00	0.410	U	U	C23070318.D
Lab ID: 0007050-05 **Sample Name:** 04D_SSVO1_20230623						
Vinyl Chloride	20,250	1.00	0.810	U	U	C23070319.D
trans-1,2-Dichloroethene	20,250	1.00	0.440	U	U	C23070319.D
cis-1,2-Dichloroethene	20,250	1.00	0.530	15.55	1.45	C23070319.D
Trichloroethene	20,250	1.00	0.330	U	U	C23070319.D
Tetrachloroethene	20,250	1.00	0.410	U	U	C23070319.D

2203A Commerce Road, Suite 1
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007050-06 **Sample Name:** 04E_SSVO1_20230623						
Vinyl Chloride	15,803	1.00	0.810	U	U	C23070320.D
trans-1,2-Dichloroethene	15,803	1.00	0.440	U	U	C23070320.D
cis-1,2-Dichloroethene	15,803	1.00	0.530	U	U	C23070320.D
Trichloroethene	15,803	1.00	0.330	U	U	C23070320.D
Tetrachloroethene	15,803	1.00	0.410	U	U	C23070320.D
Lab ID: 0007050-07 **Sample Name:** 04E_SSVO2_20230623						
Vinyl Chloride	15,827	1.00	0.810	U	U	C23070321.D
trans-1,2-Dichloroethene	15,827	1.00	0.440	U	U	C23070321.D
cis-1,2-Dichloroethene	15,827	1.00	0.530	U	U	C23070321.D
Trichloroethene	15,827	1.00	0.330	U	U	C23070321.D
Tetrachloroethene	15,827	1.00	0.410	U	U	C23070321.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U \times t}$$

where: C = concentration (µg/m^3)
M = mass (ng)
DF = dilution factor
t = sampling time (minutes)
U = compound specific uptake rate

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m³
Lab ID: 0007050-01 **Sample Name:** 04A_SSVO1_20230623					
Vinyl Chloride	15,800	1.00	0.810	10.0	0.78
trans-1,2-Dichloroethene	15,800	1.00	0.440	10.0	1.44
cis-1,2-Dichloroethene	15,800	1.00	0.530	10.0	1.19
Trichloroethene	15,800	1.00	0.330	10.0	1.92
Tetrachloroethene	15,800	1.00	0.410	10.0	1.54
Lab ID: 0007050-02 **Sample Name:** 04B_SSVO1_20230623					
Vinyl Chloride	20,110	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,110	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,110	23.25	0.530	10.0	21.8
Trichloroethene	20,110	23.25	0.330	10.0	35.0
Tetrachloroethene	20,110	1.00	0.410	10.0	1.21
Lab ID: 0007050-03 **Sample Name:** 04B_SSVO2_20230623					
Vinyl Chloride	20,087	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,087	23.25	0.440	10.0	26.3
cis-1,2-Dichloroethene	20,087	23.25	0.530	10.0	21.8
Trichloroethene	20,087	23.25	0.330	10.0	35.1
Tetrachloroethene	20,087	1.00	0.410	10.0	1.21
Lab ID: 0007050-04 **Sample Name:** 04C_SSVO1_20230623					
Vinyl Chloride	15,620	1.00	0.810	10.0	0.79
trans-1,2-Dichloroethene	15,620	1.00	0.440	10.0	1.46
cis-1,2-Dichloroethene	15,620	1.00	0.530	10.0	1.21
Trichloroethene	15,620	1.00	0.330	10.0	1.94
Tetrachloroethene	15,620	1.00	0.410	10.0	1.56
Lab ID: 0007050-05 **Sample Name:** 04D_SSVO1_20230623					
Vinyl Chloride	20,250	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,250	1.00	0.440	10.0	1.12
cis-1,2-Dichloroethene	20,250	1.00	0.530	10.0	0.93
Trichloroethene	20,250	1.00	0.330	10.0	1.50
Tetrachloroethene	20,250	1.00	0.410	10.0	1.20
Lab ID: 0007050-06 **Sample Name:** 04E_SSVO1_20230623					
Vinyl Chloride	15,803	1.00	0.810	10.0	0.78
trans-1,2-Dichloroethene	15,803	1.00	0.440	10.0	1.44
cis-1,2-Dichloroethene	15,803	1.00	0.530	10.0	1.19
Trichloroethene	15,803	1.00	0.330	10.0	1.92
Tetrachloroethene	15,803	1.00	0.410	10.0	1.54

2203A Commerce Road, Suite 1
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

EPA 8260C

Analyte	**t** Sampling Time minutes	**DF** Dilution Factor	**U** Uptake Rate	**M** Initial LOQ ng	**C** Calculated LOQ µg/m³
Lab ID: 0007050-07 **Sample Name:** 04E_SSVO2_20230623					
Vinyl Chloride	15,827	1.00	0.810	10.0	0.78
trans-1,2-Dichloroethene	15,827	1.00	0.440	10.0	1.44
cis-1,2-Dichloroethene	15,827	1.00	0.530	10.0	1.19
Trichloroethene	15,827	1.00	0.330	10.0	1.91
Tetrachloroethene	15,827	1.00	0.410	10.0	1.54

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007050
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

D	Dilution required to report within calibration Limits.

2203A Commerce Road, Suite 1
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Propertes	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Management Records

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or email help@beacon-usa.com

PASSIVE SOIL GAS SAMPLES CHAIN-OF-CUSTODY

Project Information	Client Information	
Site Name: Oakfield Properties	Company Name: The Sigma Group Inc	Project Manager: Stephen Meer
	Office Location: 1300 W Canal St Milwaukee	Client PO:
Site Location: Oakfield, WI	Submitted by: Ryan Adamec	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days
	Email: radamec@thesigmagroup.com	

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ☐ cm ☒ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
04A_SSV01-20230623	6/12	1130	6/23	1050	2.5	Concrete	
04B_SSV01-20230623	6/9	1100	6/23	1010	2.5	Concrete	
~~20~~04B_SSV02-20230623	6/9	1120	6/23	1007	2.5	Concrete	
04C_SSV01_20230623	6/12	1250	6/23	910	3.5	Concrete	
04D_SSV01_20230623	6/9	940	6/23	1110	2.5	Concrete	
04E_SSV01-20230623	6/12	940	6/23	903	3.5	Concrete	
04E_SSV02-20230623	6/12	950	6/23	937	3.5	Concrete	

Special Instructions: PCE, TCE, cis1,2DCE, trans1,2DCE, VC

Relinquished by (signature): [signature]	Date / Time: 6/23/23 2:15 Pm	Received by (signature): [signature]	Date / Time: 6/26/23 12:10
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7650	Beacon Proposal: 230317R01	Analytical Method:
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: ☒ Yes ☐ No ☐ n/a	Custody Seal No: 5504183

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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230317R01

Laboratory Work Order: 0007407

Project Description:
Oakfield Properties
Oakfield, WI

Client PO No.: 21801

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

January 05, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

Table of Contents (continued)

BEACON ENVIRONMENTAL

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007407-01	04C_SSV01_20231222	12/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007407-02	04D_SSV01_20231222	12/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007407-03	04E_SSV01_20231222	12/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007407-04	04E_SSV02_20231222	12/26/2023	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 4
Samples Analyzed: 4

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Case Narrative

U.S. EPA Method 8260C

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ($\mu g/m^3$). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

Passive Soil-Gas Survey Notes

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

Reporting Limits

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

Project Details

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Analytical Results

BEACON ENVIRONMENTAL

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1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Summary of Compound Detections- Mass

Lab Sample ID: 0007407-02

04D_SSV01_20231222
Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Tetrachloroethene	127-18-4	**11**		5.002	10	S23122716.D

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2203A Commerce Road, Suite 1
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1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007407-02

04D_SSV01_20231222
Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Tetrachloroethene	127-18-4	**1.33**		5.002	1.20	S23122716.D

2203A Commerce Road, Suite 1
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Data Summary Table- Mass

Compound	Frequency	LOQ (ng)	Max Value (ng)
Tetrachloroethene	1	10	11

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Data Summary Table- Concentration

Compound	Frequency	LOQ (µg/m³)	Max Value (µg/m³)
Tetrachloroethene	1	1.20	1.33

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Detailed Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Detailed Analytical Results- Mass

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-01

04C_SSV01_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	12/27/2023 21:45	S23122715.D
trans-1,2-Dichloroethene	156-60-5	<10		10	12/27/2023 21:45	S23122715.D
cis-1,2-Dichloroethene	156-59-2	<10		10	12/27/2023 21:45	S23122715.D
Trichloroethene	79-01-6	<10		10	12/27/2023 21:45	S23122715.D
Tetrachloroethene	127-18-4	<10		10	12/27/2023 21:45	S23122715.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*96.8%*	*70-130*		*12/27/2023 21:45*	*S23122715.D*
Surrogate: Toluene-d8	2037-26-5	*88.7%*	*70-130*		*12/27/2023 21:45*	*S23122715.D*
Surrogate: Bromofluorobenzene	460-00-4	*86.7%*	*70-130*		*12/27/2023 21:45*	*S23122715.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-02

04D_SSV01_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	12/27/2023 22:14	S23122716.D
trans-1,2-Dichloroethene	156-60-5	<10		10	12/27/2023 22:14	S23122716.D
cis-1,2-Dichloroethene	156-59-2	<10		10	12/27/2023 22:14	S23122716.D
Trichloroethene	79-01-6	<10		10	12/27/2023 22:14	S23122716.D
Tetrachloroethene	127-18-4	**11**		10	12/27/2023 22:14	S23122716.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*97.0%*	*70-130*		*12/27/2023 22:14*	*S23122716.D*
Surrogate: Toluene-d8	2037-26-5	*88.8%*	*70-130*		*12/27/2023 22:14*	*S23122716.D*
Surrogate: Bromofluorobenzene	460-00-4	*85.3%*	*70-130*		*12/27/2023 22:14*	*S23122716.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-03

04E_SSV01_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	12/27/2023 22:44	S23122717.D
trans-1,2-Dichloroethene	156-60-5	<10		10	12/27/2023 22:44	S23122717.D
cis-1,2-Dichloroethene	156-59-2	<10		10	12/27/2023 22:44	S23122717.D
Trichloroethene	79-01-6	<10		10	12/27/2023 22:44	S23122717.D
Tetrachloroethene	127-18-4	<10		10	12/27/2023 22:44	S23122717.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*93.9%*	*70-130*		*12/27/2023 22:44*	*S23122717.D*
Surrogate: Toluene-d8	2037-26-5	*88.8%*	*70-130*		*12/27/2023 22:44*	*S23122717.D*
Surrogate: Bromofluorobenzene	460-00-4	*84.7%*	*70-130*		*12/27/2023 22:44*	*S23122717.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-04

04E_SSV02_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	12/27/2023 23:13	S23122718.D
trans-1,2-Dichloroethene	156-60-5	<10		10	12/27/2023 23:13	S23122718.D
cis-1,2-Dichloroethene	156-59-2	<10		10	12/27/2023 23:13	S23122718.D
Trichloroethene	79-01-6	<10		10	12/27/2023 23:13	S23122718.D
Tetrachloroethene	127-18-4	<10		10	12/27/2023 23:13	S23122718.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*93.6%*	*70-130*		*12/27/2023 23:13*	*S23122718.D*
Surrogate: Toluene-d8	2037-26-5	*90.7%*	*70-130*		*12/27/2023 23:13*	*S23122718.D*
Surrogate: Bromofluorobenzene	460-00-4	*86.7%*	*70-130*		*12/27/2023 23:13*	*S23122718.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Detailed Analytical Results- Concentration

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-01

04C_SSV01_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	12/27/2023 21:45	S23122715.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/27/2023 21:45	S23122715.D
cis-1,2-Dichloroethene	156-59-2	<0.93		0.93	12/27/2023 21:45	S23122715.D
Trichloroethene	79-01-6	<1.50		1.50	12/27/2023 21:45	S23122715.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/27/2023 21:45	S23122715.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*96.8%*	*70-130*		*12/27/2023 21:45*	*S23122715.D*
Surrogate: Toluene-d8	2037-26-5	*88.7%*	*70-130*		*12/27/2023 21:45*	*S23122715.D*
Surrogate: Bromofluorobenzene	460-00-4	*86.7%*	*70-130*		*12/27/2023 21:45*	*S23122715.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-02

04D_SSV01_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	12/27/2023 22:14	S23122716.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/27/2023 22:14	S23122716.D
cis-1,2-Dichloroethene	156-59-2	<0.93		0.93	12/27/2023 22:14	S23122716.D
Trichloroethene	79-01-6	<1.50		1.50	12/27/2023 22:14	S23122716.D
Tetrachloroethene	127-18-4	**1.33**		1.20	12/27/2023 22:14	S23122716.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*97.0%*	*70-130*		*12/27/2023 22:14*	*S23122716.D*
Surrogate: Toluene-d8	2037-26-5	*88.8%*	*70-130*		*12/27/2023 22:14*	*S23122716.D*
Surrogate: Bromofluorobenzene	460-00-4	*85.3%*	*70-130*		*12/27/2023 22:14*	*S23122716.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-03

04E_SSV01_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	12/27/2023 22:44	S23122717.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/27/2023 22:44	S23122717.D
cis-1,2-Dichloroethene	156-59-2	<0.93		0.93	12/27/2023 22:44	S23122717.D
Trichloroethene	79-01-6	<1.50		1.50	12/27/2023 22:44	S23122717.D
Tetrachloroethene	127-18-4	<1.20		1.20	12/27/2023 22:44	S23122717.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*93.9%*	*70-130*		*12/27/2023 22:44*	*S23122717.D*
Surrogate: Toluene-d8	2037-26-5	*88.8%*	*70-130*		*12/27/2023 22:44*	*S23122717.D*
Surrogate: Bromofluorobenzene	460-00-4	*84.7%*	*70-130*		*12/27/2023 22:44*	*S23122717.D*

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007407-04

04E_SSV02_20231222

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	12/27/2023 23:13	S23122718.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/27/2023 23:13	S23122718.D
cis-1,2-Dichloroethene	156-59-2	<0.93		0.93	12/27/2023 23:13	S23122718.D
Trichloroethene	79-01-6	<1.50		1.50	12/27/2023 23:13	S23122718.D
Tetrachloroethene	127-18-4	<1.21		1.21	12/27/2023 23:13	S23122718.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*93.6%*	*70-130*		*12/27/2023 23:13*	*S23122718.D*
Surrogate: Toluene-d8	2037-26-5	*90.7%*	*70-130*		*12/27/2023 23:13*	*S23122718.D*
Surrogate: Bromofluorobenzene	460-00-4	*86.7%*	*70-130*		*12/27/2023 23:13*	*S23122718.D*

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

QC Information/Summary

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23L090 - Batch: 23L0086 - Instrument: S System - File ID: S23122702.D

23L0086-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.6	10	ng	50.0		109	80-120			
trans-1,2-Dichloroethene	50.6	10	ng	50.0		101	80-120			
cis-1,2-Dichloroethene	48.4	10	ng	50.0		96.8	80-120			
Trichloroethene	48.8	10	ng	50.0		97.5	80-120			
Tetrachloroethene	57.3	10	ng	50.0		115	80-120			
Surrogate: 1,2-DCA-d4	*52.4*		*ng*	50.0		*105*	*70-130*			
Surrogate: Toluene-d8	*51.2*		*ng*	50.0		*102*	*70-130*			
Surrogate: Bromofluorobenzene	*46.9*		*ng*	50.0		*93.8*	*70-130*			

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B23L090 - Batch: 23L0086 - Instrument: S System - File ID: S23122703.D

23L0086-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.609	0.609	µg/m³							U
trans-1,2-Dichloroethene	<1.12	1.12	µg/m³							U
cis-1,2-Dichloroethene	<0.931	0.931	µg/m³							U
Trichloroethene	<1.50	1.50	µg/m³							U
Tetrachloroethene	<1.20	1.20	µg/m³							U
Surrogate: 1,2-DCA-d4	*103*		*ng*	100		*103*	*70-130*			
Surrogate: Toluene-d8	*91.8*		*ng*	100		*91.8*	*70-130*			
Surrogate: Bromofluorobenzene	*77.4*		*ng*	100		*77.4*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23L090 - Batch: 23L0086 - Instrument: S System - File ID: S23122703.D

23L0086-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*103*		*ng*	100		*103*	*70-130*			
Surrogate: Toluene-d8	*91.8*		*ng*	100		*91.8*	*70-130*			
Surrogate: Bromofluorobenzene	*77.4*		*ng*	100		*77.4*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B23L090 - Instrument: S System - File ID: S23122704.D

B23L090-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.3	10	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	51.3	10	ng	50.0		103	70-130			
cis-1,2-Dichloroethene	49.0	10	ng	50.0		98.0	70-130			
Trichloroethene	50.2	10	ng	50.0		100	70-130			
Tetrachloroethene	55.9	10	ng	50.0		112	70-130			
Surrogate: 1,2-DCA-d4	*52.1*		*ng*	50.0		*104*	*70-130*			
Surrogate: Toluene-d8	*50.6*		*ng*	50.0		*101*	*70-130*			
Surrogate: Bromofluorobenzene	*46.0*		*ng*	50.0		*91.9*	*70-130*			

2203A Commerce Road, Suite 1
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Additional QC Information

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Result Calculation Summary (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007407-01 **Sample Name:** 04C_SSV01_20231222						
Vinyl Chloride	20,243	1.00	0.810	U	U	S23122715.D
trans-1,2-Dichloroethene	20,243	1.00	0.440	U	U	S23122715.D
cis-1,2-Dichloroethene	20,243	1.00	0.530	U	U	S23122715.D
Trichloroethene	20,243	1.00	0.330	U	U	S23122715.D
Tetrachloroethene	20,243	1.00	0.410	U	U	S23122715.D
Lab ID: 0007407-02 **Sample Name:** 04D_SSV01_20231222						
Vinyl Chloride	20,260	1.00	0.810	U	U	S23122716.D
trans-1,2-Dichloroethene	20,260	1.00	0.440	U	U	S23122716.D
cis-1,2-Dichloroethene	20,260	1.00	0.530	U	U	S23122716.D
Trichloroethene	20,260	1.00	0.330	U	U	S23122716.D
Tetrachloroethene	20,260	1.00	0.410	11.08	1.33	S23122716.D
Lab ID: 0007407-03 **Sample Name:** 04E_SSV01_20231222						
Vinyl Chloride	20,255	1.00	0.810	U	U	S23122717.D
trans-1,2-Dichloroethene	20,255	1.00	0.440	U	U	S23122717.D
cis-1,2-Dichloroethene	20,255	1.00	0.530	U	U	S23122717.D
Trichloroethene	20,255	1.00	0.330	U	U	S23122717.D
Tetrachloroethene	20,255	1.00	0.410	U	U	S23122717.D
Lab ID: 0007407-04 **Sample Name:** 04E_SSV02_20231222						
Vinyl Chloride	20,233	1.00	0.810	U	U	S23122718.D
trans-1,2-Dichloroethene	20,233	1.00	0.440	U	U	S23122718.D
cis-1,2-Dichloroethene	20,233	1.00	0.530	U	U	S23122718.D
Trichloroethene	20,233	1.00	0.330	U	U	S23122718.D
Tetrachloroethene	20,233	1.00	0.410	U	U	S23122718.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007407
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{U \times t}$$

where: C = concentration ($\mu g/m^3$)
M = mass (ng)
DF = dilution factor
t = sampling time (minutes)
U = compound specific uptake rate

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Method Detection and Reporting Limit Calculations (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m³
Lab ID: 0007407-01 **Sample Name:** 04C_SSV01_20231222					
Vinyl Chloride	20,243	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,243	1.00	0.440	10.0	1.12
cis-1,2-Dichloroethene	20,243	1.00	0.530	10.0	0.93
Trichloroethene	20,243	1.00	0.330	10.0	1.50
Tetrachloroethene	20,243	1.00	0.410	10.0	1.20
Lab ID: 0007407-02 **Sample Name:** 04D_SSV01_20231222					
Vinyl Chloride	20,260	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,260	1.00	0.440	10.0	1.12
cis-1,2-Dichloroethene	20,260	1.00	0.530	10.0	0.93
Trichloroethene	20,260	1.00	0.330	10.0	1.50
Tetrachloroethene	20,260	1.00	0.410	10.0	1.20
Lab ID: 0007407-03 **Sample Name:** 04E_SSV01_20231222					
Vinyl Chloride	20,255	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,255	1.00	0.440	10.0	1.12
cis-1,2-Dichloroethene	20,255	1.00	0.530	10.0	0.93
Trichloroethene	20,255	1.00	0.330	10.0	1.50
Tetrachloroethene	20,255	1.00	0.410	10.0	1.20
Lab ID: 0007407-04 **Sample Name:** 04E_SSV02_20231222					
Vinyl Chloride	20,233	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,233	1.00	0.440	10.0	1.12
cis-1,2-Dichloroethene	20,233	1.00	0.530	10.0	0.93
Trichloroethene	20,233	1.00	0.330	10.0	1.50
Tetrachloroethene	20,233	1.00	0.410	10.0	1.21

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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1.410.838.8780

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Management Records

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or email help@beacon-usa.com

PASSIVE SOIL GAS SAMPLES CHAIN-OF-CUSTODY

Project Information		Client Information	
Site Name: Oakfield Properties		Company Name: The Sigma Group Inc	Project Manager: Steve Meer
		Office Location: 1308 W. Canal St.	Client PO: 21801
Site Location: Oakfield WI		Submitted by: Ryan Adamec	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days
		Email: radamec@thesigmagroup.com	

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ☐ cm ☒ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
04C_SSV01_20231222	12/8/23	825	12/22/23	948	3.5	Concrete	
04D_SSV01_20231222	↓	1015	↓	1155	2.5	↓	
04E_SSV01_20231222		930		1105	3.5		
04E_SSV02_20231222		935		1048	3.5		

Special Instructions: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, VC

Relinquished by (signature):	Date / Time: 12/22/23 330	Received by (signature):	Date / Time: 12/26/23 1046
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7407	Beacon Proposal: 230317R01	Analytical Method:
Courier Name: Fedex	Shipment Condition: Good	Custody Seal Intact: ☐ Yes ☐ No ☒ n/a	Custody Seal No: —

Beacon Environmental
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230317R01

Laboratory Work Order: 0007580

Project Description:
Oakfield Properties
Oakfield, WI

Client PO No.: 21801

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

March 13, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

BEACON ENVIRONMENTAL

526 Underwood Lane
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007580-01	04C_SSV01_20240301	03/04/2024	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007580-02	04D_SSV01_20240301	03/04/2024	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 2
Samples Analyzed: 2

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Case Narrative

U.S. EPA Method 8260C

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ($\mu g/m^3$). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

Passive Soil-Gas Survey Notes

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

Reporting Limits

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

Project Details

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Detailed Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Detailed Analytical Results- Mass

BEACON ENVIRONMENTAL

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1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Lab Sample ID: 0007580-01

04C_SSV01_20240301

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	03/05/2024 10:47	C24030427.D
trans-1,2-Dichloroethene	156-60-5	<10		10	03/05/2024 10:47	C24030427.D
cis-1,2-Dichloroethene	156-59-2	<10		10	03/05/2024 10:47	C24030427.D
Trichloroethene	79-01-6	<10		10	03/05/2024 10:47	C24030427.D
Tetrachloroethene	127-18-4	<10		10	03/05/2024 10:47	C24030427.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*105%*	*70-130*		*03/05/2024 10:47*	*C24030427.D*
Surrogate: Toluene-d8	2037-26-5	*92.2%*	*70-130*		*03/05/2024 10:47*	*C24030427.D*
Surrogate: Bromofluorobenzene	460-00-4	*93.6%*	*70-130*		*03/05/2024 10:47*	*C24030427.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Lab Sample ID: 0007580-02

04D_SSV01_20240301

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	03/05/2024 11:17	C24030428.D
trans-1,2-Dichloroethene	156-60-5	<10		10	03/05/2024 11:17	C24030428.D
cis-1,2-Dichloroethene	156-59-2	<10		10	03/05/2024 11:17	C24030428.D
Trichloroethene	79-01-6	<10		10	03/05/2024 11:17	C24030428.D
Tetrachloroethene	127-18-4	<10		10	03/05/2024 11:17	C24030428.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*101%*	*70-130*		*03/05/2024 11:17*	*C24030428.D*
Surrogate: Toluene-d8	2037-26-5	*92.3%*	*70-130*		*03/05/2024 11:17*	*C24030428.D*
Surrogate: Bromofluorobenzene	460-00-4	*89.6%*	*70-130*		*03/05/2024 11:17*	*C24030428.D*

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Detailed Analytical Results- Concentration

BEACON ENVIRONMENTAL

526 Underwood Lane
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1.410.838.8780

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Lab Sample ID: 0007580-01

04C_SSV01_20240301

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	03/05/2024 10:47	C24030427.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	03/05/2024 10:47	C24030427.D
cis-1,2-Dichloroethene	156-59-2	<0.94		0.94	03/05/2024 10:47	C24030427.D
Trichloroethene	79-01-6	<1.51		1.51	03/05/2024 10:47	C24030427.D
Tetrachloroethene	127-18-4	<1.21		1.21	03/05/2024 10:47	C24030427.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*105%*	*70-130*		*03/05/2024 10:47*	*C24030427.D*
Surrogate: Toluene-d8	2037-26-5	*92.2%*	*70-130*		*03/05/2024 10:47*	*C24030427.D*
Surrogate: Bromofluorobenzene	460-00-4	*93.6%*	*70-130*		*03/05/2024 10:47*	*C24030427.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Lab Sample ID: 0007580-02

04D_SSV01_20240301

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.62		0.62	03/05/2024 11:17	C24030428.D
trans-1,2-Dichloroethene	156-60-5	<1.14		1.14	03/05/2024 11:17	C24030428.D
cis-1,2-Dichloroethene	156-59-2	<0.94		0.94	03/05/2024 11:17	C24030428.D
Trichloroethene	79-01-6	<1.51		1.51	03/05/2024 11:17	C24030428.D
Tetrachloroethene	127-18-4	<1.22		1.22	03/05/2024 11:17	C24030428.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*101%*	*70-130*		*03/05/2024 11:17*	*C24030428.D*
Surrogate: Toluene-d8	2037-26-5	*92.3%*	*70-130*		*03/05/2024 11:17*	*C24030428.D*
Surrogate: Bromofluorobenzene	460-00-4	*89.6%*	*70-130*		*03/05/2024 11:17*	*C24030428.D*

526 Underwood Lane
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1.410.838.8780

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QC Information/Summary

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B051 - Instrument: C System - File ID: Cb24021520.D

B24B051-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	45.3	10	ng	50.0		90.6	70-130			
trans-1,2-Dichloroethene	51.2	10	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	52.5	10	ng	50.0		105	70-130			
Trichloroethene	49.9	10	ng	50.0		99.8	70-130			
Tetrachloroethene	56.1	10	ng	50.0		112	70-130			
Surrogate: 1,2-DCA-d4	*46.0*		*ng*	50.0		*92.0*	*70-130*			
Surrogate: Toluene-d8	*47.9*		*ng*	50.0		*95.7*	*70-130*			
Surrogate: Bromofluorobenzene	*48.7*		*ng*	50.0		*97.4*	*70-130*			

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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B051 - Instrument: C System - File ID: Cb24021524.D

B24B051-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*95.5*		*ng*	100		*95.5*	*70-130*			
Surrogate: Toluene-d8	*92.8*		*ng*	100		*92.8*	*70-130*			
Surrogate: Bromofluorobenzene	*89.6*		*ng*	100		*89.6*	*70-130*			

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Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24C012 - Batch: 24C0012 - Instrument: C System - File ID: C24030405.D

24C0012-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	55.7	10	ng	50.0		111	80-120			
trans-1,2-Dichloroethene	56.8	10	ng	50.0		114	80-120			
cis-1,2-Dichloroethene	51.3	10	ng	50.0		103	80-120			
Trichloroethene	52.1	10	ng	50.0		104	80-120			
Tetrachloroethene	54.6	10	ng	50.0		109	80-120			
Surrogate: 1,2-DCA-d4	*52.0*		*ng*	50.0		*104*	*70-130*			
Surrogate: Toluene-d8	*50.0*		*ng*	50.0		*100*	*70-130*			
Surrogate: Bromofluorobenzene	*45.0*		*ng*	50.0		*90.0*	*70-130*			

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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B24C012 - Batch: 24C0012 - Instrument: C System - File ID: C24030406.D

24C0012-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.613	0.613	µg/m³							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m³							U
cis-1,2-Dichloroethene	<0.938	0.938	µg/m³							U
Trichloroethene	<1.51	1.51	µg/m³							U
Tetrachloroethene	<1.21	1.21	µg/m³							U
Surrogate: 1,2-DCA-d4	*105*		*ng*	100		*105*	*70-130*			
Surrogate: Toluene-d8	*99.3*		*ng*	100		*99.3*	*70-130*			
Surrogate: Bromofluorobenzene	*83.5*		*ng*	100		*83.5*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24C012 - Batch: 24C0012 - Instrument: C System - File ID: C24030406.D

24C0012-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*105*		*ng*	100		*105*	*70-130*			
Surrogate: Toluene-d8	*99.3*		*ng*	100		*99.3*	*70-130*			
Surrogate: Bromofluorobenzene	*83.5*		*ng*	100		*83.5*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24C012 - Instrument: C System - File ID: C24030425.D

B24C012-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	60.2	10	ng	50.0		120	70-130			
trans-1,2-Dichloroethene	63.7	10	ng	50.0		127	70-130			
cis-1,2-Dichloroethene	51.9	10	ng	50.0		104	70-130			
Trichloroethene	51.8	10	ng	50.0		104	70-130			
Tetrachloroethene	54.7	10	ng	50.0		109	70-130			
Surrogate: 1,2-DCA-d4	*51.3*		*ng*	50.0		*103*	*70-130*			
Surrogate: Toluene-d8	*46.7*		*ng*	50.0		*93.4*	*70-130*			
Surrogate: Bromofluorobenzene	*44.6*		*ng*	50.0		*89.2*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Additional QC Information

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Sample Result Calculation Summary (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007580-01 **Sample Name:** 04C_SSV01_20240301						
Vinyl Chloride	20,126	1.00	0.810	U	U	C24030427.D
trans-1,2-Dichloroethene	20,126	1.00	0.440	U	U	C24030427.D
cis-1,2-Dichloroethene	20,126	1.00	0.530	U	U	C24030427.D
Trichloroethene	20,126	1.00	0.330	U	U	C24030427.D
Tetrachloroethene	20,126	1.00	0.410	U	U	C24030427.D
Lab ID: 0007580-02 **Sample Name:** 04D_SSV01_20240301						
Vinyl Chloride	20,017	1.00	0.810	U	U	C24030428.D
trans-1,2-Dichloroethene	20,017	1.00	0.440	U	U	C24030428.D
cis-1,2-Dichloroethene	20,017	1.00	0.530	U	U	C24030428.D
Trichloroethene	20,017	1.00	0.330	U	U	C24030428.D
Tetrachloroethene	20,017	1.00	0.410	U	U	C24030428.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U \times t}$$

where: C = concentration (µg/m^3)
M = mass (ng)
DF = dilution factor
t = sampling time (minutes)
U = compound specific uptake rate

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Method Detection and Reporting Limit Calculations (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m³
Lab ID: 0007580-01 **Sample Name:** 04C_SSV01_20240301					
Vinyl Chloride	20,126	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,126	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,126	1.00	0.530	10.0	0.94
Trichloroethene	20,126	1.00	0.330	10.0	1.51
Tetrachloroethene	20,126	1.00	0.410	10.0	1.21
Lab ID: 0007580-02 **Sample Name:** 04D_SSV01_20240301					
Vinyl Chloride	20,017	1.00	0.810	10.0	0.62
trans-1,2-Dichloroethene	20,017	1.00	0.440	10.0	1.14
cis-1,2-Dichloroethene	20,017	1.00	0.530	10.0	0.94
Trichloroethene	20,017	1.00	0.330	10.0	1.51
Tetrachloroethene	20,017	1.00	0.410	10.0	1.22

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007580
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/13/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

526 Underwood Lane
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1.410.838.8780

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Sample Management Records

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PASSIVE SOIL GAS SAMPLES | CHAIN-OF-CUSTODY

Project Information		Client Information	
Site Name: Oakfield Properties	Company Name: The Sigma Group Inc	Project Manager: ~~21801~~ Stephen Meer	
	Office Location: Milwaukee WI	Client PO: 21801	
Site Location: Oakfield WI	Submitted by: Chelsea Eymann	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days	
	Email: ceymann@thesigmagroup.com		

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ☐ cm ☐ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
04C-SSV01-20240301	2/16/24	10:02	3/1/24	9:28	3.5	Concrete	
04D-SSV01-20240301	2/16/24	11:28	3/1/24	9:05	2.5	Concrete	

Special Instructions:

For Lab Use Only	Beacon Job No: 7580	Beacon Proposal: 230317R01	Analytical Method:

FedEx condition: Good Custody seal: n/a

Nicole Reefe 3/4/24 10:50

Pg 1 of 1

Beacon Environmental
526 Underwood Lane
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230317R01

Laboratory Work Order: 0007548

Project Description:
Oakfield Properties
Oakfield, WI

Client PO No.: 21801

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

February 29, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007548-01	04A_HDS_01_20240219	02/21/2024	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007548-02	04A_HDR_01_20240219	02/21/2024	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			
0007548-03	04A_CBW_01_20240219	02/21/2024	EPA 8260C	Soil Gas
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 3
Samples Analyzed: 3

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Case Narrative

U.S. EPA Method 8260C

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ($\mu g/m^3$). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

Passive Soil-Gas Survey Notes

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

Reporting Limits

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. All reported results are within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

Project Details

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

526 Underwood Lane
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Analytical Results

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Summary of Compound Detections- Mass

Lab Sample ID: 0007548-01 — **04A_HDS_01_20240219** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
cis-1,2-Dichloroethene	156-59-2	**11**		3.157	10	C24022315.D
Trichloroethene	79-01-6	**34**		4.312	10	C24022315.D

Lab Sample ID: 0007548-02 — **04A_HDR_01_20240219** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
cis-1,2-Dichloroethene	156-59-2	**11**		3.163	10	C24022316.D
Trichloroethene	79-01-6	**40**		4.315	10	C24022316.D

Lab Sample ID: 0007548-03 — **04A_CBW_01_20240219** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Trichloroethene	79-01-6	**14**		4.316	10	C24022317.D

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007548-01 — **04A_HDS_01_20240219** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**1.02**		3.157	0.94	C24022315.D
Trichloroethene	79-01-6	**5.20**		4.312	1.51	C24022315.D

Lab Sample ID: 0007548-02 — **04A_HDR_01_20240219** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**1.00**		3.163	0.94	C24022316.D
Trichloroethene	79-01-6	**6.07**		4.315	1.51	C24022316.D

Lab Sample ID: 0007548-03 — **04A_CBW_01_20240219** — Soil Gas — Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Trichloroethene	79-01-6	**2.11**		4.316	1.51	C24022317.D

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Data Summary Table- Mass

Compound	Frequency	LOQ (ng)	Max Value (ng)
cis-1,2-Dichloroethene	2	10	11
Trichloroethene	3	10	40

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Data Summary Table- Concentration

Compound	Frequency	LOQ (µg/m³)	Max Value (µg/m³)
cis-1,2-Dichloroethene	2	0.940	1.02
Trichloroethene	3	1.51	6.07

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Detailed Analytical Results

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Detailed Analytical Results- Mass

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Lab Sample ID: 0007548-01

04A_HDS_01_20240219

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	02/23/2024 18:41	C24022315.D
trans-1,2-Dichloroethene	156-60-5	<10		10	02/23/2024 18:41	C24022315.D
cis-1,2-Dichloroethene	156-59-2	**11**		10	02/23/2024 18:41	C24022315.D
Trichloroethene	79-01-6	**34**		10	02/23/2024 18:41	C24022315.D
Tetrachloroethene	127-18-4	<10		10	02/23/2024 18:41	C24022315.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*102%*	*70-130*		*02/23/2024 18:41*	*C24022315.D*
Surrogate: Toluene-d8	2037-26-5	*85.7%*	*70-130*		*02/23/2024 18:41*	*C24022315.D*
Surrogate: Bromofluorobenzene	460-00-4	*103%*	*70-130*		*02/23/2024 18:41*	*C24022315.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Lab Sample ID: 0007548-02

04A_HDR_01_20240219

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	02/23/2024 19:11	C24022316.D
trans-1,2-Dichloroethene	156-60-5	<10		10	02/23/2024 19:11	C24022316.D
cis-1,2-Dichloroethene	156-59-2	**11**		10	02/23/2024 19:11	C24022316.D
Trichloroethene	79-01-6	**40**		10	02/23/2024 19:11	C24022316.D
Tetrachloroethene	127-18-4	<10		10	02/23/2024 19:11	C24022316.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*98.5%*	*70-130*		*02/23/2024 19:11*	*C24022316.D*
Surrogate: Toluene-d8	2037-26-5	*87.0%*	*70-130*		*02/23/2024 19:11*	*C24022316.D*
Surrogate: Bromofluorobenzene	460-00-4	*104%*	*70-130*		*02/23/2024 19:11*	*C24022316.D*

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526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Lab Sample ID: 0007548-03

04A_CBW_01_20240219

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	02/23/2024 19:40	C24022317.D
trans-1,2-Dichloroethene	156-60-5	<10		10	02/23/2024 19:40	C24022317.D
cis-1,2-Dichloroethene	156-59-2	<10		10	02/23/2024 19:40	C24022317.D
Trichloroethene	79-01-6	**14**		10	02/23/2024 19:40	C24022317.D
Tetrachloroethene	127-18-4	<10		10	02/23/2024 19:40	C24022317.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*100%*	*70-130*		*02/23/2024 19:40*	*C24022317.D*
Surrogate: Toluene-d8	2037-26-5	*85.2%*	*70-130*		*02/23/2024 19:40*	*C24022317.D*
Surrogate: Bromofluorobenzene	460-00-4	*101%*	*70-130*		*02/23/2024 19:40*	*C24022317.D*

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Detailed Analytical Results- Concentration

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Lab Sample ID: 0007548-01

04A_HDS_01_20240219

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	02/23/2024 18:41	C24022315.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	02/23/2024 18:41	C24022315.D
cis-1,2-Dichloroethene	156-59-2	**1.02**		0.94	02/23/2024 18:41	C24022315.D
Trichloroethene	79-01-6	**5.20**		1.51	02/23/2024 18:41	C24022315.D
Tetrachloroethene	127-18-4	<1.21		1.21	02/23/2024 18:41	C24022315.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*102%*	*70-130*		*02/23/2024 18:41*	*C24022315.D*
Surrogate: Toluene-d8	2037-26-5	*85.7%*	*70-130*		*02/23/2024 18:41*	*C24022315.D*
Surrogate: Bromofluorobenzene	460-00-4	*103%*	*70-130*		*02/23/2024 18:41*	*C24022315.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Lab Sample ID: 0007548-02

04A_HDR_01_20240219

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	02/23/2024 19:11	C24022316.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	02/23/2024 19:11	C24022316.D
cis-1,2-Dichloroethene	156-59-2	**1.00**		0.94	02/23/2024 19:11	C24022316.D
Trichloroethene	79-01-6	**6.07**		1.51	02/23/2024 19:11	C24022316.D
Tetrachloroethene	127-18-4	<1.21		1.21	02/23/2024 19:11	C24022316.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*98.5%*	*70-130*		*02/23/2024 19:11*	*C24022316.D*
Surrogate: Toluene-d8	2037-26-5	*87.0%*	*70-130*		*02/23/2024 19:11*	*C24022316.D*
Surrogate: Bromofluorobenzene	460-00-4	*104%*	*70-130*		*02/23/2024 19:11*	*C24022316.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Lab Sample ID: 0007548-03

04A_CBW_01_20240219

Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.61		0.61	02/23/2024 19:40	C24022317.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	02/23/2024 19:40	C24022317.D
cis-1,2-Dichloroethene	156-59-2	<0.94		0.94	02/23/2024 19:40	C24022317.D
Trichloroethene	79-01-6	**2.11**		1.51	02/23/2024 19:40	C24022317.D
Tetrachloroethene	127-18-4	<1.21		1.21	02/23/2024 19:40	C24022317.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*100%*	*70-130*		*02/23/2024 19:40*	*C24022317.D*
Surrogate: Toluene-d8	2037-26-5	*85.2%*	*70-130*		*02/23/2024 19:40*	*C24022317.D*
Surrogate: Bromofluorobenzene	460-00-4	*101%*	*70-130*		*02/23/2024 19:40*	*C24022317.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

QC Information/Summary

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B067 - Batch: 24B0053 - Instrument: C System - File ID: C24022302.D

24B0053-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.1	10	ng	50.0		106	80-120			
trans-1,2-Dichloroethene	53.8	10	ng	50.0		108	80-120			
cis-1,2-Dichloroethene	49.5	10	ng	50.0		99.0	80-120			
Trichloroethene	49.5	10	ng	50.0		99.1	80-120			
Tetrachloroethene	50.8	10	ng	50.0		102	80-120			
Surrogate: 1,2-DCA-d4	*49.9*		*ng*	50.0		*99.8*	*70-130*			
Surrogate: Toluene-d8	*45.7*		*ng*	50.0		*91.4*	*70-130*			
Surrogate: Bromofluorobenzene	*49.9*		*ng*	50.0		*99.9*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B24B067 - Batch: 24B0053 - Instrument: C System - File ID: C24022303.D

24B0053-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.614	0.614	µg/m³							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m³							U
cis-1,2-Dichloroethene	<0.938	0.938	µg/m³							U
Trichloroethene	<1.51	1.51	µg/m³							U
Tetrachloroethene	<1.21	1.21	µg/m³							U
Surrogate: 1,2-DCA-d4	*99.0*		*ng*	100		*99.0*	*70-130*			
Surrogate: Toluene-d8	*91.3*		*ng*	100		*91.3*	*70-130*			
Surrogate: Bromofluorobenzene	*93.5*		*ng*	100		*93.5*	*70-130*			

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B067 - Batch: 24B0053 - Instrument: C System - File ID: C24022303.D

24B0053-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
Surrogate: 1,2-DCA-d4	*99.0*		*ng*	100		*99.0*	*70-130*			
Surrogate: Toluene-d8	*91.3*		*ng*	100		*91.3*	*70-130*			
Surrogate: Bromofluorobenzene	*93.5*		*ng*	100		*93.5*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B067 - Instrument: C System - File ID: C24022304.D

B24B067-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	60.3	10	ng	50.0		121	70-130			
trans-1,2-Dichloroethene	54.8	10	ng	50.0		110	70-130			
cis-1,2-Dichloroethene	49.0	10	ng	50.0		97.9	70-130			
Trichloroethene	51.3	10	ng	50.0		103	70-130			
Tetrachloroethene	53.7	10	ng	50.0		107	70-130			
Surrogate: 1,2-DCA-d4	*47.5*		*ng*	50.0		*95.0*	*70-130*			
Surrogate: Toluene-d8	*45.3*		*ng*	50.0		*90.6*	*70-130*			
Surrogate: Bromofluorobenzene	*46.7*		*ng*	50.0		*93.3*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Additional QC Information

526 Underwood Lane
Bel Air, MD 21014 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Sample Result Calculation Summary (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007548-01 **Sample Name:** 04A_HDS_01_20240219						
Vinyl Chloride	20,115	1.00	0.810	U	U	C24022315.D
trans-1,2-Dichloroethene	20,115	1.00	0.440	U	U	C24022315.D
cis-1,2-Dichloroethene	20,115	1.00	0.530	10.84	1.02	C24022315.D
Trichloroethene	20,115	1.00	0.330	34.49	5.20	C24022315.D
Tetrachloroethene	20,115	1.00	0.410	U	U	C24022315.D
Lab ID: 0007548-02 **Sample Name:** 04A_HDR_01_20240219						
Vinyl Chloride	20,117	1.00	0.810	U	U	C24022316.D
trans-1,2-Dichloroethene	20,117	1.00	0.440	U	U	C24022316.D
cis-1,2-Dichloroethene	20,117	1.00	0.530	10.63	1.00	C24022316.D
Trichloroethene	20,117	1.00	0.330	40.30	6.07	C24022316.D
Tetrachloroethene	20,117	1.00	0.410	U	U	C24022316.D
Lab ID: 0007548-03 **Sample Name:** 04A_CBW_01_20240219						
Vinyl Chloride	20,110	1.00	0.810	U	U	C24022317.D
trans-1,2-Dichloroethene	20,110	1.00	0.440	U	U	C24022317.D
cis-1,2-Dichloroethene	20,110	1.00	0.530	U	U	C24022317.D
Trichloroethene	20,110	1.00	0.330	14.01	2.11	C24022317.D
Tetrachloroethene	20,110	1.00	0.410	U	U	C24022317.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U \times t}$$

where: C = concentration (µg/m^3)
M = mass (ng)
DF = dilution factor
t = sampling time (minutes)
U = compound specific uptake rate

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Method Detection and Reporting Limit Calculations (Concentration)

EPA 8260C

Analyte	**t** Sampling Time minutes	**DF** Dilution Factor	**U** Uptake Rate	**M** Initial LOQ ng	**C** Calculated LOQ µg/m³
Lab ID: 0007548-01 **Sample Name:** 04A_HDS_01_20240219					
Vinyl Chloride	20,115	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,115	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,115	1.00	0.530	10.0	0.94
Trichloroethene	20,115	1.00	0.330	10.0	1.51
Tetrachloroethene	20,115	1.00	0.410	10.0	1.21
Lab ID: 0007548-02 **Sample Name:** 04A_HDR_01_20240219					
Vinyl Chloride	20,117	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,117	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,117	1.00	0.530	10.0	0.94
Trichloroethene	20,117	1.00	0.330	10.0	1.51
Tetrachloroethene	20,117	1.00	0.410	10.0	1.21
Lab ID: 0007548-03 **Sample Name:** 04A CBW 01 20240219					
Vinyl Chloride	20,110	1.00	0.810	10.0	0.61
trans-1,2-Dichloroethene	20,110	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,110	1.00	0.530	10.0	0.94
Trichloroethene	20,110	1.00	0.330	10.0	1.51
Tetrachloroethene	20,110	1.00	0.410	10.0	1.21

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007548
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 02/29/2024

Sample Management Records

BEACON ENVIRONMENTAL
526 Underwood Lane
Bel Air, Maryland 21014 USA
Need help? Call 1-410-838-8780
or email help@beacon-usa.com

PASSIVE SOIL GAS SAMPLES | CHAIN-OF-CUSTODY

Project Information		Client Information	
Site Name: Oakfield Properties	Company Name: The Sigma Group Inc	Project Manager: Stephen Meer	
	Office Location: Milwaukee WI	Client PO: 21801	
Site Location: Oakfield, WI	Submitted by: Chelsea Erpenbach	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days	
	Email: cerpenbach@thesigmagroup.com		

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ☐ cm ☒ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
04A_HDS_01_20240219	2/5/24	1145	2/19/24	1100	0	NA	
04A_HDR_01_20240219	2/5/24	1153	2/19/24	1110	0	NA	
04A_CBW_01_20240219	2/5/24	1220	2/19/24	1130	3	Concrete	

Special Instructions:

Relinquished by (signature): CErpenbach	Date / Time: 02/20/2024 200	Received by (signature): Nicole Reif	Date / Time: 2/21/24 12:33
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7548	Beacon Proposal: 230317R01	Analytical Method:
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: ☒ Yes ☐ No ☐ n/a	Custody Seal No: 5262037

Appendix J

Indoor Air Laboratory Analytical Reports

Beacon Environmental
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230317R02

Laboratory Work Order: 0007048

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

July 06, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

Table of Contents (continued)

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007048-01	04A_1A01_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-02	04A_1A02_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-03	04A_SUMP01_20230623	06/26/2023	TO-17 (Passive)	Sump Headspace
Sampler Type:	Sorbent Tube			
0007048-04	04B_1A01_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-05	04B_1A02_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-06	04B_1A03_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-07	04C_1A01_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-08	04C_1A02_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-09	04C_SUMP01_20230623	06/26/2023	TO-17 (Passive)	Sump Headspace
Sampler Type:	Sorbent Tube			
0007048-10	04D_1A01_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-11	04D_1A02_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-12	04D_1A03_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-13	04E_1A01_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-14	04E_1A02_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-15	04E_1A03_20230623	06/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007048-16	04_0A01_20230623	06/26/2023	TO-17 (Passive)	Ambient Air
Sampler Type:	Sorbent Tube			

Project Completeness

Samples Received: 16
Samples Analyzed: 16

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Forest Hill, MD 21050 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

STATEMENT OF DATA QUALIFICATIONS

Qualifier Summary:

Analysis: TO-17 (Passive) / Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube

0007048-07 **04C_1A01_20230623**

Compound	Q	Q Explanation
1,2-DCA-d4	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Chlorobenzene-d5	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
cis-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Fluorobenzene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Tetrachloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Toluene-d8	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
trans-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Trichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Vinyl Chloride	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.

0007048-08 **04C_1A02_20230623**

Compound	Q	Q Explanation
1,2-DCA-d4	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Chlorobenzene-d5	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
cis-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Fluorobenzene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Tetrachloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Toluene-d8	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
trans-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Trichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Vinyl Chloride	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.

0007048-09 **04C_SUMP01_20230623**

Compound	Q	Q Explanation
1,2-DCA-d4	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Chlorobenzene-d5	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
cis-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Fluorobenzene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Tetrachloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Toluene-d8	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
trans-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Trichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Vinyl Chloride	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.

0007048-10 **04D_1A01_20230623**

Compound	Q	Q Explanation
1,2-DCA-d4	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Chlorobenzene-d5	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
cis-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Fluorobenzene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Tetrachloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Toluene-d8	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
trans-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Trichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Vinyl Chloride	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

0007048-11 **04D_1A02_20230623**

Compound	Q	Q Explanation
1,2-DCA-d4	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Chlorobenzene-d5	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
cis-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Fluorobenzene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Tetrachloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Toluene-d8	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
trans-1,2-Dichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Trichloroethene	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
Vinyl Chloride	D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Concentration

Lab Sample ID: 0007048-01 — **04A_1A01_20230623** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
trans-1,2-Dichloroethene	156-60-5	**0.892**	J	2.746	0.896	0.224	Kc23062705.D
cis-1,2-Dichloroethene	156-59-2	**8.63**		3.685	0.896	0.224	Kc23062705.D
Trichloroethene	79-01-6	**10.2**		5.917	0.965	0.241	Kc23062705.D

Lab Sample ID: 0007048-02 — **04A_1A02_20230623** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
trans-1,2-Dichloroethene	156-60-5	**0.256**	J	2.746	0.896	0.224	Kc23062706.D
cis-1,2-Dichloroethene	156-59-2	**2.42**		3.682	0.896	0.224	Kc23062706.D
Trichloroethene	79-01-6	**2.57**		5.913	0.965	0.241	Kc23062706.D

Lab Sample ID: 0007048-03 — **04A_SUMP01_20230623** — Sump Headspace — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
trans-1,2-Dichloroethene	156-60-5	**1.97**		2.746	0.897	0.224	Kc23062707.D
cis-1,2-Dichloroethene	156-59-2	**17.6**		3.682	0.897	0.224	Kc23062707.D
Trichloroethene	79-01-6	**16.2**		5.913	0.966	0.242	Kc23062707.D

Lab Sample ID: 0007048-04 — **04B_1A01_20230623** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
trans-1,2-Dichloroethene	156-60-5	**0.495**	J	2.743	0.704	0.176	Kc23062708.D
cis-1,2-Dichloroethene	156-59-2	**12.9**		3.682	0.704	0.176	Kc23062708.D
Trichloroethene	79-01-6	**4.70**		5.913	0.758	0.189	Kc23062708.D

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Concentration

Lab Sample ID: 0007048-05 — **04B_1A02_20230623** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**1.90**		3.682	0.705	0.176	Kc23062709.D

Lab Sample ID: 0007048-06 — **04B_1A03_20230623** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Vinyl Chloride	75-01-4	**0.537**	J	1.584	0.882	0.220	Kc23062710.D
trans-1,2-Dichloroethene	156-60-5	**0.540**	J	2.743	0.706	0.176	Kc23062710.D
cis-1,2-Dichloroethene	156-59-2	**13.7**		3.682	0.706	0.176	Kc23062710.D
Trichloroethene	79-01-6	**5.02**		5.913	0.760	0.190	Kc23062710.D

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Data Summary Table- Concentration

Compound	Frequency	LOD (µg/m³)	Max Value (µg/m³)
Vinyl Chloride	1	0.220	0.537
trans-1,2-Dichloroethene	5	0.176	1.97
cis-1,2-Dichloroethene	6	0.176	17.6
Trichloroethene	5	0.189	16.2

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Detailed Analytical Results

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-01

04A_1A01_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.280	U	0.280	1.12	06/28/2023 00:57	Kc23062705.D
trans-1,2-Dichloroethene	156-60-5	**0.892**	J	0.224	0.896	06/28/2023 00:57	Kc23062705.D
cis-1,2-Dichloroethene	156-59-2	**8.63**		0.224	0.896	06/28/2023 00:57	Kc23062705.D
Trichloroethene	79-01-6	**10.2**		0.241	0.965	06/28/2023 00:57	Kc23062705.D
Tetrachloroethene	127-18-4	<0.285	U	0.285	1.14	06/28/2023 00:57	Kc23062705.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*86.6%*	*70-130*		*06/28/2023 00:57*	*Kc23062705.D*
Surrogate: Toluene-d8	2037-26-5	*94.2%*	*70-130*		*06/28/2023 00:57*	*Kc23062705.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-02

04A_1A02_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.280	U	0.280	1.12	06/28/2023 01:26	Kc23062706.D
trans-1,2-Dichloroethene	156-60-5	**0.256**	J	0.224	0.896	06/28/2023 01:26	Kc23062706.D
cis-1,2-Dichloroethene	156-59-2	**2.42**		0.224	0.896	06/28/2023 01:26	Kc23062706.D
Trichloroethene	79-01-6	**2.57**		0.241	0.965	06/28/2023 01:26	Kc23062706.D
Tetrachloroethene	127-18-4	<0.285	U	0.285	1.14	06/28/2023 01:26	Kc23062706.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*93.6%*	*70-130*		*06/28/2023 01:26*	*Kc23062706.D*
Surrogate: Toluene-d8	2037-26-5	*97.7%*	*70-130*		*06/28/2023 01:26*	*Kc23062706.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-03

04A_SUMP01_20230623

Sump Headspace

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.280	U	0.280	1.12	06/28/2023 01:54	Kc23062707.D
trans-1,2-Dichloroethene	156-60-5	**1.97**		0.224	0.897	06/28/2023 01:54	Kc23062707.D
cis-1,2-Dichloroethene	156-59-2	**17.6**		0.224	0.897	06/28/2023 01:54	Kc23062707.D
Trichloroethene	79-01-6	**16.2**		0.242	0.966	06/28/2023 01:54	Kc23062707.D
Tetrachloroethene	127-18-4	<0.285	U	0.285	1.14	06/28/2023 01:54	Kc23062707.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*87.0%*	*70-130*		*06/28/2023 01:54*	*Kc23062707.D*
Surrogate: Toluene-d8	2037-26-5	*86.6%*	*70-130*		*06/28/2023 01:54*	*Kc23062707.D*

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-04

04B_1A01_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.220	U	0.220	0.880	06/28/2023 02:23	Kc23062708.D
trans-1,2-Dichloroethene	156-60-5	**0.495**	J	0.176	0.704	06/28/2023 02:23	Kc23062708.D
cis-1,2-Dichloroethene	156-59-2	**12.9**		0.176	0.704	06/28/2023 02:23	Kc23062708.D
Trichloroethene	79-01-6	**4.70**		0.189	0.758	06/28/2023 02:23	Kc23062708.D
Tetrachloroethene	127-18-4	<0.224	U	0.224	0.896	06/28/2023 02:23	Kc23062708.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*88.0%*	*70-130*		*06/28/2023 02:23*	*Kc23062708.D*
Surrogate: Toluene-d8	2037-26-5	*83.8%*	*70-130*		*06/28/2023 02:23*	*Kc23062708.D*

2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-05

04B_1A02_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.220	U	0.220	0.881	06/28/2023 02:51	Kc23062709.D
trans-1,2-Dichloroethene	156-60-5	<0.176	U	0.176	0.705	06/28/2023 02:51	Kc23062709.D
cis-1,2-Dichloroethene	156-59-2	**1.90**		0.176	0.705	06/28/2023 02:51	Kc23062709.D
Trichloroethene	79-01-6	<0.190	U	0.190	0.759	06/28/2023 02:51	Kc23062709.D
Tetrachloroethene	127-18-4	<0.224	U	0.224	0.897	06/28/2023 02:51	Kc23062709.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*90.5%*	*70-130*		*06/28/2023 02:51*	*Kc23062709.D*
Surrogate: Toluene-d8	2037-26-5	*96.8%*	*70-130*		*06/28/2023 02:51*	*Kc23062709.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-06

04B_1A03_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	**0.537**	J	0.220	0.882	06/28/2023 03:20	Kc23062710.D
trans-1,2-Dichloroethene	156-60-5	**0.540**	J	0.176	0.706	06/28/2023 03:20	Kc23062710.D
cis-1,2-Dichloroethene	156-59-2	**13.7**		0.176	0.706	06/28/2023 03:20	Kc23062710.D
Trichloroethene	79-01-6	**5.02**		0.190	0.760	06/28/2023 03:20	Kc23062710.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.898	06/28/2023 03:20	Kc23062710.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*106%*	*70-130*		*06/28/2023 03:20*	*Kc23062710.D*
Surrogate: Toluene-d8	2037-26-5	*99.3%*	*70-130*		*06/28/2023 03:20*	*Kc23062710.D*

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-07

04C_1A01_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<2.79	D2, U, D	2.79	11.1	06/28/2023 07:19	Kc23062711.D
trans-1,2-Dichloroethene	156-60-5	<2.23	D2, U, D	2.23	8.91	06/28/2023 07:19	Kc23062711.D
cis-1,2-Dichloroethene	156-59-2	<2.23	D2, U, D	2.23	8.91	06/28/2023 07:19	Kc23062711.D
Trichloroethene	79-01-6	<2.40	D2, U, D	2.40	9.60	06/28/2023 07:19	Kc23062711.D
Tetrachloroethene	127-18-4	<2.84	D2, U, D	2.84	11.3	06/28/2023 07:19	Kc23062711.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*110%*	*70-130*	*D2*	*06/28/2023 07:19*	*Kc23062711.D*
Surrogate: Toluene-d8	2037-26-5	*108%*	*70-130*	*D2*	*06/28/2023 07:19*	*Kc23062711.D*

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-08

04C_1A02_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<2.79	D2, U, D	2.79	11.1	06/28/2023 07:47	Kc23062712.D
trans-1,2-Dichloroethene	156-60-5	<2.23	D2, U, D	2.23	8.92	06/28/2023 07:47	Kc23062712.D
cis-1,2-Dichloroethene	156-59-2	<2.23	D2, U, D	2.23	8.92	06/28/2023 07:47	Kc23062712.D
Trichloroethene	79-01-6	<2.40	D2, U, D	2.40	9.61	06/28/2023 07:47	Kc23062712.D
Tetrachloroethene	127-18-4	<2.84	D2, U, D	2.84	11.4	06/28/2023 07:47	Kc23062712.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*107%*	*70-130*	*D2*	*06/28/2023 07:47*	*Kc23062712.D*
Surrogate: Toluene-d8	2037-26-5	*105%*	*70-130*	*D2*	*06/28/2023 07:47*	*Kc23062712.D*

BEACON ENVIRONMENTAL

2203A Commerce Road, Suite 1
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1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-09

04C_SUMP01_20230623

Sump Headspace

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<2.78	D2, U, D	2.78	11.1	06/28/2023 08:16	Kc23062713.D
trans-1,2-Dichloroethene	156-60-5	<2.23	D2, U, D	2.23	8.91	06/28/2023 08:16	Kc23062713.D
cis-1,2-Dichloroethene	156-59-2	<2.23	D2, U, D	2.23	8.91	06/28/2023 08:16	Kc23062713.D
Trichloroethene	79-01-6	<2.40	D2, U, D	2.40	9.59	06/28/2023 08:16	Kc23062713.D
Tetrachloroethene	127-18-4	<2.83	D2, U, D	2.83	11.3	06/28/2023 08:16	Kc23062713.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*98.9%*	*70-130*	*D2*	*06/28/2023 08:16*	*Kc23062713.D*
Surrogate: Toluene-d8	2037-26-5	*105%*	*70-130*	*D2*	*06/28/2023 08:16*	*Kc23062713.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-10

04D_1A01_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<2.14	D2, U, D	2.14	8.58	06/28/2023 08:45	Kc23062714.D
trans-1,2-Dichloroethene	156-60-5	<1.72	D2, U, D	1.72	6.86	06/28/2023 08:45	Kc23062714.D
cis-1,2-Dichloroethene	156-59-2	<1.72	D2, U, D	1.72	6.86	06/28/2023 08:45	Kc23062714.D
Trichloroethene	79-01-6	<1.85	D2, U, D	1.85	7.39	06/28/2023 08:45	Kc23062714.D
Tetrachloroethene	127-18-4	<2.18	D2, U, D	2.18	8.73	06/28/2023 08:45	Kc23062714.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*99.4%*	*70-130*	*D2*	*06/28/2023 08:45*	*Kc23062714.D*
Surrogate: Toluene-d8	2037-26-5	*99.6%*	*70-130*	*D2*	*06/28/2023 08:45*	*Kc23062714.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-11

04D_1A02_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<2.14	D2, U, D	2.14	8.56	06/28/2023 10:05	Kc23062717.D
trans-1,2-Dichloroethene	156-60-5	<1.71	D2, U, D	1.71	6.85	06/28/2023 10:05	Kc23062717.D
cis-1,2-Dichloroethene	156-59-2	<1.71	D2, U, D	1.71	6.85	06/28/2023 10:05	Kc23062717.D
Trichloroethene	79-01-6	<1.84	D2, U, D	1.84	7.38	06/28/2023 10:05	Kc23062717.D
Tetrachloroethene	127-18-4	<2.18	D2, U, D	2.18	8.72	06/28/2023 10:05	Kc23062717.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*102%*	*70-130*	*D2*	*06/28/2023 10:05*	*Kc23062717.D*
Surrogate: Toluene-d8	2037-26-5	*106%*	*70-130*	*D2*	*06/28/2023 10:05*	*Kc23062717.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-12

04D_1A03_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.218	U	0.218	0.873	06/28/2023 10:34	Kc23062718.D
trans-1,2-Dichloroethene	156-60-5	<0.175	U	0.175	0.699	06/28/2023 10:34	Kc23062718.D
cis-1,2-Dichloroethene	156-59-2	<0.175	U	0.175	0.699	06/28/2023 10:34	Kc23062718.D
Trichloroethene	79-01-6	<0.188	U	0.188	0.752	06/28/2023 10:34	Kc23062718.D
Tetrachloroethene	127-18-4	<0.222	U	0.222	0.889	06/28/2023 10:34	Kc23062718.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.0%*	*70-130*		*06/28/2023 10:34*	*Kc23062718.D*
Surrogate: Toluene-d8	2037-26-5	*96.0%*	*70-130*		*06/28/2023 10:34*	*Kc23062718.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-13

04E_1A01_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.279	U	0.279	1.12	06/28/2023 11:02	Kc23062719.D
trans-1,2-Dichloroethene	156-60-5	<0.223	U	0.223	0.893	06/28/2023 11:02	Kc23062719.D
cis-1,2-Dichloroethene	156-59-2	<0.223	U	0.223	0.893	06/28/2023 11:02	Kc23062719.D
Trichloroethene	79-01-6	<0.241	U	0.241	0.962	06/28/2023 11:02	Kc23062719.D
Tetrachloroethene	127-18-4	<0.284	U	0.284	1.14	06/28/2023 11:02	Kc23062719.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*100%*	*70-130*		*06/28/2023 11:02*	*Kc23062719.D*
Surrogate: Toluene-d8	2037-26-5	*99.9%*	*70-130*		*06/28/2023 11:02*	*Kc23062719.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-14

04E_1A02_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.280	U	0.280	1.12	06/28/2023 11:31	Kc23062720.D
trans-1,2-Dichloroethene	156-60-5	<0.224	U	0.224	0.895	06/28/2023 11:31	Kc23062720.D
cis-1,2-Dichloroethene	156-59-2	<0.224	U	0.224	0.895	06/28/2023 11:31	Kc23062720.D
Trichloroethene	79-01-6	<0.241	U	0.241	0.964	06/28/2023 11:31	Kc23062720.D
Tetrachloroethene	127-18-4	<0.285	U	0.285	1.14	06/28/2023 11:31	Kc23062720.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.9%*	*70-130*		*06/28/2023 11:31*	*Kc23062720.D*
Surrogate: Toluene-d8	2037-26-5	*94.9%*	*70-130*		*06/28/2023 11:31*	*Kc23062720.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-15

04E_1A03_20230623

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.280	U	0.280	1.12	06/28/2023 12:00	Kc23062721.D
trans-1,2-Dichloroethene	156-60-5	<0.224	U	0.224	0.895	06/28/2023 12:00	Kc23062721.D
cis-1,2-Dichloroethene	156-59-2	<0.224	U	0.224	0.895	06/28/2023 12:00	Kc23062721.D
Trichloroethene	79-01-6	<0.241	U	0.241	0.964	06/28/2023 12:00	Kc23062721.D
Tetrachloroethene	127-18-4	<0.285	U	0.285	1.14	06/28/2023 12:00	Kc23062721.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*101%*	*70-130*		*06/28/2023 12:00*	*Kc23062721.D*
Surrogate: Toluene-d8	2037-26-5	*102%*	*70-130*		*06/28/2023 12:00*	*Kc23062721.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007048-16

04_0A01_20230623

Ambient Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.216	U	0.216	0.866	06/28/2023 12:29	Kc23062722.D
trans-1,2-Dichloroethene	156-60-5	<0.173	U	0.173	0.693	06/28/2023 12:29	Kc23062722.D
cis-1,2-Dichloroethene	156-59-2	<0.173	U	0.173	0.693	06/28/2023 12:29	Kc23062722.D
Trichloroethene	79-01-6	<0.187	U	0.187	0.746	06/28/2023 12:29	Kc23062722.D
Tetrachloroethene	127-18-4	<0.220	U	0.220	0.882	06/28/2023 12:29	Kc23062722.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*73.7%*	*70-130*		*06/28/2023 12:29*	*Kc23062722.D*
Surrogate: Toluene-d8	2037-26-5	*74.2%*	*70-130*		*06/28/2023 12:29*	*Kc23062722.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

QC Information/Summary

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23E056 - Instrument: K System - File ID: Kb23052215.D

B23E056-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.4	10	2.5	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	54.8	10	2.5	ng	50.0		110	70-130			
cis-1,2-Dichloroethene	50.8	10	2.5	ng	50.0		102	70-130			
Trichloroethene	55.8	10	2.5	ng	50.0		112	70-130			
Tetrachloroethene	58.3	10	2.5	ng	50.0		117	70-130			
Surrogate: 1,2-DCA-d4	*49.8*			*ng*	50.0		*99.6*	*70-130*			
Surrogate: Toluene-d8	*49.5*			*ng*	50.0		*99.0*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23E056 - Instrument: K System - File ID: Kb23052218.D

B23E056-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*87.9*			*ng*	100		*87.9*	*70-130*			
Surrogate: Toluene-d8	*100*			*ng*	100		*100*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Batch: 23F0106 - Instrument: K System - File ID: Kc23062702.D

23F0106-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.9	10	2.5	ng	50.0		104	70-130			
trans-1,2-Dichloroethene	53.5	10	2.5	ng	50.0		107	70-130			
cis-1,2-Dichloroethene	50.2	10	2.5	ng	50.0		100	70-130			
Trichloroethene	47.3	10	2.5	ng	50.0		94.6	70-130			
Tetrachloroethene	56.2	10	2.5	ng	50.0		112	70-130			
Surrogate: 1,2-DCA-d4	*53.6*			*ng*	50.0		*107*	*70-130*			
Surrogate: Toluene-d8	*51.8*			*ng*	50.0		*104*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Batch: 23F0106 - Instrument: K System - File ID: Kc23062703.D

23F0106-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.217	0.866	0.217	µg/m³							U
trans-1,2-Dichloroethene	<0.173	0.693	0.173	µg/m³							U
cis-1,2-Dichloroethene	<0.173	0.693	0.173	µg/m³							U
Trichloroethene	<0.187	0.746	0.187	µg/m³							U
Tetrachloroethene	<0.220	0.882	0.220	µg/m³							U
Surrogate: 1,2-DCA-d4	*101*			*ng*	100		*101*	*70-130*			
Surrogate: Toluene-d8	*104*			*ng*	100		*104*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Instrument: K System - File ID: Kc23062704.D

B23F112-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.0	10	2.5	ng	50.0		106	70-130			
trans-1,2-Dichloroethene	55.2	10	2.5	ng	50.0		110	70-130			
cis-1,2-Dichloroethene	51.0	10	2.5	ng	50.0		102	70-130			
Trichloroethene	49.1	10	2.5	ng	50.0		98.3	70-130			
Tetrachloroethene	57.4	10	2.5	ng	50.0		115	70-130			
Surrogate: 1,2-DCA-d4	*52.9*			*ng*	50.0		*106*	*70-130*			
Surrogate: Toluene-d8	*51.8*			*ng*	50.0		*104*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Instrument: K System - File ID: Kc23062715.D

B23F112-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.4	10	2.5	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	54.5	10	2.5	ng	50.0		109	70-130			
cis-1,2-Dichloroethene	50.7	10	2.5	ng	50.0		101	70-130			
Trichloroethene	49.1	10	2.5	ng	50.0		98.3	70-130			
Tetrachloroethene	58.8	10	2.5	ng	50.0		118	70-130			
Surrogate: 1,2-DCA-d4	*52.5*			*ng*	50.0		*105*	*70-130*			
Surrogate: Toluene-d8	*54.2*			*ng*	50.0		*108*	*70-130*			

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Instrument: K System - File ID: Kc23062716.D

B23F112-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*96.1*			*ng*	100		*96.1*	*70-130*			
Surrogate: Toluene-d8	*104*			*ng*	100		*104*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Instrument: K System - File ID: Kc23062723.D

B23F112-CCV2 (Continuing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.5	10	2.5	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	54.5	10	2.5	ng	50.0		109	70-130			
cis-1,2-Dichloroethene	49.9	10	2.5	ng	50.0		99.8	70-130			
Trichloroethene	52.2	10	2.5	ng	50.0		104	70-130			
Tetrachloroethene	58.0	10	2.5	ng	50.0		116	70-130			
Surrogate: 1,2-DCA-d4	*52.2*			*ng*	50.0		*104*	*70-130*			
Surrogate: Toluene-d8	*53.8*			*ng*	50.0		*108*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23F112 - Instrument: K System - File ID: Kc23062724.D

B23F112-CCB2 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*81.0*			*ng*	100		*81.0*	*70-130*			
Surrogate: Toluene-d8	*105*			*ng*	100		*105*	*70-130*			

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23F0106-BS1 File ID: Kc23062702.D Analyzed: 6/28/23 0:27

LCSD: B23F112-ICV1 File ID: Kc23062704.D Analyzed: 6/27/23 23:36

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	51.89	103.78		50	52.98	106.00	70-130	2.08	30	
trans-1,2-Dichloroethene	156-60-5	53.46	106.92		50	55.22	110.00	70-130	3.24	30	
cis-1,2-Dichloroethene	156-59-2	50.22	100.44		50	51.01	102.00	70-130	1.56	30	
Trichloroethene	79-01-6	47.31	94.62		50	49.14	98.30	70-130	3.79	30	
Tetrachloroethene	127-18-4	56.22	112.44		50	57.35	115.00	70-130	1.99	30	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Additional QC Information

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007048-01 **Sample Name:** 04A_1A01_20230623					**x̄ Temp (°C):** 23.33	
Vinyl Chloride	15,758	1.00	0.566	U	U	Kc23062705.D
trans-1,2-Dichloroethene	15,758	1.00	0.708	9.95	0.892	Kc23062705.D
cis-1,2-Dichloroethene	15,758	1.00	0.708	96.25	8.63	Kc23062705.D
Trichloroethene	15,758	1.00	0.657	105.58	10.2	Kc23062705.D
Tetrachloroethene	15,758	1.00	0.556	U	U	Kc23062705.D
Lab ID: 0007048-02 **Sample Name:** 04A_1A02_20230623					**x̄ Temp (°C):** 23.33	
Vinyl Chloride	15,755	1.00	0.566	U	U	Kc23062706.D
trans-1,2-Dichloroethene	15,755	1.00	0.708	2.86	0.256	Kc23062706.D
cis-1,2-Dichloroethene	15,755	1.00	0.708	27.05	2.42	Kc23062706.D
Trichloroethene	15,755	1.00	0.657	26.60	2.57	Kc23062706.D
Tetrachloroethene	15,755	1.00	0.556	U	U	Kc23062706.D
Lab ID: 0007048-03 **Sample Name:** 04A_SUMP01_20230623					**x̄ Temp (°C):** 22.22	
Vinyl Chloride	15,775	1.00	0.565	U	U	Kc23062707.D
trans-1,2-Dichloroethene	15,775	1.00	0.707	22.01	1.97	Kc23062707.D
cis-1,2-Dichloroethene	15,775	1.00	0.707	196.72	17.6	Kc23062707.D
Trichloroethene	15,775	1.00	0.656	167.22	16.2	Kc23062707.D
Tetrachloroethene	15,775	1.00	0.555	U	U	Kc23062707.D
Lab ID: 0007048-04 **Sample Name:** 04B_1A01_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,100	1.00	0.566	U	U	Kc23062708.D
trans-1,2-Dichloroethene	20,100	1.00	0.707	7.03	0.495	Kc23062708.D
cis-1,2-Dichloroethene	20,100	1.00	0.707	183.41	12.9	Kc23062708.D
Trichloroethene	20,100	1.00	0.657	62.02	4.70	Kc23062708.D
Tetrachloroethene	20,100	1.00	0.556	U	U	Kc23062708.D
Lab ID: 0007048-05 **Sample Name:** 04B_1A02_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,060	1.00	0.566	U	U	Kc23062709.D
trans-1,2-Dichloroethene	20,060	1.00	0.707	U	U	Kc23062709.D
cis-1,2-Dichloroethene	20,060	1.00	0.707	26.95	1.90	Kc23062709.D
Trichloroethene	20,060	1.00	0.657	U	U	Kc23062709.D
Tetrachloroethene	20,060	1.00	0.556	U	U	Kc23062709.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007048-06 **Sample Name:** 04B_1A03_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,045	1.00	0.566	6.09	0.537	Kc23062710.D
trans-1,2-Dichloroethene	20,045	1.00	0.707	7.65	0.540	Kc23062710.D
cis-1,2-Dichloroethene	20,045	1.00	0.707	193.82	13.7	Kc23062710.D
Trichloroethene	20,045	1.00	0.657	66.02	5.02	Kc23062710.D
Tetrachloroethene	20,045	1.00	0.556	U	U	Kc23062710.D
Lab ID: 0007048-07 **Sample Name:** 04C_1A01_20230623					**x̄ Temp (°C):** 21.40	
Vinyl Chloride	15,595	9.81	0.565	U	U	Kc23062711.D
trans-1,2-Dichloroethene	15,595	9.81	0.706	U	U	Kc23062711.D
cis-1,2-Dichloroethene	15,595	9.81	0.706	U	U	Kc23062711.D
Trichloroethene	15,595	9.81	0.655	U	U	Kc23062711.D
Tetrachloroethene	15,595	9.81	0.554	U	U	Kc23062711.D
Lab ID: 0007048-08 **Sample Name:** 04C_1A02_20230623					**x̄ Temp (°C):** 21.40	
Vinyl Chloride	15,585	9.81	0.565	U	U	Kc23062712.D
trans-1,2-Dichloroethene	15,585	9.81	0.706	U	U	Kc23062712.D
cis-1,2-Dichloroethene	15,585	9.81	0.706	U	U	Kc23062712.D
Trichloroethene	15,585	9.81	0.655	U	U	Kc23062712.D
Tetrachloroethene	15,585	9.81	0.554	U	U	Kc23062712.D
Lab ID: 0007048-09 **Sample Name:** 04C_SUMP01_20230623					**x̄ Temp (°C):** 21.40	
Vinyl Chloride	15,605	9.81	0.565	U	U	Kc23062713.D
trans-1,2-Dichloroethene	15,605	9.81	0.706	U	U	Kc23062713.D
cis-1,2-Dichloroethene	15,605	9.81	0.706	U	U	Kc23062713.D
Trichloroethene	15,605	9.81	0.655	U	U	Kc23062713.D
Tetrachloroethene	15,605	9.81	0.554	U	U	Kc23062713.D
Lab ID: 0007048-10 **Sample Name:** 04D_1A01_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,220	9.81	0.566	U	U	Kc23062714.D
trans-1,2-Dichloroethene	20,220	9.81	0.707	U	U	Kc23062714.D
cis-1,2-Dichloroethene	20,220	9.81	0.707	U	U	Kc23062714.D
Trichloroethene	20,220	9.81	0.657	U	U	Kc23062714.D
Tetrachloroethene	20,220	9.81	0.556	U	U	Kc23062714.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007048-11 **Sample Name:** 04D_1A02_20230623					**x̄ Temp (°C):** 23.60	
Vinyl Chloride	20,215	9.81	0.567	U	U	Kc23062717.D
trans-1,2-Dichloroethene	20,215	9.81	0.708	U	U	Kc23062717.D
cis-1,2-Dichloroethene	20,215	9.81	0.708	U	U	Kc23062717.D
Trichloroethene	20,215	9.81	0.658	U	U	Kc23062717.D
Tetrachloroethene	20,215	9.81	0.557	U	U	Kc23062717.D
Lab ID: 0007048-12 **Sample Name:** 04D_1A03_20230623					**x̄ Temp (°C):** 23.60	
Vinyl Chloride	20,207	1.00	0.567	U	U	Kc23062718.D
trans-1,2-Dichloroethene	20,207	1.00	0.708	U	U	Kc23062718.D
cis-1,2-Dichloroethene	20,207	1.00	0.708	U	U	Kc23062718.D
Trichloroethene	20,207	1.00	0.658	U	U	Kc23062718.D
Tetrachloroethene	20,207	1.00	0.557	U	U	Kc23062718.D
Lab ID: 0007048-13 **Sample Name:** 04E_1A01_20230623					**x̄ Temp (°C):** 23.10	
Vinyl Chloride	15,815	1.00	0.566	U	U	Kc23062719.D
trans-1,2-Dichloroethene	15,815	1.00	0.708	U	U	Kc23062719.D
cis-1,2-Dichloroethene	15,815	1.00	0.708	U	U	Kc23062719.D
Trichloroethene	15,815	1.00	0.657	U	U	Kc23062719.D
Tetrachloroethene	15,815	1.00	0.556	U	U	Kc23062719.D
Lab ID: 0007048-14 **Sample Name:** 04E_1A02_20230623					**x̄ Temp (°C):** 22.22	
Vinyl Chloride	15,806	1.00	0.565	U	U	Kc23062720.D
trans-1,2-Dichloroethene	15,806	1.00	0.707	U	U	Kc23062720.D
cis-1,2-Dichloroethene	15,806	1.00	0.707	U	U	Kc23062720.D
Trichloroethene	15,806	1.00	0.656	U	U	Kc23062720.D
Tetrachloroethene	15,806	1.00	0.555	U	U	Kc23062720.D
Lab ID: 0007048-15 **Sample Name:** 04E_1A03_20230623					**x̄ Temp (°C):** 22.22	
Vinyl Chloride	15,803	1.00	0.565	U	U	Kc23062721.D
trans-1,2-Dichloroethene	15,803	1.00	0.707	U	U	Kc23062721.D
cis-1,2-Dichloroethene	15,803	1.00	0.707	U	U	Kc23062721.D
Trichloroethene	15,803	1.00	0.656	U	U	Kc23062721.D
Tetrachloroethene	15,803	1.00	0.555	U	U	Kc23062721.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007048-16 **Sample Name:** 04_0A01_20230623					**x̄ Temp (°C):** 24.72	
Vinyl Chloride	20,340	1.00	0.568	U	U	Kc23062722.D
trans-1,2-Dichloroethene	20,340	1.00	0.710	U	U	Kc23062722.D
cis-1,2-Dichloroethene	20,340	1.00	0.710	U	U	Kc23062722.D
Trichloroethene	20,340	1.00	0.659	U	U	Kc23062722.D
Tetrachloroethene	20,340	1.00	0.558	U	U	Kc23062722.D

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where: C = concentration (µg/m^3)
M = mass (ng)
DF = dilution factor
Uc = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
Tu = uptake rate study temperature
Ts = sample average temperature

Note: Tu is 16.65°C

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007048-01	**Sample Name:** 04A_1A01_20230623					**x̄ Temp (°C):** 23.33	
Vinyl Chloride	15,758	1.00	0.566	10.00	2.50	1.12	0.280
trans-1,2-Dichloroethene	15,758	1.00	0.708	10.00	2.50	0.896	0.224
cis-1,2-Dichloroethene	15,758	1.00	0.708	10.00	2.50	0.896	0.224
Trichloroethene	15,758	1.00	0.657	10.00	2.50	0.965	0.241
Tetrachloroethene	15,758	1.00	0.556	10.00	2.50	1.14	0.285
Lab ID: 0007048-02	**Sample Name:** 04A_1A02_20230623					**x̄ Temp (°C):** 23.33	
Vinyl Chloride	15,755	1.00	0.566	10.00	2.50	1.12	0.280
trans-1,2-Dichloroethene	15,755	1.00	0.708	10.00	2.50	0.896	0.224
cis-1,2-Dichloroethene	15,755	1.00	0.708	10.00	2.50	0.896	0.224
Trichloroethene	15,755	1.00	0.657	10.00	2.50	0.965	0.241
Tetrachloroethene	15,755	1.00	0.556	10.00	2.50	1.14	0.285
Lab ID: 0007048-03	**Sample Name:** 04A_SUMP01_20230623					**x̄ Temp (°C):** 22.22	
Vinyl Chloride	15,775	1.00	0.565	10.00	2.50	1.12	0.280
trans-1,2-Dichloroethene	15,775	1.00	0.707	10.00	2.50	0.897	0.224
cis-1,2-Dichloroethene	15,775	1.00	0.707	10.00	2.50	0.897	0.224
Trichloroethene	15,775	1.00	0.656	10.00	2.50	0.966	0.242
Tetrachloroethene	15,775	1.00	0.555	10.00	2.50	1.14	0.285
Lab ID: 0007048-04	**Sample Name:** 04B_1A01_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,100	1.00	0.566	10.00	2.50	0.880	0.220
trans-1,2-Dichloroethene	20,100	1.00	0.707	10.00	2.50	0.704	0.176
cis-1,2-Dichloroethene	20,100	1.00	0.707	10.00	2.50	0.704	0.176
Trichloroethene	20,100	1.00	0.657	10.00	2.50	0.758	0.189
Tetrachloroethene	20,100	1.00	0.556	10.00	2.50	0.896	0.224
Lab ID: 0007048-05	**Sample Name:** 04B_1A02_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,060	1.00	0.566	10.00	2.50	0.881	0.220
trans-1,2-Dichloroethene	20,060	1.00	0.707	10.00	2.50	0.705	0.176
cis-1,2-Dichloroethene	20,060	1.00	0.707	10.00	2.50	0.705	0.176
Trichloroethene	20,060	1.00	0.657	10.00	2.50	0.759	0.190
Tetrachloroethene	20,060	1.00	0.556	10.00	2.50	0.897	0.224

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007048-06	**Sample Name:** 04B_1A03_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,045	1.00	0.566	10.00	2.50	0.882	0.220
trans-1,2-Dichloroethene	20,045	1.00	0.707	10.00	2.50	0.706	0.176
cis-1,2-Dichloroethene	20,045	1.00	0.707	10.00	2.50	0.706	0.176
Trichloroethene	20,045	1.00	0.657	10.00	2.50	0.760	0.190
Tetrachloroethene	20,045	1.00	0.556	10.00	2.50	0.898	0.225
Lab ID: 0007048-07	**Sample Name:** 04C_1A01_20230623					**x̄ Temp (°C):** 21.40	
Vinyl Chloride	15,595	9.81	0.565	10.00	2.50	11.1	2.79
trans-1,2-Dichloroethene	15,595	9.81	0.706	10.00	2.50	8.91	2.23
cis-1,2-Dichloroethene	15,595	9.81	0.706	10.00	2.50	8.91	2.23
Trichloroethene	15,595	9.81	0.655	10.00	2.50	9.60	2.40
Tetrachloroethene	15,595	9.81	0.554	10.00	2.50	11.3	2.84
Lab ID: 0007048-08	**Sample Name:** 04C_1A02_20230623					**x̄ Temp (°C):** 21.40	
Vinyl Chloride	15,585	9.81	0.565	10.00	2.50	11.1	2.79
trans-1,2-Dichloroethene	15,585	9.81	0.706	10.00	2.50	8.92	2.23
cis-1,2-Dichloroethene	15,585	9.81	0.706	10.00	2.50	8.92	2.23
Trichloroethene	15,585	9.81	0.655	10.00	2.50	9.61	2.40
Tetrachloroethene	15,585	9.81	0.554	10.00	2.50	11.4	2.84
Lab ID: 0007048-09	**Sample Name:** 04C_SUMP01_20230623					**x̄ Temp (°C):** 21.40	
Vinyl Chloride	15,605	9.81	0.565	10.00	2.50	11.1	2.78
trans-1,2-Dichloroethene	15,605	9.81	0.706	10.00	2.50	8.91	2.23
cis-1,2-Dichloroethene	15,605	9.81	0.706	10.00	2.50	8.91	2.23
Trichloroethene	15,605	9.81	0.655	10.00	2.50	9.59	2.40
Tetrachloroethene	15,605	9.81	0.554	10.00	2.50	11.3	2.83
Lab ID: 0007048-10	**Sample Name:** 04D_1A01_20230623					**x̄ Temp (°C):** 22.50	
Vinyl Chloride	20,220	9.81	0.566	10.00	2.50	8.58	2.14
trans-1,2-Dichloroethene	20,220	9.81	0.707	10.00	2.50	6.86	1.72
cis-1,2-Dichloroethene	20,220	9.81	0.707	10.00	2.50	6.86	1.72
Trichloroethene	20,220	9.81	0.657	10.00	2.50	7.39	1.85
Tetrachloroethene	20,220	9.81	0.556	10.00	2.50	8.73	2.18

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007048-11	**Sample Name:** 04D_1A02_20230623					**x̄ Temp (°C):** 23.60	
Vinyl Chloride	20,215	9.81	0.567	10.00	2.50	8.56	2.14
trans-1,2-Dichloroethene	20,215	9.81	0.708	10.00	2.50	6.85	1.71
cis-1,2-Dichloroethene	20,215	9.81	0.708	10.00	2.50	6.85	1.71
Trichloroethene	20,215	9.81	0.658	10.00	2.50	7.38	1.84
Tetrachloroethene	20,215	9.81	0.557	10.00	2.50	8.72	2.18
Lab ID: 0007048-12	**Sample Name:** 04D_1A03_20230623					**x̄ Temp (°C):** 23.60	
Vinyl Chloride	20,207	1.00	0.567	10.00	2.50	0.873	0.218
trans-1,2-Dichloroethene	20,207	1.00	0.708	10.00	2.50	0.699	0.175
cis-1,2-Dichloroethene	20,207	1.00	0.708	10.00	2.50	0.699	0.175
Trichloroethene	20,207	1.00	0.658	10.00	2.50	0.752	0.188
Tetrachloroethene	20,207	1.00	0.557	10.00	2.50	0.889	0.222
Lab ID: 0007048-13	**Sample Name:** 04E_1A01_20230623					**x̄ Temp (°C):** 23.10	
Vinyl Chloride	15,815	1.00	0.566	10.00	2.50	1.12	0.279
trans-1,2-Dichloroethene	15,815	1.00	0.708	10.00	2.50	0.893	0.223
cis-1,2-Dichloroethene	15,815	1.00	0.708	10.00	2.50	0.893	0.223
Trichloroethene	15,815	1.00	0.657	10.00	2.50	0.962	0.241
Tetrachloroethene	15,815	1.00	0.556	10.00	2.50	1.14	0.284
Lab ID: 0007048-14	**Sample Name:** 04E_1A02_20230623					**x̄ Temp (°C):** 22.22	
Vinyl Chloride	15,806	1.00	0.565	10.00	2.50	1.12	0.280
trans-1,2-Dichloroethene	15,806	1.00	0.707	10.00	2.50	0.895	0.224
cis-1,2-Dichloroethene	15,806	1.00	0.707	10.00	2.50	0.895	0.224
Trichloroethene	15,806	1.00	0.656	10.00	2.50	0.964	0.241
Tetrachloroethene	15,806	1.00	0.555	10.00	2.50	1.14	0.285
Lab ID: 0007048-15	**Sample Name:** 04E_1A03_20230623					**x̄ Temp (°C):** 22.22	
Vinyl Chloride	15,803	1.00	0.565	10.00	2.50	1.12	0.280
trans-1,2-Dichloroethene	15,803	1.00	0.707	10.00	2.50	0.895	0.224
cis-1,2-Dichloroethene	15,803	1.00	0.707	10.00	2.50	0.895	0.224
Trichloroethene	15,803	1.00	0.656	10.00	2.50	0.964	0.241
Tetrachloroethene	15,803	1.00	0.555	10.00	2.50	1.14	0.285

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007048-16	**Sample Name:** 04_0A01_20230623					**x̄ Temp (°C):** 24.72	
Vinyl Chloride	20,340	1.00	0.568	10.00	2.50	0.866	0.216
trans-1,2-Dichloroethene	20,340	1.00	0.710	10.00	2.50	0.693	0.173
cis-1,2-Dichloroethene	20,340	1.00	0.710	10.00	2.50	0.693	0.173
Trichloroethene	20,340	1.00	0.659	10.00	2.50	0.746	0.187
Tetrachloroethene	20,340	1.00	0.558	10.00	2.50	0.882	0.220

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

D	Dilution required to report within calibration Limits.
D2	Original analysis lost due to power failure. Recolletion tube analyzed at dilution.
J	Value reported below limit of quantitation (LOQ).
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007048
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Management Records

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800-878-5510 Toll Free

PASSIVE AIR SAMPLING - SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information			
Company: The Sigma Group Inc	Project Manager: Stephen Meer	Client PO: 21801	
Address: 1300 W Canal St	Project Name: Oakfield Properties	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days	
City / State / Zip: Milwaukee WI	Location: Oakfield WI	Analysis: ☒ Method TO-17 ☐ Method 325	
Phone: 414 643 4200	Submitted by: Ryan Adamec		
	Email: radamec@thesigmagroup.com		

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04A_IA01_20230623	1181278	6/12	1155	6/23	1033	23.33	PCE, TCE, cisDCE, transDCE	X			
04A_IA02_20230623	1179481	6/12	1200	6/23	1035	23.33	VC	X			
04A_SUMP01_20230623	1181000	6/12	1145	6/23	1040	22.22					
04B_IA01_20230623	1181090	6/9	1100	6/23	1000	22.5		X			
04B_IA02_20230623	1141932	6/9	1130	6/23	950	22.5		X			
04B_IA03_20230623	1078629	6/9	1145	6/23	950	22.5		X			
04C_IA01_20230623	1181109	6/12	105	6/23	900	21.4		X			
04C_IA02_20230623	1183785	6/12	110	6/23	855	21.4		X			
04C_SUMP01_20230623	1181074	6/12	100	6/23	905	21.4					
04D_IA01_20230623	1141846	6/9	1000	6/23	1100	22.5		X			
04D_IA02_20230623	1179327	6/9	1010	6/23	1105	23.6		X			
04D_IA03_20230623	1099745	6/9	1020	6/23	1107	23.6		X			
04E_IA01_20230623	1183702	6/12	955	6/23	930	23.1		X			
04E_IA02_20230623	1183776	6/12	1000	6/23	926	22.22		X			
04E_IA03_20230623	1141943	6/12	1005	6/23	928	22.22		X			

Special Notes / Instructions:

Relinquished by (signature): Ryan Adamec	Date / Time: 6/23/23 2:20 pm	Received by (signature): Nicole Reis	Date / Time: 6/26/23 12:10
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7048	Beacon Proposal: 230317R02	
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: ☒ Yes ☐ No ☐ n/a	Custody Seal No: 5504183

Pg 1 of 2

Sump headspace X X

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PASSIVE AIR SAMPLING - SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information		Project Manager: Steve Meer	Client PO: 21801
Company: The Sigma Group, Inc		Project Name: Oakfield Properties	Turn around time (check one):
Address: 1300 W. Canal Street		Location: Oakfield Wisconsin	[X] Normal [ ] Rush (specify) ____ days
City / State / Zip: Milwaukee WI		Submitted by: Ryan Adamec	Analysis:
Phone: (414)643-4124		Email: Smeer@thesigmagroup.com	[X] Method TO-17 [ ] Method 325

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04_OA01_20230623	11836d0	6/9	900	6/23	1200	24.72	PCE, TCE, CisDCE trans 12DCE, VC		X		

Special Notes / Instructions:

For Lab Use Only	Beacon Job No: 7048	Beacon Proposal: 230317R02	

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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230714R01

Laboratory Work Order: 0007189

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

September 20, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007189-01	04_OA01_20230907	09/11/2023	TO-17 (Passive)	Ambient Air
Sampler Type:	Sorbent Tube			
0007189-02	04B_IAB_01_20230907	09/11/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007189-03	04B_IA1_02_20230907	09/11/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007189-04	04B_IA2_03_20230907	09/11/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007189-05	04A_IAB_01_20230907	09/11/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007189-06	04A_IA1_02_20230907	09/11/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007189-07	04A_IA2_03_20230907	09/11/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			

Project Completeness

Samples Received: 7
Samples Analyzed: 7

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

STATEMENT OF DATA QUALIFICATIONS

Qualifier Summary:

Analysis: TO-17 (Passive) / Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube

0007189-01 **04_OA01_20230907**

Compound	Q	Q Explanation
Toluene-d8	S5	Surrogate recovery was out of laboratory and method acceptance limits.

0007189-02 **04B_IAB_01_20230907**

Compound	Q	Q Explanation
Toluene-d8	S5	Surrogate recovery was out of laboratory and method acceptance limits.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Summary of Compound Detections- Concentration

Lab Sample ID: 0007189-04 — **04B_IA2_03_20230907** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Vinyl Chloride	75-01-4	**0.470**	J	1.576	0.946	0.236	Kb23091208.D

Lab Sample ID: 0007189-07 — **04A_IA2_03_20230907** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**0.264**	J	5.904	0.815	0.204	Kb23091211.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Data Summary Table- Concentration

Compound	Frequency	LOD (µg/m³)	Max Value (µg/m³)
Vinyl Chloride	1	0.236	0.470
Trichloroethene	1	0.204	0.264

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Detailed Analytical Results

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-01

04_OA01_20230907

Ambient Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.238	U	0.238	0.952	09/12/2023 16:52	Kb23091205.D
trans-1,2-Dichloroethene	156-60-5	<0.190	U	0.190	0.761	09/12/2023 16:52	Kb23091205.D
cis-1,2-Dichloroethene	156-59-2	<0.190	U	0.190	0.761	09/12/2023 16:52	Kb23091205.D
Trichloroethene	79-01-6	<0.205	U	0.205	0.820	09/12/2023 16:52	Kb23091205.D
Tetrachloroethene	127-18-4	<0.242	U	0.242	0.969	09/12/2023 16:52	Kb23091205.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*73.9%*	*70-130*		*09/12/2023 16:52*	*Kb23091205.D*
Surrogate: Toluene-d8	2037-26-5	*38.4%*	*70-130*	*S5*	*09/12/2023 16:52*	*Kb23091205.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-02

04B_IAB_01_20230907

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.236	U	0.236	0.945	09/12/2023 17:21	Kb23091206.D
trans-1,2-Dichloroethene	156-60-5	<0.189	U	0.189	0.756	09/12/2023 17:21	Kb23091206.D
cis-1,2-Dichloroethene	156-59-2	<0.189	U	0.189	0.756	09/12/2023 17:21	Kb23091206.D
Trichloroethene	79-01-6	<0.204	U	0.204	0.814	09/12/2023 17:21	Kb23091206.D
Tetrachloroethene	127-18-4	<0.241	U	0.241	0.962	09/12/2023 17:21	Kb23091206.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*91.2%*	*70-130*		*09/12/2023 17:21*	*Kb23091206.D*
Surrogate: Toluene-d8	2037-26-5	*58.7%*	*70-130*	*S5*	*09/12/2023 17:21*	*Kb23091206.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-03

04B_IA1_02_20230907

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.236	U	0.236	0.946	09/12/2023 17:50	Kb23091207.D
trans-1,2-Dichloroethene	156-60-5	<0.189	U	0.189	0.757	09/12/2023 17:50	Kb23091207.D
cis-1,2-Dichloroethene	156-59-2	<0.189	U	0.189	0.757	09/12/2023 17:50	Kb23091207.D
Trichloroethene	79-01-6	<0.204	U	0.204	0.815	09/12/2023 17:50	Kb23091207.D
Tetrachloroethene	127-18-4	<0.241	U	0.241	0.963	09/12/2023 17:50	Kb23091207.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*102%*	*70-130*		*09/12/2023 17:50*	*Kb23091207.D*
Surrogate: Toluene-d8	2037-26-5	*87.7%*	*70-130*		*09/12/2023 17:50*	*Kb23091207.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-04

04B_IA2_03_20230907

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	**0.470**	J	0.236	0.946	09/12/2023 18:19	Kb23091208.D
trans-1,2-Dichloroethene	156-60-5	<0.189	U	0.189	0.757	09/12/2023 18:19	Kb23091208.D
cis-1,2-Dichloroethene	156-59-2	<0.189	U	0.189	0.757	09/12/2023 18:19	Kb23091208.D
Trichloroethene	79-01-6	<0.204	U	0.204	0.815	09/12/2023 18:19	Kb23091208.D
Tetrachloroethene	127-18-4	<0.241	U	0.241	0.963	09/12/2023 18:19	Kb23091208.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*105%*	*70-130*		*09/12/2023 18:19*	*Kb23091208.D*
Surrogate: Toluene-d8	2037-26-5	*93.8%*	*70-130*		*09/12/2023 18:19*	*Kb23091208.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-05

04A_IAB_01_20230907

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.237	U	0.237	0.946	09/12/2023 18:48	Kb23091209.D
trans-1,2-Dichloroethene	156-60-5	<0.189	U	0.189	0.757	09/12/2023 18:48	Kb23091209.D
cis-1,2-Dichloroethene	156-59-2	<0.189	U	0.189	0.757	09/12/2023 18:48	Kb23091209.D
Trichloroethene	79-01-6	<0.204	U	0.204	0.815	09/12/2023 18:48	Kb23091209.D
Tetrachloroethene	127-18-4	<0.241	U	0.241	0.963	09/12/2023 18:48	Kb23091209.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*91.9%*	*70-130*		*09/12/2023 18:48*	*Kb23091209.D*
Surrogate: Toluene-d8	2037-26-5	*82.0%*	*70-130*		*09/12/2023 18:48*	*Kb23091209.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-06

04A_IA1_02_20230907

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.237	U	0.237	0.946	09/12/2023 19:17	Kb23091210.D
trans-1,2-Dichloroethene	156-60-5	<0.189	U	0.189	0.757	09/12/2023 19:17	Kb23091210.D
cis-1,2-Dichloroethene	156-59-2	<0.189	U	0.189	0.757	09/12/2023 19:17	Kb23091210.D
Trichloroethene	79-01-6	<0.204	U	0.204	0.815	09/12/2023 19:17	Kb23091210.D
Tetrachloroethene	127-18-4	<0.241	U	0.241	0.963	09/12/2023 19:17	Kb23091210.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*96.4%*	*70-130*		*09/12/2023 19:17*	*Kb23091210.D*
Surrogate: Toluene-d8	2037-26-5	*89.4%*	*70-130*		*09/12/2023 19:17*	*Kb23091210.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Lab Sample ID: 0007189-07

04A_IA2_03_20230907

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.236	U	0.236	0.946	09/12/2023 19:46	Kb23091211.D
trans-1,2-Dichloroethene	156-60-5	<0.189	U	0.189	0.757	09/12/2023 19:46	Kb23091211.D
cis-1,2-Dichloroethene	156-59-2	<0.189	U	0.189	0.757	09/12/2023 19:46	Kb23091211.D
Trichloroethene	79-01-6	**0.264**	J	0.204	0.815	09/12/2023 19:46	Kb23091211.D
Tetrachloroethene	127-18-4	<0.241	U	0.241	0.963	09/12/2023 19:46	Kb23091211.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.7%*	*70-130*		*09/12/2023 19:46*	*Kb23091211.D*
Surrogate: Toluene-d8	2037-26-5	*89.6%*	*70-130*		*09/12/2023 19:46*	*Kb23091211.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

QC Information/Summary

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23G110 - Instrument: K System - File ID: Kc23072815.D

B23G110-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	49.7	10	2.5	ng	50.0		99.3	70-130			
trans-1,2-Dichloroethene	51.4	10	2.5	ng	50.0		103	70-130			
cis-1,2-Dichloroethene	50.7	10	2.5	ng	50.0		101	70-130			
Trichloroethene	54.0	10	2.5	ng	50.0		108	70-130			
Tetrachloroethene	60.0	10	2.5	ng	50.0		120	70-130			
Surrogate: 1,2-DCA-d4	*51.3*			*ng*	50.0		*103*	*70-130*			
Surrogate: Toluene-d8	*51.2*			*ng*	50.0		*102*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23G110 - Instrument: K System - File ID: Kc23072818.D

B23G110-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*95.9*			*ng*	100		*95.9*	*70-130*			
Surrogate: Toluene-d8	*99.9*			*ng*	100		*99.9*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23I011 - Batch: 23I0011 - Instrument: K System - File ID: Kb23091202.D

23I0011-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	47.8	10	2.5	ng	50.0		95.7	70-130			
trans-1,2-Dichloroethene	52.7	10	2.5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	48.4	10	2.5	ng	50.0		96.8	70-130			
Trichloroethene	47.9	10	2.5	ng	50.0		95.8	70-130			
Tetrachloroethene	54.8	10	2.5	ng	50.0		110	70-130			
Surrogate: 1,2-DCA-d4	*53.9*			*ng*	50.0		*108*	*70-130*			
Surrogate: Toluene-d8	*50.6*			*ng*	50.0		*101*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23I011 - Batch: 23I0011 - Instrument: K System - File ID: Kb23091203.D

23I0011-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.236	0.942	0.236	µg/m³							U
trans-1,2-Dichloroethene	<0.188	0.754	0.188	µg/m³							U
cis-1,2-Dichloroethene	<0.188	0.754	0.188	µg/m³							U
Trichloroethene	<0.203	0.812	0.203	µg/m³							U
Tetrachloroethene	<0.240	0.959	0.240	µg/m³							U
Surrogate: 1,2-DCA-d4	*100*			*ng*	100		*100*	*70-130*			
Surrogate: Toluene-d8	*101*			*ng*	100		*101*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23I011 - Instrument: K System - File ID: Kb23091204.D

B23I011-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	48.3	10	2.5	ng	50.0		96.5	70-130			
trans-1,2-Dichloroethene	53.6	10	2.5	ng	50.0		107	70-130			
cis-1,2-Dichloroethene	49.7	10	2.5	ng	50.0		99.4	70-130			
Trichloroethene	48.7	10	2.5	ng	50.0		97.4	70-130			
Tetrachloroethene	55.7	10	2.5	ng	50.0		111	70-130			
Surrogate: 1,2-DCA-d4	*51.0*			*ng*	50.0		*102*	*70-130*			
Surrogate: Toluene-d8	*49.5*			*ng*	50.0		*99.0*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23I011 - Instrument: K System - File ID: Kb23091212.D

B23I011-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	46.2	10	2.5	ng	50.0		92.4	70-130			
trans-1,2-Dichloroethene	53.1	10	2.5	ng	50.0		106	70-130			
cis-1,2-Dichloroethene	49.1	10	2.5	ng	50.0		98.2	70-130			
Trichloroethene	52.8	10	2.5	ng	50.0		106	70-130			
Tetrachloroethene	55.0	10	2.5	ng	50.0		110	70-130			
Surrogate: 1,2-DCA-d4	*53.3*			*ng*	50.0		*107*	*70-130*			
Surrogate: Toluene-d8	*49.9*			*ng*	50.0		*99.7*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23I011 - Instrument: K System - File ID: Kb23091213.D

B23I011-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*96.8*			*ng*	100		*96.8*	*70-130*			
Surrogate: Toluene-d8	*97.2*			*ng*	100		*97.2*	*70-130*			

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23I0011-BS1 File ID: Kb23091202.D Analyzed: 9/12/23 16:11

LCSD: B23I011-ICV1 File ID: Kb23091204.D Analyzed: 9/12/23 15:19

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	47.84	95.68		50	48.27	96.50	70-130	0.89	30	
trans-1,2-Dichloroethene	156-60-5	52.65	105.3		50	53.6	107.00	70-130	1.79	30	
cis-1,2-Dichloroethene	156-59-2	48.39	96.78		50	49.72	99.40	70-130	2.71	30	
Trichloroethene	79-01-6	47.89	95.78		50	48.69	97.40	70-130	1.66	30	
Tetrachloroethene	127-18-4	54.76	109.52		50	55.69	111.00	70-130	1.68	30	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Additional QC Information

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007189-01 **Sample Name:** 04_OA01_20230907					**X̄ Temp (°C):** 18.00	
Vinyl Chloride	18,720	1.00	0.561	U	U	Kb23091205.D
trans-1,2-Dichloroethene	18,720	1.00	0.702	U	U	Kb23091205.D
cis-1,2-Dichloroethene	18,720	1.00	0.702	U	U	Kb23091205.D
Trichloroethene	18,720	1.00	0.652	U	U	Kb23091205.D
Tetrachloroethene	18,720	1.00	0.551	U	U	Kb23091205.D
Lab ID: 0007189-02 **Sample Name:** 04B_IAB_01_20230907					**X̄ Temp (°C):** 23.00	
Vinyl Chloride	18,690	1.00	0.566	U	U	Kb23091206.D
trans-1,2-Dichloroethene	18,690	1.00	0.708	U	U	Kb23091206.D
cis-1,2-Dichloroethene	18,690	1.00	0.708	U	U	Kb23091206.D
Trichloroethene	18,690	1.00	0.657	U	U	Kb23091206.D
Tetrachloroethene	18,690	1.00	0.556	U	U	Kb23091206.D
Lab ID: 0007189-03 **Sample Name:** 04B_IA1_02_20230907					**X̄ Temp (°C):** 23.00	
Vinyl Chloride	18,677	1.00	0.566	U	U	Kb23091207.D
trans-1,2-Dichloroethene	18,677	1.00	0.708	U	U	Kb23091207.D
cis-1,2-Dichloroethene	18,677	1.00	0.708	U	U	Kb23091207.D
Trichloroethene	18,677	1.00	0.657	U	U	Kb23091207.D
Tetrachloroethene	18,677	1.00	0.556	U	U	Kb23091207.D
Lab ID: 0007189-04 **Sample Name:** 04B_IA2_03_20230907					**X̄ Temp (°C):** 23.00	
Vinyl Chloride	18,677	1.00	0.566	4.97	0.470	Kb23091208.D
trans-1,2-Dichloroethene	18,677	1.00	0.708	U	U	Kb23091208.D
cis-1,2-Dichloroethene	18,677	1.00	0.708	U	U	Kb23091208.D
Trichloroethene	18,677	1.00	0.657	U	U	Kb23091208.D
Tetrachloroethene	18,677	1.00	0.556	U	U	Kb23091208.D
Lab ID: 0007189-05 **Sample Name:** 04A_IAB_01_20230907					**X̄ Temp (°C):** 24.00	
Vinyl Chloride	18,641	1.00	0.567	U	U	Kb23091209.D
trans-1,2-Dichloroethene	18,641	1.00	0.709	U	U	Kb23091209.D
cis-1,2-Dichloroethene	18,641	1.00	0.709	U	U	Kb23091209.D
Trichloroethene	18,641	1.00	0.658	U	U	Kb23091209.D
Tetrachloroethene	18,641	1.00	0.557	U	U	Kb23091209.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007189-06 **Sample Name:** 04A_IA1_02_20230907					**x̄ Temp (°C):** 24.00	
Vinyl Chloride	18,638	1.00	0.567	U	U	Kb23091210.D
trans-1,2-Dichloroethene	18,638	1.00	0.709	U	U	Kb23091210.D
cis-1,2-Dichloroethene	18,638	1.00	0.709	U	U	Kb23091210.D
Trichloroethene	18,638	1.00	0.658	U	U	Kb23091210.D
Tetrachloroethene	18,638	1.00	0.557	U	U	Kb23091210.D
Lab ID: 0007189-07 **Sample Name:** 04A_IA2_03_20230907					**x̄ Temp (°C):** 24.00	
Vinyl Chloride	18,644	1.00	0.567	U	U	Kb23091211.D
trans-1,2-Dichloroethene	18,644	1.00	0.709	U	U	Kb23091211.D
cis-1,2-Dichloroethene	18,644	1.00	0.709	U	U	Kb23091211.D
Trichloroethene	18,644	1.00	0.658	3.24	0.264	Kb23091211.D
Tetrachloroethene	18,644	1.00	0.557	U	U	Kb23091211.D

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where: C = concentration (µg/m^3)
M = mass (ng)
DF = dilution factor
Uc = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
Tu = uptake rate study temperature
Ts = sample average temperature

Note: Tu is 16.65°C

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007189-01	**Sample Name:** 04_OA01_20230907					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	18,720	1.00	0.561	10.00	2.50	0.952	0.238
trans-1,2-Dichloroethene	18,720	1.00	0.702	10.00	2.50	0.761	0.190
cis-1,2-Dichloroethene	18,720	1.00	0.702	10.00	2.50	0.761	0.190
Trichloroethene	18,720	1.00	0.652	10.00	2.50	0.820	0.205
Tetrachloroethene	18,720	1.00	0.551	10.00	2.50	0.969	0.242
Lab ID: 0007189-02	**Sample Name:** 04B_IAB_01_20230907					**x̄ Temp (°C):** 23.00	
Vinyl Chloride	18,690	1.00	0.566	10.00	2.50	0.945	0.236
trans-1,2-Dichloroethene	18,690	1.00	0.708	10.00	2.50	0.756	0.189
cis-1,2-Dichloroethene	18,690	1.00	0.708	10.00	2.50	0.756	0.189
Trichloroethene	18,690	1.00	0.657	10.00	2.50	0.814	0.204
Tetrachloroethene	18,690	1.00	0.556	10.00	2.50	0.962	0.241
Lab ID: 0007189-03	**Sample Name:** 04B_IA1_02_20230907					**x̄ Temp (°C):** 23.00	
Vinyl Chloride	18,677	1.00	0.566	10.00	2.50	0.946	0.236
trans-1,2-Dichloroethene	18,677	1.00	0.708	10.00	2.50	0.757	0.189
cis-1,2-Dichloroethene	18,677	1.00	0.708	10.00	2.50	0.757	0.189
Trichloroethene	18,677	1.00	0.657	10.00	2.50	0.815	0.204
Tetrachloroethene	18,677	1.00	0.556	10.00	2.50	0.963	0.241
Lab ID: 0007189-04	**Sample Name:** 04B_IA2_03_20230907					**x̄ Temp (°C):** 23.00	
Vinyl Chloride	18,677	1.00	0.566	10.00	2.50	0.946	0.236
trans-1,2-Dichloroethene	18,677	1.00	0.708	10.00	2.50	0.757	0.189
cis-1,2-Dichloroethene	18,677	1.00	0.708	10.00	2.50	0.757	0.189
Trichloroethene	18,677	1.00	0.657	10.00	2.50	0.815	0.204
Tetrachloroethene	18,677	1.00	0.556	10.00	2.50	0.963	0.241
Lab ID: 0007189-05	**Sample Name:** 04A_IAB_01_20230907					**x̄ Temp (°C):** 24.00	
Vinyl Chloride	18,641	1.00	0.567	10.00	2.50	0.946	0.237
trans-1,2-Dichloroethene	18,641	1.00	0.709	10.00	2.50	0.757	0.189
cis-1,2-Dichloroethene	18,641	1.00	0.709	10.00	2.50	0.757	0.189
Trichloroethene	18,641	1.00	0.658	10.00	2.50	0.815	0.204
Tetrachloroethene	18,641	1.00	0.557	10.00	2.50	0.963	0.241

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007189-06	**Sample Name:** 04A_IA1_02_20230907					**x̄ Temp (°C):** 24.00	
Vinyl Chloride	18,638	1.00	0.567	10.00	2.50	0.946	0.237
trans-1,2-Dichloroethene	18,638	1.00	0.709	10.00	2.50	0.757	0.189
cis-1,2-Dichloroethene	18,638	1.00	0.709	10.00	2.50	0.757	0.189
Trichloroethene	18,638	1.00	0.658	10.00	2.50	0.815	0.204
Tetrachloroethene	18,638	1.00	0.557	10.00	2.50	0.963	0.241
Lab ID: 0007189-07	**Sample Name:** 04A_IA2_03_20230907					**x̄ Temp (°C):** 24.00	
Vinyl Chloride	18,644	1.00	0.567	10.00	2.50	0.946	0.236
trans-1,2-Dichloroethene	18,644	1.00	0.709	10.00	2.50	0.757	0.189
cis-1,2-Dichloroethene	18,644	1.00	0.709	10.00	2.50	0.757	0.189
Trichloroethene	18,644	1.00	0.658	10.00	2.50	0.815	0.204
Tetrachloroethene	18,644	1.00	0.557	10.00	2.50	0.963	0.241

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
S5	Surrogate recovery was out of laboratory and method acceptance limits.
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007189
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 09/20/2023

Sample Management Records

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800-878-5510 Toll Free

PASSIVE AIR SAMPLING – SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information			
Company: The Sigma Group, Inc.	Project Manager: Steve Meer	Client PO: 21801	
Address: 1300 W. Canal St.	Project Name: Oakfield Properties	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days	
City / State / Zip: Milwaukee/WI/53233	Location: Oakfield, WI	Analysis: ☒ Method TO-17 ☐ Method 325	
Phone: 414-643-4200	Submitted by:		
	Email: smeere ~~gsd~~ thesigmagroup.com		

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04OA01_20230907	1066573	8/25/23	9:50AM	9/7/23	950AM	~~24~~ 18	PCE, TCE, cis-1,2-DCE,		X		
04B_IAB_01_20230907	100098	8/25/23	10:10 AM	9/7/23	940AM	23	trans-1,2-DCE, + VC	X			
04B_IA1_02_20230907	101357	8/25/23	10:13 AM	9/7/23	930AM	23		X			
04B_IA2_03_20230907	183776	8/25/23	10:18 AM	9/7/23	935AM	23		X			
04A_IAB_01_20230907	179392	8/25/23	10:36 AM	9/7/23	917AM	24		X			
04A_IA1_02_20230907	181000	8/25/23	10:42 AM	9/7/23	920AM	24		X			
04A_IA2_03_20230907	14717	8/25/23	10:39 AM	9/7/23	923AM	24		X			

Special Notes / Instructions:

Relinquished by (signature): [signature]	Date / Time: 09/07/2023 3:40PM	Received by (signature): Nicole Reif	Date / Time: 9/11/23 10:51
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7189	Beacon Proposal: 230714R01	
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: ☒ Yes ☐ No ☐ n/a	Custody Seal No: 5504086

Beacon Environmental
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230714R01

Laboratory Work Order: 0007408

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

January 05, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

Table of Contents (continued)

BEACON ENVIRONMENTAL

2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007408-01	04_OA01_20231222	12/26/2023	TO-17 (Passive)	Ambient Air
Sampler Type:	Sorbent Tube			
0007408-02	04B_IAB01_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-03	04B_IA102_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-04	04B_IA203_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-05	04C_Sump01_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-06	04C_IAB01_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-07	04C_IA102_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-08	04D_IAB01_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-09	04D_IA102_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-10	04D_IA203_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-11	04E_IAB01_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-12	04E_IA102_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007408-13	04E_IA203_20231222	12/26/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			

Project Completeness

Samples Received: 13
Samples Analyzed: 13

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

STATEMENT OF DATA QUALIFICATIONS

Qualifier Summary:

Analysis: TO-17 (Passive)

0007408-01 **04_OA01_20231222**

Compound	Q	Q Explanation
1,2-DCA-d4	S5	Surrogate recovery was out of laboratory and method acceptance limits.
Toluene-d8	S5	Surrogate recovery was out of laboratory and method acceptance limits.

0007408-05 **04C_Sump01_20231222**

Compound	Q	Q Explanation
Toluene-d8	S5	Surrogate recovery was out of laboratory and method acceptance limits.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Analytical Results

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007408-06 — **04C_IAB01_20231222** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**1.13**		5.904	0.761	0.190	Ka23122710.D

Lab Sample ID: 0007408-07 — **04C_IA102_20231222** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**0.716**	J	5.901	0.761	0.190	Ka23122711.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Data Summary Table- Concentration

Compound	Frequency	LOD (µg/m³)	Max Value (µg/m³)
Trichloroethene	2	0.190	1.13

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Detailed Analytical Results

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-01

04_OA01_20231222

Ambient Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.225	U	0.225	0.902	12/27/2023 08:28	Ka23122705.D
trans-1,2-Dichloroethene	156-60-5	<0.180	U	0.180	0.722	12/27/2023 08:28	Ka23122705.D
cis-1,2-Dichloroethene	156-59-2	<0.180	U	0.180	0.722	12/27/2023 08:28	Ka23122705.D
Trichloroethene	79-01-6	<0.194	U	0.194	0.777	12/27/2023 08:28	Ka23122705.D
Tetrachloroethene	127-18-4	<0.230	U	0.230	0.918	12/27/2023 08:28	Ka23122705.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*59.6%*	*70-130*	*S5*	*12/27/2023 08:28*	*Ka23122705.D*
Surrogate: Toluene-d8	2037-26-5	*62.7%*	*70-130*	*S5*	*12/27/2023 08:28*	*Ka23122705.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-02

04B_IAB01_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.223	U	0.223	0.892	12/27/2023 08:56	Ka23122706.D
trans-1,2-Dichloroethene	156-60-5	<0.178	U	0.178	0.714	12/27/2023 08:56	Ka23122706.D
cis-1,2-Dichloroethene	156-59-2	<0.178	U	0.178	0.714	12/27/2023 08:56	Ka23122706.D
Trichloroethene	79-01-6	<0.192	U	0.192	0.769	12/27/2023 08:56	Ka23122706.D
Tetrachloroethene	127-18-4	<0.227	U	0.227	0.909	12/27/2023 08:56	Ka23122706.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*92.8%*	*70-130*		*12/27/2023 08:56*	*Ka23122706.D*
Surrogate: Toluene-d8	2037-26-5	*95.2%*	*70-130*		*12/27/2023 08:56*	*Ka23122706.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-03

04B_IA102_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.221	U	0.221	0.884	12/27/2023 09:25	Ka23122707.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.707	12/27/2023 09:25	Ka23122707.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.707	12/27/2023 09:25	Ka23122707.D
Trichloroethene	79-01-6	<0.190	U	0.190	0.761	12/27/2023 09:25	Ka23122707.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.900	12/27/2023 09:25	Ka23122707.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*97.6%*	*70-130*		*12/27/2023 09:25*	*Ka23122707.D*
Surrogate: Toluene-d8	2037-26-5	*96.4%*	*70-130*		*12/27/2023 09:25*	*Ka23122707.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-04

04B_IA203_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.221	U	0.221	0.884	12/27/2023 09:54	Ka23122708.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.707	12/27/2023 09:54	Ka23122708.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.707	12/27/2023 09:54	Ka23122708.D
Trichloroethene	79-01-6	<0.190	U	0.190	0.761	12/27/2023 09:54	Ka23122708.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.900	12/27/2023 09:54	Ka23122708.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.6%*	*70-130*		*12/27/2023 09:54*	*Ka23122708.D*
Surrogate: Toluene-d8	2037-26-5	*95.9%*	*70-130*		*12/27/2023 09:54*	*Ka23122708.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-05

04C_Sump01_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.221	U	0.221	0.883	12/27/2023 10:23	Ka23122709.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.707	12/27/2023 10:23	Ka23122709.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.707	12/27/2023 10:23	Ka23122709.D
Trichloroethene	79-01-6	<0.190	U	0.190	0.761	12/27/2023 10:23	Ka23122709.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.899	12/27/2023 10:23	Ka23122709.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*85.0%*	*70-130*		*12/27/2023 10:23*	*Ka23122709.D*
Surrogate: Toluene-d8	2037-26-5	*62.4%*	*70-130*	*S5*	*12/27/2023 10:23*	*Ka23122709.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-06

04C_IAB01_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.221	U	0.221	0.883	12/27/2023 10:51	Ka23122710.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.707	12/27/2023 10:51	Ka23122710.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.707	12/27/2023 10:51	Ka23122710.D
Trichloroethene	79-01-6	**1.13**		0.190	0.761	12/27/2023 10:51	Ka23122710.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.899	12/27/2023 10:51	Ka23122710.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*101%*	*70-130*		*12/27/2023 10:51*	*Ka23122710.D*
Surrogate: Toluene-d8	2037-26-5	*97.4%*	*70-130*		*12/27/2023 10:51*	*Ka23122710.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-07

04C_IA102_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.221	U	0.221	0.883	12/27/2023 11:20	Ka23122711.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.707	12/27/2023 11:20	Ka23122711.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.707	12/27/2023 11:20	Ka23122711.D
Trichloroethene	79-01-6	**0.716**	J	0.190	0.761	12/27/2023 11:20	Ka23122711.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.899	12/27/2023 11:20	Ka23122711.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*96.4%*	*70-130*		*12/27/2023 11:20*	*Ka23122711.D*
Surrogate: Toluene-d8	2037-26-5	*96.3%*	*70-130*		*12/27/2023 11:20*	*Ka23122711.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-08

04D_IAB01_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.220	U	0.220	0.879	12/27/2023 11:49	Ka23122712.D
trans-1,2-Dichloroethene	156-60-5	<0.176	U	0.176	0.703	12/27/2023 11:49	Ka23122712.D
cis-1,2-Dichloroethene	156-59-2	<0.176	U	0.176	0.703	12/27/2023 11:49	Ka23122712.D
Trichloroethene	79-01-6	<0.189	U	0.189	0.757	12/27/2023 11:49	Ka23122712.D
Tetrachloroethene	127-18-4	<0.224	U	0.224	0.895	12/27/2023 11:49	Ka23122712.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.9%*	*70-130*		*12/27/2023 11:49*	*Ka23122712.D*
Surrogate: Toluene-d8	2037-26-5	*96.1%*	*70-130*		*12/27/2023 11:49*	*Ka23122712.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-09

04D_IA102_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.220	U	0.220	0.879	12/27/2023 12:17	Ka23122713.D
trans-1,2-Dichloroethene	156-60-5	<0.176	U	0.176	0.703	12/27/2023 12:17	Ka23122713.D
cis-1,2-Dichloroethene	156-59-2	<0.176	U	0.176	0.703	12/27/2023 12:17	Ka23122713.D
Trichloroethene	79-01-6	<0.189	U	0.189	0.757	12/27/2023 12:17	Ka23122713.D
Tetrachloroethene	127-18-4	<0.224	U	0.224	0.895	12/27/2023 12:17	Ka23122713.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*100%*	*70-130*		*12/27/2023 12:17*	*Ka23122713.D*
Surrogate: Toluene-d8	2037-26-5	*99.2%*	*70-130*		*12/27/2023 12:17*	*Ka23122713.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-10

04D_IA203_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.220	U	0.220	0.879	12/27/2023 12:46	Ka23122714.D
trans-1,2-Dichloroethene	156-60-5	<0.176	U	0.176	0.704	12/27/2023 12:46	Ka23122714.D
cis-1,2-Dichloroethene	156-59-2	<0.176	U	0.176	0.704	12/27/2023 12:46	Ka23122714.D
Trichloroethene	79-01-6	<0.189	U	0.189	0.758	12/27/2023 12:46	Ka23122714.D
Tetrachloroethene	127-18-4	<0.224	U	0.224	0.895	12/27/2023 12:46	Ka23122714.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*98.5%*	*70-130*		*12/27/2023 12:46*	*Ka23122714.D*
Surrogate: Toluene-d8	2037-26-5	*95.3%*	*70-130*		*12/27/2023 12:46*	*Ka23122714.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-11

04E_IAB01_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.887	12/27/2023 14:07	Ka23122717.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.709	12/27/2023 14:07	Ka23122717.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.709	12/27/2023 14:07	Ka23122717.D
Trichloroethene	79-01-6	<0.191	U	0.191	0.764	12/27/2023 14:07	Ka23122717.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.903	12/27/2023 14:07	Ka23122717.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.6%*	*70-130*		*12/27/2023 14:07*	*Ka23122717.D*
Surrogate: Toluene-d8	2037-26-5	*94.7%*	*70-130*		*12/27/2023 14:07*	*Ka23122717.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-12

04E_IA102_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.221	U	0.221	0.883	12/27/2023 14:36	Ka23122718.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.707	12/27/2023 14:36	Ka23122718.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.707	12/27/2023 14:36	Ka23122718.D
Trichloroethene	79-01-6	<0.190	U	0.190	0.761	12/27/2023 14:36	Ka23122718.D
Tetrachloroethene	127-18-4	<0.225	U	0.225	0.899	12/27/2023 14:36	Ka23122718.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.2%*	*70-130*		*12/27/2023 14:36*	*Ka23122718.D*
Surrogate: Toluene-d8	2037-26-5	*93.7%*	*70-130*		*12/27/2023 14:36*	*Ka23122718.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Lab Sample ID: 0007408-13

04E_IA203_20231222

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.887	12/27/2023 15:05	Ka23122719.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.710	12/27/2023 15:05	Ka23122719.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.710	12/27/2023 15:05	Ka23122719.D
Trichloroethene	79-01-6	<0.191	U	0.191	0.765	12/27/2023 15:05	Ka23122719.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.904	12/27/2023 15:05	Ka23122719.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*97.7%*	*70-130*		*12/27/2023 15:05*	*Ka23122719.D*
Surrogate: Toluene-d8	2037-26-5	*96.4%*	*70-130*		*12/27/2023 15:05*	*Ka23122719.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

QC Information/Summary

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23K044 - Instrument: K System - File ID: Kb23111516.D

B23K044-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	49.8	10	2.5	ng	50.0		99.6	70-130			
trans-1,2-Dichloroethene	52.0	10	2.5	ng	50.0		104	70-130			
cis-1,2-Dichloroethene	50.0	10	2.5	ng	50.0		100	70-130			
Trichloroethene	55.3	10	2.5	ng	50.0		111	70-130			
Tetrachloroethene	58.6	10	2.5	ng	50.0		117	70-130			
Surrogate: 1,2-DCA-d4	*50.3*			*ng*	50.0		*101*	*70-130*			
Surrogate: Toluene-d8	*50.6*			*ng*	50.0		*101*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23K044 - Instrument: K System - File ID: Kb23111519.D

B23K044-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*100*			*ng*	100		*100*	*70-130*			
Surrogate: Toluene-d8	*98.8*			*ng*	100		*98.8*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Batch: 23L0075 - Instrument: K System - File ID: Ka23122702.D

23L0075-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	44.1	10	2.5	ng	50.0		88.3	70-130			
trans-1,2-Dichloroethene	46.7	10	2.5	ng	50.0		93.4	70-130			
cis-1,2-Dichloroethene	50.1	10	2.5	ng	50.0		100	70-130			
Trichloroethene	58.5	10	2.5	ng	50.0		117	70-130			
Tetrachloroethene	60.8	10	2.5	ng	50.0		122	70-130			
Surrogate: 1,2-DCA-d4	*47.7*			*ng*	50.0		*95.3*	*70-130*			
Surrogate: Toluene-d8	*48.8*			*ng*	50.0		*97.7*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Batch: 23L0075 - Instrument: K System - File ID: Ka23122703.D

23L0075-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.220	0.879	0.220	µg/m³							U
trans-1,2-Dichloroethene	<0.176	0.703	0.176	µg/m³							U
cis-1,2-Dichloroethene	<0.176	0.703	0.176	µg/m³							U
Trichloroethene	<0.189	0.757	0.189	µg/m³							U
Tetrachloroethene	<0.224	0.895	0.224	µg/m³							U
Surrogate: 1,2-DCA-d4	*91.3*			*ng*	100		*91.3*	*70-130*			
Surrogate: Toluene-d8	*95.2*			*ng*	100		*95.2*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Instrument: K System - File ID: Ka23122704.D

B23L079-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	46.2	10	2.5	ng	50.0		92.3	70-130			
trans-1,2-Dichloroethene	49.2	10	2.5	ng	50.0		98.5	70-130			
cis-1,2-Dichloroethene	51.7	10	2.5	ng	50.0		103	70-130			
Trichloroethene	62.3	10	2.5	ng	50.0		125	70-130			
Tetrachloroethene	64.8	10	2.5	ng	50.0		130	70-130			
Surrogate: 1,2-DCA-d4	*45.9*			*ng*	50.0		*91.8*	*70-130*			
Surrogate: Toluene-d8	*49.4*			*ng*	50.0		*98.8*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Instrument: K System - File ID: Ka23122715.D

B23L079-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.9	10	2.5	ng	50.0		102	70-130			
trans-1,2-Dichloroethene	48.2	10	2.5	ng	50.0		96.4	70-130			
cis-1,2-Dichloroethene	49.7	10	2.5	ng	50.0		99.4	70-130			
Trichloroethene	58.6	10	2.5	ng	50.0		117	70-130			
Tetrachloroethene	59.6	10	2.5	ng	50.0		119	70-130			
Surrogate: 1,2-DCA-d4	*45.2*			*ng*	50.0		*90.4*	*70-130*			
Surrogate: Toluene-d8	*50.0*			*ng*	50.0		*99.9*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Instrument: K System - File ID: Ka23122716.D

B23L079-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*88.3*			*ng*	100		*88.3*	*70-130*			
Surrogate: Toluene-d8	*95.5*			*ng*	100		*95.5*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Instrument: K System - File ID: Ka23122720.D

B23L079-CCV2 (Continuing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.9	10	2.5	ng	50.0		104	70-130			
trans-1,2-Dichloroethene	52.4	10	2.5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	52.3	10	2.5	ng	50.0		105	70-130			
Trichloroethene	46.8	10	2.5	ng	50.0		93.6	70-130			
Tetrachloroethene	64.6	10	2.5	ng	50.0		129	70-130			
Surrogate: 1,2-DCA-d4	*49.8*			*ng*	50.0		*99.5*	*70-130*			
Surrogate: Toluene-d8	*63.8*			*ng*	50.0		*128*	*70-130*			

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23L079 - Instrument: K System - File ID: Ka23122721.D

B23L079-CCB2 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*96.3*			*ng*	100		*96.3*	*70-130*			
Surrogate: Toluene-d8	*99.6*			*ng*	100		*99.6*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23L0075-BS1 File ID: Ka23122702.D Analyzed: 12/27/23 7:41

LCSD: B23L079-ICV1 File ID: Ka23122704.D Analyzed: 12/27/23 6:51

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	44.13	88.26		50	46.17	92.30	70-130	4.52	30	
trans-1,2-Dichloroethene	156-60-5	46.69	93.38		50	49.23	98.50	70-130	5.30	30	
cis-1,2-Dichloroethene	156-59-2	50.06	100.12		50	51.71	103.00	70-130	3.24	30	
Trichloroethene	79-01-6	58.45	116.9		50	62.28	125.00	70-130	6.34	30	
Tetrachloroethene	127-18-4	60.82	121.64		50	64.79	130.00	70-130	6.32	30	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Additional QC Information

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007408-01 **Sample Name:** 04_OA01_20231222					**x̄ Temp (°C):** 4.44	
Vinyl Chloride	20,228	1.00	0.548	U	U	Ka23122705.D
trans-1,2-Dichloroethene	20,228	1.00	0.685	U	U	Ka23122705.D
cis-1,2-Dichloroethene	20,228	1.00	0.685	U	U	Ka23122705.D
Trichloroethene	20,228	1.00	0.636	U	U	Ka23122705.D
Tetrachloroethene	20,228	1.00	0.538	U	U	Ka23122705.D
Lab ID: 0007408-02 **Sample Name:** 04B_IAB01_20231222					**x̄ Temp (°C):** 13.33	
Vinyl Chloride	20,128	1.00	0.557	U	U	Ka23122706.D
trans-1,2-Dichloroethene	20,128	1.00	0.696	U	U	Ka23122706.D
cis-1,2-Dichloroethene	20,128	1.00	0.696	U	U	Ka23122706.D
Trichloroethene	20,128	1.00	0.646	U	U	Ka23122706.D
Tetrachloroethene	20,128	1.00	0.547	U	U	Ka23122706.D
Lab ID: 0007408-03 **Sample Name:** 04B_IA102_20231222					**x̄ Temp (°C):** 18.33	
Vinyl Chloride	20,147	1.00	0.562	U	U	Ka23122707.D
trans-1,2-Dichloroethene	20,147	1.00	0.702	U	U	Ka23122707.D
cis-1,2-Dichloroethene	20,147	1.00	0.702	U	U	Ka23122707.D
Trichloroethene	20,147	1.00	0.652	U	U	Ka23122707.D
Tetrachloroethene	20,147	1.00	0.552	U	U	Ka23122707.D
Lab ID: 0007408-04 **Sample Name:** 04B_IA203_20231222					**x̄ Temp (°C):** 18.33	
Vinyl Chloride	20,146	1.00	0.562	U	U	Ka23122708.D
trans-1,2-Dichloroethene	20,146	1.00	0.702	U	U	Ka23122708.D
cis-1,2-Dichloroethene	20,146	1.00	0.702	U	U	Ka23122708.D
Trichloroethene	20,146	1.00	0.652	U	U	Ka23122708.D
Tetrachloroethene	20,146	1.00	0.552	U	U	Ka23122708.D
Lab ID: 0007408-05 **Sample Name:** 04C_Sump01_20231222					**x̄ Temp (°C):** 16.11	
Vinyl Chloride	20,234	1.00	0.559	U	U	Ka23122709.D
trans-1,2-Dichloroethene	20,234	1.00	0.699	U	U	Ka23122709.D
cis-1,2-Dichloroethene	20,234	1.00	0.699	U	U	Ka23122709.D
Trichloroethene	20,234	1.00	0.649	U	U	Ka23122709.D
Tetrachloroethene	20,234	1.00	0.549	U	U	Ka23122709.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007408-06 **Sample Name:** 04C_IAB01_20231222					**x̄ Temp (°C):** 16.11	
Vinyl Chloride	20,235	1.00	0.559	U	U	Ka23122710.D
trans-1,2-Dichloroethene	20,235	1.00	0.699	U	U	Ka23122710.D
cis-1,2-Dichloroethene	20,235	1.00	0.699	U	U	Ka23122710.D
Trichloroethene	20,235	1.00	0.649	14.81	1.13	Ka23122710.D
Tetrachloroethene	20,235	1.00	0.549	U	U	Ka23122710.D
Lab ID: 0007408-07 **Sample Name:** 04C_IA102_20231222					**x̄ Temp (°C):** 16.11	
Vinyl Chloride	20,235	1.00	0.559	U	U	Ka23122711.D
trans-1,2-Dichloroethene	20,235	1.00	0.699	U	U	Ka23122711.D
cis-1,2-Dichloroethene	20,235	1.00	0.699	U	U	Ka23122711.D
Trichloroethene	20,235	1.00	0.649	9.41	0.716	Ka23122711.D
Tetrachloroethene	20,235	1.00	0.549	U	U	Ka23122711.D
Lab ID: 0007408-08 **Sample Name:** 04D_IAB01_20231222					**x̄ Temp (°C):** 18.89	
Vinyl Chloride	20,247	1.00	0.562	U	U	Ka23122712.D
trans-1,2-Dichloroethene	20,247	1.00	0.703	U	U	Ka23122712.D
cis-1,2-Dichloroethene	20,247	1.00	0.703	U	U	Ka23122712.D
Trichloroethene	20,247	1.00	0.653	U	U	Ka23122712.D
Tetrachloroethene	20,247	1.00	0.552	U	U	Ka23122712.D
Lab ID: 0007408-09 **Sample Name:** 04D_IA102_20231222					**x̄ Temp (°C):** 18.89	
Vinyl Chloride	20,235	1.00	0.562	U	U	Ka23122713.D
trans-1,2-Dichloroethene	20,235	1.00	0.703	U	U	Ka23122713.D
cis-1,2-Dichloroethene	20,235	1.00	0.703	U	U	Ka23122713.D
Trichloroethene	20,235	1.00	0.653	U	U	Ka23122713.D
Tetrachloroethene	20,235	1.00	0.552	U	U	Ka23122713.D
Lab ID: 0007408-10 **Sample Name:** 04D_IA203_20231222					**x̄ Temp (°C):** 18.89	
Vinyl Chloride	20,226	1.00	0.562	U	U	Ka23122714.D
trans-1,2-Dichloroethene	20,226	1.00	0.703	U	U	Ka23122714.D
cis-1,2-Dichloroethene	20,226	1.00	0.703	U	U	Ka23122714.D
Trichloroethene	20,226	1.00	0.653	U	U	Ka23122714.D
Tetrachloroethene	20,226	1.00	0.552	U	U	Ka23122714.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007408-11 **Sample Name:** 04E_IAB01_20231222					**x̄ Temp (°C):** 14.44	
Vinyl Chloride	20,215	1.00	0.558	U	U	Ka23122717.D
trans-1,2-Dichloroethene	20,215	1.00	0.697	U	U	Ka23122717.D
cis-1,2-Dichloroethene	20,215	1.00	0.697	U	U	Ka23122717.D
Trichloroethene	20,215	1.00	0.648	U	U	Ka23122717.D
Tetrachloroethene	20,215	1.00	0.548	U	U	Ka23122717.D
Lab ID: 0007408-12 **Sample Name:** 04E_IA102_20231222					**x̄ Temp (°C):** 17.22	
Vinyl Chloride	20,200	1.00	0.561	U	U	Ka23122718.D
trans-1,2-Dichloroethene	20,200	1.00	0.701	U	U	Ka23122718.D
cis-1,2-Dichloroethene	20,200	1.00	0.701	U	U	Ka23122718.D
Trichloroethene	20,200	1.00	0.651	U	U	Ka23122718.D
Tetrachloroethene	20,200	1.00	0.551	U	U	Ka23122718.D
Lab ID: 0007408-13 **Sample Name:** 04E_IA203_20231222					**x̄ Temp (°C):** 14.44	
Vinyl Chloride	20,199	1.00	0.558	U	U	Ka23122719.D
trans-1,2-Dichloroethene	20,199	1.00	0.697	U	U	Ka23122719.D
cis-1,2-Dichloroethene	20,199	1.00	0.697	U	U	Ka23122719.D
Trichloroethene	20,199	1.00	0.648	U	U	Ka23122719.D
Tetrachloroethene	20,199	1.00	0.548	U	U	Ka23122719.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where:
- C = concentration (µg/m^3)
- M = mass (ng)
- DF = dilution factor
- Uc = uptake rate (ml/min), corrected
- t = sampling time (minutes)
- U = compound specific uptake rate
- Tu = uptake rate study temperature
- Ts = sample average temperature

Note: Tu is 16.65°C

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007408-01	**Sample Name:** 04_OA01_20231222					**X̄ Temp (°C):** 4.44	
Vinyl Chloride	20,228	1.00	0.548	10.00	2.50	0.902	0.225
trans-1,2-Dichloroethene	20,228	1.00	0.685	10.00	2.50	0.722	0.180
cis-1,2-Dichloroethene	20,228	1.00	0.685	10.00	2.50	0.722	0.180
Trichloroethene	20,228	1.00	0.636	10.00	2.50	0.777	0.194
Tetrachloroethene	20,228	1.00	0.538	10.00	2.50	0.918	0.230
Lab ID: 0007408-02	**Sample Name:** 04B_IAB01_20231222					**X̄ Temp (°C):** 13.33	
Vinyl Chloride	20,128	1.00	0.557	10.00	2.50	0.892	0.223
trans-1,2-Dichloroethene	20,128	1.00	0.696	10.00	2.50	0.714	0.178
cis-1,2-Dichloroethene	20,128	1.00	0.696	10.00	2.50	0.714	0.178
Trichloroethene	20,128	1.00	0.646	10.00	2.50	0.769	0.192
Tetrachloroethene	20,128	1.00	0.547	10.00	2.50	0.909	0.227
Lab ID: 0007408-03	**Sample Name:** 04B_IA102_20231222					**X̄ Temp (°C):** 18.33	
Vinyl Chloride	20,147	1.00	0.562	10.00	2.50	0.884	0.221
trans-1,2-Dichloroethene	20,147	1.00	0.702	10.00	2.50	0.707	0.177
cis-1,2-Dichloroethene	20,147	1.00	0.702	10.00	2.50	0.707	0.177
Trichloroethene	20,147	1.00	0.652	10.00	2.50	0.761	0.190
Tetrachloroethene	20,147	1.00	0.552	10.00	2.50	0.900	0.225
Lab ID: 0007408-04	**Sample Name:** 04B_IA203_20231222					**X̄ Temp (°C):** 18.33	
Vinyl Chloride	20,146	1.00	0.562	10.00	2.50	0.884	0.221
trans-1,2-Dichloroethene	20,146	1.00	0.702	10.00	2.50	0.707	0.177
cis-1,2-Dichloroethene	20,146	1.00	0.702	10.00	2.50	0.707	0.177
Trichloroethene	20,146	1.00	0.652	10.00	2.50	0.761	0.190
Tetrachloroethene	20,146	1.00	0.552	10.00	2.50	0.900	0.225
Lab ID: 0007408-05	**Sample Name:** 04C_Sump01_20231222					**X̄ Temp (°C):** 16.11	
Vinyl Chloride	20,234	1.00	0.559	10.00	2.50	0.883	0.221
trans-1,2-Dichloroethene	20,234	1.00	0.699	10.00	2.50	0.707	0.177
cis-1,2-Dichloroethene	20,234	1.00	0.699	10.00	2.50	0.707	0.177
Trichloroethene	20,234	1.00	0.649	10.00	2.50	0.761	0.190
Tetrachloroethene	20,234	1.00	0.549	10.00	2.50	0.899	0.225

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007408-06	**Sample Name:** 04C_IAB01_20231222					**x̄ Temp (°C):** 16.11	
Vinyl Chloride	20,235	1.00	0.559	10.00	2.50	0.883	0.221
trans-1,2-Dichloroethene	20,235	1.00	0.699	10.00	2.50	0.707	0.177
cis-1,2-Dichloroethene	20,235	1.00	0.699	10.00	2.50	0.707	0.177
Trichloroethene	20,235	1.00	0.649	10.00	2.50	0.761	0.190
Tetrachloroethene	20,235	1.00	0.549	10.00	2.50	0.899	0.225
Lab ID: 0007408-07	**Sample Name:** 04C_IA102_20231222					**x̄ Temp (°C):** 16.11	
Vinyl Chloride	20,235	1.00	0.559	10.00	2.50	0.883	0.221
trans-1,2-Dichloroethene	20,235	1.00	0.699	10.00	2.50	0.707	0.177
cis-1,2-Dichloroethene	20,235	1.00	0.699	10.00	2.50	0.707	0.177
Trichloroethene	20,235	1.00	0.649	10.00	2.50	0.761	0.190
Tetrachloroethene	20,235	1.00	0.549	10.00	2.50	0.899	0.225
Lab ID: 0007408-08	**Sample Name:** 04D_IAB01_20231222					**x̄ Temp (°C):** 18.89	
Vinyl Chloride	20,247	1.00	0.562	10.00	2.50	0.879	0.220
trans-1,2-Dichloroethene	20,247	1.00	0.703	10.00	2.50	0.703	0.176
cis-1,2-Dichloroethene	20,247	1.00	0.703	10.00	2.50	0.703	0.176
Trichloroethene	20,247	1.00	0.653	10.00	2.50	0.757	0.189
Tetrachloroethene	20,247	1.00	0.552	10.00	2.50	0.895	0.224
Lab ID: 0007408-09	**Sample Name:** 04D_IA102_20231222					**x̄ Temp (°C):** 18.89	
Vinyl Chloride	20,235	1.00	0.562	10.00	2.50	0.879	0.220
trans-1,2-Dichloroethene	20,235	1.00	0.703	10.00	2.50	0.703	0.176
cis-1,2-Dichloroethene	20,235	1.00	0.703	10.00	2.50	0.703	0.176
Trichloroethene	20,235	1.00	0.653	10.00	2.50	0.757	0.189
Tetrachloroethene	20,235	1.00	0.552	10.00	2.50	0.895	0.224
Lab ID: 0007408-10	**Sample Name:** 04D_IA203_20231222					**x̄ Temp (°C):** 18.89	
Vinyl Chloride	20,226	1.00	0.562	10.00	2.50	0.879	0.220
trans-1,2-Dichloroethene	20,226	1.00	0.703	10.00	2.50	0.704	0.176
cis-1,2-Dichloroethene	20,226	1.00	0.703	10.00	2.50	0.704	0.176
Trichloroethene	20,226	1.00	0.653	10.00	2.50	0.758	0.189
Tetrachloroethene	20,226	1.00	0.552	10.00	2.50	0.895	0.224

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007408-11	**Sample Name:** 04E_IAB01_20231222					**x̄ Temp (°C):** 14.44	
Vinyl Chloride	20,215	1.00	0.558	10.00	2.50	0.887	0.222
trans-1,2-Dichloroethene	20,215	1.00	0.697	10.00	2.50	0.709	0.177
cis-1,2-Dichloroethene	20,215	1.00	0.697	10.00	2.50	0.709	0.177
Trichloroethene	20,215	1.00	0.648	10.00	2.50	0.764	0.191
Tetrachloroethene	20,215	1.00	0.548	10.00	2.50	0.903	0.226
Lab ID: 0007408-12	**Sample Name:** 04E_IA102_20231222					**x̄ Temp (°C):** 17.22	
Vinyl Chloride	20,200	1.00	0.561	10.00	2.50	0.883	0.221
trans-1,2-Dichloroethene	20,200	1.00	0.701	10.00	2.50	0.707	0.177
cis-1,2-Dichloroethene	20,200	1.00	0.701	10.00	2.50	0.707	0.177
Trichloroethene	20,200	1.00	0.651	10.00	2.50	0.761	0.190
Tetrachloroethene	20,200	1.00	0.551	10.00	2.50	0.899	0.225
Lab ID: 0007408-13	**Sample Name:** 04E_IA203_20231222					**x̄ Temp (°C):** 14.44	
Vinyl Chloride	20,199	1.00	0.558	10.00	2.50	0.887	0.222
trans-1,2-Dichloroethene	20,199	1.00	0.697	10.00	2.50	0.710	0.177
cis-1,2-Dichloroethene	20,199	1.00	0.697	10.00	2.50	0.710	0.177
Trichloroethene	20,199	1.00	0.648	10.00	2.50	0.765	0.191
Tetrachloroethene	20,199	1.00	0.548	10.00	2.50	0.904	0.226

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
S5	Surrogate recovery was out of laboratory and method acceptance limits.
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007408
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/05/2024

Sample Management Records

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800-878-5510 Toll Free

PASSIVE AIR SAMPLING – SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information		Project Manager: Steve Meer	Client PO: 21801
Company: The Sigma Group, Inc		Project Name: Oakfield Properties	Turn around time (check one): ☒ Normal ☐ Rush (specify) ____ days
Address: 1300 W. Canal St.		Location: Oakfield WI	
City / State / Zip: Milwaukee WI		Submitted by: Ryan Adamec	Analysis: ☒ Method TO-17 ☐ Method 325
Phone: (414) 643-4200		Email: radamec@thesigmagroup.com	

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04_OA01-20231222	1156657	12/8/23	810	12/22/23	918	4.44	PCE, TCE, c3-1,2-DCE		X		
04B_IA01-20231222	1183480		1148		1116	13.33	trans-1,2-DCE, vinyl chloride	X			
04B_IA02-20231222	1183682		1155		1122	18.33		X			
04B_IA03_20231222	1118062		1140		1126	18.33		X			
04C_Sump01_20231222	CS0938		850		1004	16.11		X			
04C_IA01_20231222	CS0939		855		1010	16.11		X			
04C_IA02_20231222	CS0900		900		1015	16.11		X			
04D_IA01_20231222	1101383		1025		1152	18.89		X			
04D_IA02_20231222	1183580		1030		1145	18.89		X			
04D_IA03_20231222	CS0964		1035		1141	18.89		X			
04E_IA01_20231222	CS0923		945		1040	14.44		X			
04E_IA02_20231222	CS0932		950		1030	17.22		X			
04E_IA03_20231222	1119856		955		1034	14.44		X			

Special Notes / Instructions:

Relinquished by (signature): Ryan Adamec	Date / Time: 12/22/23 330	Received by (signature): [signature]	Date / Time: 12/26/23 1102
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7408	Beacon Proposal: 230714R01	
Courier Name: Fedex	Shipment Condition: good	Custody Seal Intact: ☐ Yes ☐ No ☑ n/a	Custody Seal No: —

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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230714R01

Laboratory Work Order: 0007442

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

January 18, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007442-01	04A_IAB_01_20240105	01/09/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007442-02	04A_IA1_02_20240105	01/09/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007442-03	04A_IA2_03_20240105	01/09/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			

Project Completeness

Samples Received: 3
Samples Analyzed: 3

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007442-01 — **04A_IAB_01_20240105** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**3.34**		5.904	1.07	0.267	Ka24011223.D
Tetrachloroethene	127-18-4	**0.380**	J	8.154	1.26	0.316	Ka24011223.D

Lab Sample ID: 0007442-02 — **04A_IA1_02_20240105** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**2.74**		5.901	1.07	0.267	Ka24011224.D
Tetrachloroethene	127-18-4	**0.576**	J	8.151	1.26	0.315	Ka24011224.D

Lab Sample ID: 0007442-03 — **04A_IA2_03_20240105** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**0.889**	J	3.674	0.993	0.248	Ka24011225.D
Trichloroethene	79-01-6	**2.87**		5.904	1.07	0.267	Ka24011225.D
Tetrachloroethene	127-18-4	**0.454**	J	8.153	1.26	0.316	Ka24011225.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Data Summary Table- Concentration

Compound	Frequency	LOD (µg/m³)	Max Value (µg/m³)
cis-1,2-Dichloroethene	1	0.248	0.889
Trichloroethene	3	0.267	3.34
Tetrachloroethene	3	0.315	0.576

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Detailed Analytical Results

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Lab Sample ID: 0007442-01

04A_IAB_01_20240105

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.310	U	0.310	1.24	01/12/2024 21:42	Ka24011223.D
trans-1,2-Dichloroethene	156-60-5	<0.248	U	0.248	0.993	01/12/2024 21:42	Ka24011223.D
cis-1,2-Dichloroethene	156-59-2	<0.248	U	0.248	0.993	01/12/2024 21:42	Ka24011223.D
Trichloroethene	79-01-6	**3.34**		0.267	1.07	01/12/2024 21:42	Ka24011223.D
Tetrachloroethene	127-18-4	**0.380**	J	0.316	1.26	01/12/2024 21:42	Ka24011223.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*90.6%*	*70-130*		*01/12/2024 21:42*	*Ka24011223.D*
Surrogate: Toluene-d8	2037-26-5	*88.4%*	*70-130*		*01/12/2024 21:42*	*Ka24011223.D*

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1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Lab Sample ID: 0007442-02

04A_IA1_02_20240105

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.310	U	0.310	1.24	01/12/2024 22:11	Ka24011224.D
trans-1,2-Dichloroethene	156-60-5	<0.248	U	0.248	0.991	01/12/2024 22:11	Ka24011224.D
cis-1,2-Dichloroethene	156-59-2	<0.248	U	0.248	0.991	01/12/2024 22:11	Ka24011224.D
Trichloroethene	79-01-6	**2.74**		0.267	1.07	01/12/2024 22:11	Ka24011224.D
Tetrachloroethene	127-18-4	**0.576**	J	0.315	1.26	01/12/2024 22:11	Ka24011224.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*89.2%*	*70-130*		*01/12/2024 22:11*	*Ka24011224.D*
Surrogate: Toluene-d8	2037-26-5	*88.2%*	*70-130*		*01/12/2024 22:11*	*Ka24011224.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Lab Sample ID: 0007442-03

04A_IA2_03_20240105

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.310	U	0.310	1.24	01/12/2024 22:39	Ka24011225.D
trans-1,2-Dichloroethene	156-60-5	<0.248	U	0.248	0.993	01/12/2024 22:39	Ka24011225.D
cis-1,2-Dichloroethene	156-59-2	**0.889**	J	0.248	0.993	01/12/2024 22:39	Ka24011225.D
Trichloroethene	79-01-6	**2.87**		0.267	1.07	01/12/2024 22:39	Ka24011225.D
Tetrachloroethene	127-18-4	**0.454**	J	0.316	1.26	01/12/2024 22:39	Ka24011225.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*88.8%*	*70-130*		*01/12/2024 22:39*	*Ka24011225.D*
Surrogate: Toluene-d8	2037-26-5	*89.4%*	*70-130*		*01/12/2024 22:39*	*Ka24011225.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

QC Information/Summary

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23K044 - Instrument: K System - File ID: Kb23111516.D

B23K044-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	49.8	10	2.5	ng	50.0		99.6	70-130			
trans-1,2-Dichloroethene	52.0	10	2.5	ng	50.0		104	70-130			
cis-1,2-Dichloroethene	50.0	10	2.5	ng	50.0		100	70-130			
Trichloroethene	55.3	10	2.5	ng	50.0		111	70-130			
Tetrachloroethene	58.6	10	2.5	ng	50.0		117	70-130			
Surrogate: 1,2-DCA-d4	*50.3*			*ng*	50.0		*101*	*70-130*			
Surrogate: Toluene-d8	*50.6*			*ng*	50.0		*101*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B23K044 - Instrument: K System - File ID: Kb23111519.D

B23K044-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*100*			*ng*	100		*100*	*70-130*			
Surrogate: Toluene-d8	*98.8*			*ng*	100		*98.8*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Batch: 24A0057 - Instrument: K System - File ID: Ka24011202.D

24A0057-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.8	10	2.5	ng	50.0		83.5	70-130			
trans-1,2-Dichloroethene	46.6	10	2.5	ng	50.0		93.3	70-130			
cis-1,2-Dichloroethene	51.0	10	2.5	ng	50.0		102	70-130			
Trichloroethene	61.2	10	2.5	ng	50.0		122	70-130			
Tetrachloroethene	64.2	10	2.5	ng	50.0		128	70-130			
Surrogate: 1,2-DCA-d4	*48.7*			*ng*	50.0		*97.4*	*70-130*			
Surrogate: Toluene-d8	*47.6*			*ng*	50.0		*95.1*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Batch: 24A0057 - Instrument: K System - File ID: Ka24011203.D

24A0057-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.309	1.24	0.309	µg/m³							U
trans-1,2-Dichloroethene	<0.247	0.989	0.247	µg/m³							U
cis-1,2-Dichloroethene	<0.247	0.989	0.247	µg/m³							U
Trichloroethene	<0.266	1.07	0.266	µg/m³							U
Tetrachloroethene	<0.315	1.26	0.315	µg/m³							U
Surrogate: 1,2-DCA-d4	*95.9*			*ng*	100		*95.9*	*70-130*			
Surrogate: Toluene-d8	*90.5*			*ng*	100		*90.5*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Instrument: K System - File ID: Ka24011204.D

B24A057-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	44.3	10	2.5	ng	50.0		88.7	70-130			
trans-1,2-Dichloroethene	47.9	10	2.5	ng	50.0		95.8	70-130			
cis-1,2-Dichloroethene	52.3	10	2.5	ng	50.0		105	70-130			
Trichloroethene	59.6	10	2.5	ng	50.0		119	70-130			
Tetrachloroethene	65.0	10	2.5	ng	50.0		130	70-130			
Surrogate: 1,2-DCA-d4	*47.1*			*ng*	50.0		*94.1*	*70-130*			
Surrogate: Toluene-d8	*47.2*			*ng*	50.0		*94.4*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Instrument: K System - File ID: Ka24011215.D

B24A057-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.2	10	2.5	ng	50.0		86.4	70-130			
trans-1,2-Dichloroethene	46.1	10	2.5	ng	50.0		92.2	70-130			
cis-1,2-Dichloroethene	49.4	10	2.5	ng	50.0		98.7	70-130			
Trichloroethene	59.9	10	2.5	ng	50.0		120	70-130			
Tetrachloroethene	63.8	10	2.5	ng	50.0		128	70-130			
Surrogate: 1,2-DCA-d4	*47.0*			*ng*	50.0		*94.0*	*70-130*			
Surrogate: Toluene-d8	*47.9*			*ng*	50.0		*95.8*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Instrument: K System - File ID: Ka24011216.D

B24A057-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*87.5*			*ng*	100		*87.5*	*70-130*			
Surrogate: Toluene-d8	*92.9*			*ng*	100		*92.9*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Instrument: K System - File ID: Ka24011226.D

B24A057-CCV2 (Continuing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.0	10	2.5	ng	50.0		86.0	70-130			
trans-1,2-Dichloroethene	45.9	10	2.5	ng	50.0		91.7	70-130			
cis-1,2-Dichloroethene	50.1	10	2.5	ng	50.0		100	70-130			
Trichloroethene	57.0	10	2.5	ng	50.0		114	70-130			
Tetrachloroethene	62.9	10	2.5	ng	50.0		126	70-130			
Surrogate: 1,2-DCA-d4	*46.7*			*ng*	50.0		*93.5*	*70-130*			
Surrogate: Toluene-d8	*47.7*			*ng*	50.0		*95.4*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24A057 - Instrument: K System - File ID: Ka24011227.D

B24A057-CCB2 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*82.1*			*ng*	100		*82.1*	*70-130*			
Surrogate: Toluene-d8	*90.6*			*ng*	100		*90.6*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 24A0057-BS1 File ID: Ka24011202.D Analyzed: 1/12/24 12:38

LCSD: B24A057-ICV1 File ID: Ka24011204.D Analyzed: 1/12/24 11:43

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	41.77	83.54		50	44.33	88.70	70-130	5.95	30	
trans-1,2-Dichloroethene	156-60-5	46.64	93.28		50	47.89	95.80	70-130	2.64	30	
cis-1,2-Dichloroethene	156-59-2	50.97	101.94		50	52.32	105.00	70-130	2.61	30	
Trichloroethene	79-01-6	61.15	122.3		50	59.59	119.00	70-130	2.58	30	
Tetrachloroethene	127-18-4	64.15	128.3		50	65	130.00	70-130	1.32	30	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Additional QC Information

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007442-01 **Sample Name:** 04A_IAB_01_20240105					**x̄ Temp (°C):** 17.50	
Vinyl Chloride	14,365	1.00	0.561	U	U	Ka24011223.D
trans-1,2-Dichloroethene	14,365	1.00	0.701	U	U	Ka24011223.D
cis-1,2-Dichloroethene	14,365	1.00	0.701	U	U	Ka24011223.D
Trichloroethene	14,365	1.00	0.651	31.26	3.34	Ka24011223.D
Tetrachloroethene	14,365	1.00	0.551	3.01	0.380	Ka24011223.D
Lab ID: 0007442-02 **Sample Name:** 04A_IA1_02_20240105					**x̄ Temp (°C):** 19.70	
Vinyl Chloride	14,341	1.00	0.563	U	U	Ka24011224.D
trans-1,2-Dichloroethene	14,341	1.00	0.704	U	U	Ka24011224.D
cis-1,2-Dichloroethene	14,341	1.00	0.704	U	U	Ka24011224.D
Trichloroethene	14,341	1.00	0.653	25.67	2.74	Ka24011224.D
Tetrachloroethene	14,341	1.00	0.553	4.57	0.576	Ka24011224.D
Lab ID: 0007442-03 **Sample Name:** 04A_IA2_03_20240105					**x̄ Temp (°C):** 18.60	
Vinyl Chloride	14,342	1.00	0.562	U	U	Ka24011225.D
trans-1,2-Dichloroethene	14,342	1.00	0.702	U	U	Ka24011225.D
cis-1,2-Dichloroethene	14,342	1.00	0.702	8.95	0.889	Ka24011225.D
Trichloroethene	14,342	1.00	0.652	26.86	2.87	Ka24011225.D
Tetrachloroethene	14,342	1.00	0.552	3.59	0.454	Ka24011225.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where:
- C = concentration (µg/m^3)
- M = mass (ng)
- DF = dilution factor
- Uc = uptake rate (ml/min), corrected
- t = sampling time (minutes)
- U = compound specific uptake rate
- Tu = uptake rate study temperature
- Ts = sample average temperature

Note: Tu is 16.65°C

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007442-01	**Sample Name:** 04A_IAB_01_20240105					**x̄ Temp (°C):** 17.50	
Vinyl Chloride	14,365	1.00	0.561	10.00	2.50	1.24	0.310
trans-1,2-Dichloroethene	14,365	1.00	0.701	10.00	2.50	0.993	0.248
cis-1,2-Dichloroethene	14,365	1.00	0.701	10.00	2.50	0.993	0.248
Trichloroethene	14,365	1.00	0.651	10.00	2.50	1.07	0.267
Tetrachloroethene	14,365	1.00	0.551	10.00	2.50	1.26	0.316
Lab ID: 0007442-02	**Sample Name:** 04A_IA1_02_20240105					**x̄ Temp (°C):** 19.70	
Vinyl Chloride	14,341	1.00	0.563	10.00	2.50	1.24	0.310
trans-1,2-Dichloroethene	14,341	1.00	0.704	10.00	2.50	0.991	0.248
cis-1,2-Dichloroethene	14,341	1.00	0.704	10.00	2.50	0.991	0.248
Trichloroethene	14,341	1.00	0.653	10.00	2.50	1.07	0.267
Tetrachloroethene	14,341	1.00	0.553	10.00	2.50	1.26	0.315
Lab ID: 0007442-03	**Sample Name:** 04A_IA2_03_20240105					**x̄ Temp (°C):** 18.60	
Vinyl Chloride	14,342	1.00	0.562	10.00	2.50	1.24	0.310
trans-1,2-Dichloroethene	14,342	1.00	0.702	10.00	2.50	0.993	0.248
cis-1,2-Dichloroethene	14,342	1.00	0.702	10.00	2.50	0.993	0.248
Trichloroethene	14,342	1.00	0.652	10.00	2.50	1.07	0.267
Tetrachloroethene	14,342	1.00	0.552	10.00	2.50	1.26	0.316

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007442
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 01/18/2024

Sample Management Records

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Forest Hill, MD 21050, USA
1-410-838-8780
800-878-5510 Toll Free

PASSIVE AIR SAMPLING – SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information			
Company: The Sigma Group Inc	Project Manager: Stephen Heer	Client PO: 21801	
Address: 1300 N Canal St.	Project Name: Oakfield Properties	Turn around time (check one): [X] Normal [ ] Rush (specify) ____ days	
City / State / Zip: Milwaukee WI 53233	Location: Oakfield WI	Analysis: [X] Method TO-17 [ ] Method 325	
Phone: 414 643 4200	Submitted by: Chelsea Tyrpak		
	Email: ctyrpak@thesigmagroup.com		

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
OHA-1AB-01-20240105	CS0911	12/26/23	935	1/5/24	900	17.5	PCE, TCE, cis 12DCE,	X			
OHA-1A1-02-20240105	CS1017	12/26/23	955	1/5/24	856	19.7	trans 12DCE, vinyl	X			
OHA-1A2-03-20240105	CS1001	12/26/23	948	1/5/24	850	18.6	Chloride	X			

Special Notes / Instructions:

For Lab Use Only | Beacon Job No: 7442 | Beacon Proposal: ~~230609R03~~ 230714R01

Nicole Reif 1/9/24 12:13

UPS condition: Good custody seal: n/a

Beacon Environmental
526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230714R01

Laboratory Work Order: 0007549

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

March 06, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007549-01	04A_IAB_01_20240219	02/21/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007549-02	04A_IAB_02_20240219	02/21/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007549-03	04A_IAB_03_20240219	02/21/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007549-04	04A_IAB_04_20240219	02/21/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007549-05	04A_IA1_02_20240219	02/21/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			

Project Completeness

Samples Received: 5
Samples Analyzed: 5

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Analytical Results

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Summary of Compound Detections- Concentration

Lab Sample ID: 0007549-01 — **04A_IAB_01_20240219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**0.984**	J	3.592	1.42	0.354	Ka24022205.D
Trichloroethene	79-01-6	**2.05**		5.781	1.52	0.381	Ka24022205.D

Lab Sample ID: 0007549-02 — **04A_IAB_02_20240219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**0.764**	J	3.595	1.41	0.354	Ka24022206.D
Trichloroethene	79-01-6	**1.82**		5.787	1.52	0.381	Ka24022206.D

Lab Sample ID: 0007549-03 — **04A_IAB_03_20240219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**0.500**	J	5.784	1.52	0.381	Ka24022207.D

Lab Sample ID: 0007549-04 — **04A_IAB_04_20240219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**0.602**	J	5.784	1.52	0.380	Ka24022208.D

Lab Sample ID: 0007549-05 — **04A_IA1_02_20240219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
cis-1,2-Dichloroethene	156-59-2	**0.770**	J	3.594	1.41	0.353	Ka24022209.D
Trichloroethene	79-01-6	**1.70**		5.784	1.52	0.380	Ka24022209.D

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Data Summary Table- Concentration

Compound	Frequency	LOD (µg/m³)	Max Value (µg/m³)
cis-1,2-Dichloroethene	3	0.353	0.984
Trichloroethene	5	0.380	2.05

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Detailed Analytical Results

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Lab Sample ID: 0007549-01

04A_IAB_01_20240219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.442	U	0.442	1.77	02/22/2024 12:02	Ka24022205.D
trans-1,2-Dichloroethene	156-60-5	<0.354	U	0.354	1.42	02/22/2024 12:02	Ka24022205.D
cis-1,2-Dichloroethene	156-59-2	**0.984**	J	0.354	1.42	02/22/2024 12:02	Ka24022205.D
Trichloroethene	79-01-6	**2.05**		0.381	1.52	02/22/2024 12:02	Ka24022205.D
Tetrachloroethene	127-18-4	<0.450	U	0.450	1.80	02/22/2024 12:02	Ka24022205.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*102%*	*70-130*		*02/22/2024 12:02*	*Ka24022205.D*
Surrogate: Toluene-d8	2037-26-5	*94.6%*	*70-130*		*02/22/2024 12:02*	*Ka24022205.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Lab Sample ID: 0007549-02

04A_IAB_02_20240219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.442	U	0.442	1.77	02/22/2024 12:31	Ka24022206.D
trans-1,2-Dichloroethene	156-60-5	<0.354	U	0.354	1.41	02/22/2024 12:31	Ka24022206.D
cis-1,2-Dichloroethene	156-59-2	**0.764**	J	0.354	1.41	02/22/2024 12:31	Ka24022206.D
Trichloroethene	79-01-6	**1.82**		0.381	1.52	02/22/2024 12:31	Ka24022206.D
Tetrachloroethene	127-18-4	<0.450	U	0.450	1.80	02/22/2024 12:31	Ka24022206.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*103%*	*70-130*		*02/22/2024 12:31*	*Ka24022206.D*
Surrogate: Toluene-d8	2037-26-5	*91.1%*	*70-130*		*02/22/2024 12:31*	*Ka24022206.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Lab Sample ID: 0007549-03

04A_IAB_03_20240219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.442	U	0.442	1.77	02/22/2024 13:00	Ka24022207.D
trans-1,2-Dichloroethene	156-60-5	<0.354	U	0.354	1.41	02/22/2024 13:00	Ka24022207.D
cis-1,2-Dichloroethene	156-59-2	<0.354	U	0.354	1.41	02/22/2024 13:00	Ka24022207.D
Trichloroethene	79-01-6	**0.500**	J	0.381	1.52	02/22/2024 13:00	Ka24022207.D
Tetrachloroethene	127-18-4	<0.450	U	0.450	1.80	02/22/2024 13:00	Ka24022207.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*96.5%*	*70-130*		*02/22/2024 13:00*	*Ka24022207.D*
Surrogate: Toluene-d8	2037-26-5	*94.6%*	*70-130*		*02/22/2024 13:00*	*Ka24022207.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Lab Sample ID: 0007549-04

04A_IAB_04_20240219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.441	U	0.441	1.77	02/22/2024 13:29	Ka24022208.D
trans-1,2-Dichloroethene	156-60-5	<0.353	U	0.353	1.41	02/22/2024 13:29	Ka24022208.D
cis-1,2-Dichloroethene	156-59-2	<0.353	U	0.353	1.41	02/22/2024 13:29	Ka24022208.D
Trichloroethene	79-01-6	**0.602**	J	0.380	1.52	02/22/2024 13:29	Ka24022208.D
Tetrachloroethene	127-18-4	<0.449	U	0.449	1.80	02/22/2024 13:29	Ka24022208.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*97.0%*	*70-130*		*02/22/2024 13:29*	*Ka24022208.D*
Surrogate: Toluene-d8	2037-26-5	*94.2%*	*70-130*		*02/22/2024 13:29*	*Ka24022208.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Lab Sample ID: 0007549-05

04A_IA1_02_20240219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.441	U	0.441	1.77	02/22/2024 13:57	Ka24022209.D
trans-1,2-Dichloroethene	156-60-5	<0.353	U	0.353	1.41	02/22/2024 13:57	Ka24022209.D
cis-1,2-Dichloroethene	156-59-2	**0.770**	J	0.353	1.41	02/22/2024 13:57	Ka24022209.D
Trichloroethene	79-01-6	**1.70**		0.380	1.52	02/22/2024 13:57	Ka24022209.D
Tetrachloroethene	127-18-4	<0.449	U	0.449	1.80	02/22/2024 13:57	Ka24022209.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*106%*	*70-130*		*02/22/2024 13:57*	*Ka24022209.D*
Surrogate: Toluene-d8	2037-26-5	*96.8%*	*70-130*		*02/22/2024 13:57*	*Ka24022209.D*

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

QC Information/Summary

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B010 - Instrument: K System - File ID: Ka24020216.D

B24B010-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.7	10	2.5	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	52.4	10	2.5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	51.2	10	2.5	ng	50.0		102	70-130			
Trichloroethene	52.9	10	2.5	ng	50.0		106	70-130			
Tetrachloroethene	54.0	10	2.5	ng	50.0		108	70-130			
Surrogate: 1,2-DCA-d4	*51.6*			*ng*	50.0		*103*	*70-130*			
Surrogate: Toluene-d8	*49.5*			*ng*	50.0		*99.0*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B010 - Instrument: K System - File ID: Ka24020219.D

B24B010-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*102*			*ng*	100		*102*	*70-130*			
Surrogate: Toluene-d8	*94.8*			*ng*	100		*94.8*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B063 - Batch: 24B0049 - Instrument: K System - File ID: Ka24022202.D

24B0049-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	48.7	10	2.5	ng	50.0		97.3	70-130			
trans-1,2-Dichloroethene	48.4	10	2.5	ng	50.0		96.7	70-130			
cis-1,2-Dichloroethene	48.1	10	2.5	ng	50.0		96.3	70-130			
Trichloroethene	52.7	10	2.5	ng	50.0		105	70-130			
Tetrachloroethene	51.9	10	2.5	ng	50.0		104	70-130			
Surrogate: 1,2-DCA-d4	*49.8*			*ng*	50.0		*99.7*	*70-130*			
Surrogate: Toluene-d8	*48.2*			*ng*	50.0		*96.4*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B063 - Batch: 24B0049 - Instrument: K System - File ID: Ka24022203.D

24B0049-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.441	1.77	0.441	µg/m³							U
trans-1,2-Dichloroethene	<0.353	1.41	0.353	µg/m³							U
cis-1,2-Dichloroethene	<0.353	1.41	0.353	µg/m³							U
Trichloroethene	<0.380	1.52	0.380	µg/m³							U
Tetrachloroethene	<0.449	1.80	0.449	µg/m³							U
Surrogate: 1,2-DCA-d4	*92.7*			*ng*	100		*92.7*	*70-130*			
Surrogate: Toluene-d8	*89.8*			*ng*	100		*89.8*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B063 - Instrument: K System - File ID: Ka24022204.D

B24B063-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.1	10	2.5	ng	50.0		102	70-130			
trans-1,2-Dichloroethene	50.2	10	2.5	ng	50.0		100	70-130			
cis-1,2-Dichloroethene	49.6	10	2.5	ng	50.0		99.3	70-130			
Trichloroethene	51.0	10	2.5	ng	50.0		102	70-130			
Tetrachloroethene	52.2	10	2.5	ng	50.0		104	70-130			
Surrogate: 1,2-DCA-d4	*49.5*			*ng*	50.0		*99.0*	*70-130*			
Surrogate: Toluene-d8	*47.9*			*ng*	50.0		*95.9*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

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Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B063 - Instrument: K System - File ID: Ka24022210.D

B24B063-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	47.3	10	2.5	ng	50.0		94.6	70-130			
trans-1,2-Dichloroethene	48.3	10	2.5	ng	50.0		96.6	70-130			
cis-1,2-Dichloroethene	48.0	10	2.5	ng	50.0		96.0	70-130			
Trichloroethene	45.8	10	2.5	ng	50.0		91.5	70-130			
Tetrachloroethene	52.2	10	2.5	ng	50.0		104	70-130			
Surrogate: 1,2-DCA-d4	*53.6*			*ng*	50.0		*107*	*70-130*			
Surrogate: Toluene-d8	*49.3*			*ng*	50.0		*98.6*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B063 - Instrument: K System - File ID: Ka24022211.D

B24B063-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*103*			*ng*	100		*103*	*70-130*			
Surrogate: Toluene-d8	*95.6*			*ng*	100		*95.6*	*70-130*			

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 24B0049-BS1 ***File ID: Ka24022202.D*** Analyzed: 2/22/24 10:51

LCSD: B24B063-ICV1 ***File ID: Ka24022204.D*** Analyzed: 2/22/24 10:00

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	48.65	97.3		50	51.09	102.00	70-130	4.89	30	
trans-1,2-Dichloroethene	156-60-5	48.36	96.72		50	50.2	100.00	70-130	3.73	30	
cis-1,2-Dichloroethene	156-59-2	48.13	96.26		50	49.64	99.30	70-130	3.09	30	
Trichloroethene	79-01-6	52.65	105.3		50	50.96	102.00	70-130	3.26	30	
Tetrachloroethene	127-18-4	51.87	103.74		50	52.22	104.00	70-130	0.67	30	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Additional QC Information

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007549-01 **Sample Name:** 04A_IAB_01_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,085	1.00	0.560	U	U	Ka24022205.D
trans-1,2-Dichloroethene	10,085	1.00	0.700	U	U	Ka24022205.D
cis-1,2-Dichloroethene	10,085	1.00	0.700	6.95	0.984	Ka24022205.D
Trichloroethene	10,085	1.00	0.650	13.43	2.05	Ka24022205.D
Tetrachloroethene	10,085	1.00	0.550	U	U	Ka24022205.D
Lab ID: 0007549-02 **Sample Name:** 04A_IAB_02_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,094	1.00	0.560	U	U	Ka24022206.D
trans-1,2-Dichloroethene	10,094	1.00	0.700	U	U	Ka24022206.D
cis-1,2-Dichloroethene	10,094	1.00	0.700	5.40	0.764	Ka24022206.D
Trichloroethene	10,094	1.00	0.650	11.94	1.82	Ka24022206.D
Tetrachloroethene	10,094	1.00	0.550	U	U	Ka24022206.D
Lab ID: 0007549-03 **Sample Name:** 04A_IAB_03_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,095	1.00	0.560	U	U	Ka24022207.D
trans-1,2-Dichloroethene	10,095	1.00	0.700	U	U	Ka24022207.D
cis-1,2-Dichloroethene	10,095	1.00	0.700	U	U	Ka24022207.D
Trichloroethene	10,095	1.00	0.650	3.28	0.500	Ka24022207.D
Tetrachloroethene	10,095	1.00	0.550	U	U	Ka24022207.D
Lab ID: 0007549-04 **Sample Name:** 04A_IAB_04_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,110	1.00	0.560	U	U	Ka24022208.D
trans-1,2-Dichloroethene	10,110	1.00	0.700	U	U	Ka24022208.D
cis-1,2-Dichloroethene	10,110	1.00	0.700	U	U	Ka24022208.D
Trichloroethene	10,110	1.00	0.650	3.96	0.602	Ka24022208.D
Tetrachloroethene	10,110	1.00	0.550	U	U	Ka24022208.D
Lab ID: 0007549-05 **Sample Name:** 04A_IA1_02_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,111	1.00	0.560	U	U	Ka24022209.D
trans-1,2-Dichloroethene	10,111	1.00	0.700	U	U	Ka24022209.D
cis-1,2-Dichloroethene	10,111	1.00	0.700	5.45	0.770	Ka24022209.D
Trichloroethene	10,111	1.00	0.650	11.17	1.70	Ka24022209.D
Tetrachloroethene	10,111	1.00	0.550	U	U	Ka24022209.D

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where:
- C = concentration (µg/m^3)
- M = mass (ng)
- DF = dilution factor
- Uc = uptake rate (ml/min), corrected
- t = sampling time (minutes)
- U = compound specific uptake rate
- Tu = uptake rate study temperature
- Ts = sample average temperature

Note: Tu is 16.65°C

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007549-01	**Sample Name:** 04A_IAB_01_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,085	1.00	0.560	10.00	2.50	1.77	0.442
trans-1,2-Dichloroethene	10,085	1.00	0.700	10.00	2.50	1.42	0.354
cis-1,2-Dichloroethene	10,085	1.00	0.700	10.00	2.50	1.42	0.354
Trichloroethene	10,085	1.00	0.650	10.00	2.50	1.52	0.381
Tetrachloroethene	10,085	1.00	0.550	10.00	2.50	1.80	0.450
Lab ID: 0007549-02	**Sample Name:** 04A_IAB_02_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,094	1.00	0.560	10.00	2.50	1.77	0.442
trans-1,2-Dichloroethene	10,094	1.00	0.700	10.00	2.50	1.41	0.354
cis-1,2-Dichloroethene	10,094	1.00	0.700	10.00	2.50	1.41	0.354
Trichloroethene	10,094	1.00	0.650	10.00	2.50	1.52	0.381
Tetrachloroethene	10,094	1.00	0.550	10.00	2.50	1.80	0.450
Lab ID: 0007549-03	**Sample Name:** 04A_IAB_03_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,095	1.00	0.560	10.00	2.50	1.77	0.442
trans-1,2-Dichloroethene	10,095	1.00	0.700	10.00	2.50	1.41	0.354
cis-1,2-Dichloroethene	10,095	1.00	0.700	10.00	2.50	1.41	0.354
Trichloroethene	10,095	1.00	0.650	10.00	2.50	1.52	0.381
Tetrachloroethene	10,095	1.00	0.550	10.00	2.50	1.80	0.450
Lab ID: 0007549-04	**Sample Name:** 04A_IAB_04_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,110	1.00	0.560	10.00	2.50	1.77	0.441
trans-1,2-Dichloroethene	10,110	1.00	0.700	10.00	2.50	1.41	0.353
cis-1,2-Dichloroethene	10,110	1.00	0.700	10.00	2.50	1.41	0.353
Trichloroethene	10,110	1.00	0.650	10.00	2.50	1.52	0.380
Tetrachloroethene	10,110	1.00	0.550	10.00	2.50	1.80	0.449
Lab ID: 0007549-05	**Sample Name:** 04A_IA1_02_20240219					**x̄ Temp (°C):** 17.00	
Vinyl Chloride	10,111	1.00	0.560	10.00	2.50	1.77	0.441
trans-1,2-Dichloroethene	10,111	1.00	0.700	10.00	2.50	1.41	0.353
cis-1,2-Dichloroethene	10,111	1.00	0.700	10.00	2.50	1.41	0.353
Trichloroethene	10,111	1.00	0.650	10.00	2.50	1.52	0.380
Tetrachloroethene	10,111	1.00	0.550	10.00	2.50	1.80	0.449

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007549
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
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Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/06/2024

Sample Management Records

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help@beacon-usa.com

PASSIVE AIR SAMPLING - SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information		Project Manager: Stephen Meer		Client PO: 21801					
Company: The Sigma Group Inc		Project Name: Oakfield Properties		Turn around time (check one): [X] Normal [ ] Rush (specify) ____ days					
Address: 1300 W Canal St.		Location: Oakfield WI							
City / State / Zip: Milwaukee WI 53233		Submitted by: Chelsea Eynatten		Analysis: [X] Method TO-17 [ ] Method 325					
Phone: 414 643 4200		Email: ceynatten@thesigmagroup.com							

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04A-IAB-01-20240219	CS0645	2/12	1110	2/19	1115	17	PCE, TCE, cis12DCE,	X			
04A-IAB-02-20240219	CS0772	2/12	1100	2/19	1114	17	trans12DCE, &	X			
04A-IAB-03-20240219	CS0332	2/12	1135	2/19	1150	17	vinyl chloride				
04A-IAB-04-20240219	CS0357	2/12	1125	2/19	1155	17					
04A-IA1-02-20240219	CS0607	2/12	1041	2/19	1112	17		X			

Special Notes / Instructions:

Relinquished by (signature):	Date / Time: 02/20/2024 200	Received by (signature):	Date / Time: 2/21/24 12:45
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7549	Beacon Proposal: 230714R01	
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: [X] Yes [ ] No [ ] n/a	Custody Seal No: 5262037

Beacon Environmental
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230714R01

Laboratory Work Order: 0007579

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

March 18, 2024

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007579-01	04C_SUMP01_20240301	03/04/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007579-02	04C_IAB01_20240301	03/04/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007579-03	04C_IA102_20240301	03/04/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007579-04	04D_IAB01_20240301	03/04/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007579-05	04D_IA102_20240301	03/04/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007579-06	04D_IA203_20240301	03/04/2024	TO-17 (Passive)	Indoor Air
Sampler Type:	Sorbent Tube			
0007579-07	04_OA01_20240301	03/04/2024	TO-17 (Passive)	Ambient Air
Sampler Type:	Sorbent Tube			

Project Completeness

Samples Received: 7
Samples Analyzed: 7

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Case Narrative

Beacon Environmental provided thermally conditioned ChloroSorbers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs) for EPA Method TO-17
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of detection (LOD) as noted in the data tables.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

526 Underwood Lane
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

STATEMENT OF DATA QUALIFICATIONS

Qualifier Summary:

Analysis: TO-17 (Passive)

0007579-01 **04C_SUMP01_20240301**

Compound	Q	Q Explanation
1,2-DCA-d4	S5	Surrogate recovery was out of laboratory and method acceptance limits.
Toluene-d8	S5	Surrogate recovery was out of laboratory and method acceptance limits.

End of Case Narrative

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Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
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Analytical Results

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007579-02 — **04C_IAB01_20240301** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**0.994**		5.780	0.764	0.191	Kb24030506.D

Lab Sample ID: 0007579-03 — **04C_IA102_20240301** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Trichloroethene	79-01-6	**0.585**	J	5.781	0.764	0.191	Kb24030507.D

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Data Summary Table- Concentration

Compound	Frequency	LOD (µg/m³)	Max Value (µg/m³)
Trichloroethene	2	0.191	0.994

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Detailed Analytical Results

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-01

04C_SUMP01_20240301

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.889	03/05/2024 14:41	Kb24030505.D
trans-1,2-Dichloroethene	156-60-5	<0.178	U	0.178	0.711	03/05/2024 14:41	Kb24030505.D
cis-1,2-Dichloroethene	156-59-2	<0.178	U	0.178	0.711	03/05/2024 14:41	Kb24030505.D
Trichloroethene	79-01-6	<0.191	U	0.191	0.766	03/05/2024 14:41	Kb24030505.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.905	03/05/2024 14:41	Kb24030505.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*63.4%*	*70-130*	*S5*	*03/05/2024 14:41*	*Kb24030505.D*
Surrogate: Toluene-d8	2037-26-5	*44.5%*	*70-130*	*S5*	*03/05/2024 14:41*	*Kb24030505.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-02

04C_IAB01_20240301

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.886	03/05/2024 15:10	Kb24030506.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.709	03/05/2024 15:10	Kb24030506.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.709	03/05/2024 15:10	Kb24030506.D
Trichloroethene	79-01-6	**0.994**		0.191	0.764	03/05/2024 15:10	Kb24030506.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.902	03/05/2024 15:10	Kb24030506.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*105%*	*70-130*		*03/05/2024 15:10*	*Kb24030506.D*
Surrogate: Toluene-d8	2037-26-5	*95.8%*	*70-130*		*03/05/2024 15:10*	*Kb24030506.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-03

04C_IA102_20240301

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.887	03/05/2024 15:39	Kb24030507.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.710	03/05/2024 15:39	Kb24030507.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.710	03/05/2024 15:39	Kb24030507.D
Trichloroethene	79-01-6	**0.585**	J	0.191	0.764	03/05/2024 15:39	Kb24030507.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.903	03/05/2024 15:39	Kb24030507.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*106%*	*70-130*		*03/05/2024 15:39*	*Kb24030507.D*
Surrogate: Toluene-d8	2037-26-5	*94.4%*	*70-130*		*03/05/2024 15:39*	*Kb24030507.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-04

04D_IAB01_20240301

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.223	U	0.223	0.892	03/05/2024 16:08	Kb24030508.D
trans-1,2-Dichloroethene	156-60-5	<0.178	U	0.178	0.713	03/05/2024 16:08	Kb24030508.D
cis-1,2-Dichloroethene	156-59-2	<0.178	U	0.178	0.713	03/05/2024 16:08	Kb24030508.D
Trichloroethene	79-01-6	<0.192	U	0.192	0.768	03/05/2024 16:08	Kb24030508.D
Tetrachloroethene	127-18-4	<0.227	U	0.227	0.908	03/05/2024 16:08	Kb24030508.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*103%*	*70-130*		*03/05/2024 16:08*	*Kb24030508.D*
Surrogate: Toluene-d8	2037-26-5	*89.5%*	*70-130*		*03/05/2024 16:08*	*Kb24030508.D*

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-05

04D_IA102_20240301

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.888	03/05/2024 16:37	Kb24030509.D
trans-1,2-Dichloroethene	156-60-5	<0.178	U	0.178	0.710	03/05/2024 16:37	Kb24030509.D
cis-1,2-Dichloroethene	156-59-2	<0.178	U	0.178	0.710	03/05/2024 16:37	Kb24030509.D
Trichloroethene	79-01-6	<0.191	U	0.191	0.765	03/05/2024 16:37	Kb24030509.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.904	03/05/2024 16:37	Kb24030509.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*106%*	*70-130*		*03/05/2024 16:37*	*Kb24030509.D*
Surrogate: Toluene-d8	2037-26-5	*94.3%*	*70-130*		*03/05/2024 16:37*	*Kb24030509.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-06

04D_IA203_20240301

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.222	U	0.222	0.887	03/05/2024 17:06	Kb24030510.D
trans-1,2-Dichloroethene	156-60-5	<0.177	U	0.177	0.710	03/05/2024 17:06	Kb24030510.D
cis-1,2-Dichloroethene	156-59-2	<0.177	U	0.177	0.710	03/05/2024 17:06	Kb24030510.D
Trichloroethene	79-01-6	<0.191	U	0.191	0.765	03/05/2024 17:06	Kb24030510.D
Tetrachloroethene	127-18-4	<0.226	U	0.226	0.904	03/05/2024 17:06	Kb24030510.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*105%*	*70-130*		*03/05/2024 17:06*	*Kb24030510.D*
Surrogate: Toluene-d8	2037-26-5	*94.3%*	*70-130*		*03/05/2024 17:06*	*Kb24030510.D*

BEACON ENVIRONMENTAL

526 Underwood Lane
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Lab Sample ID: 0007579-07

04_OA01_20240301

Ambient Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOD (µg/m³)	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.228	U	0.228	0.910	03/05/2024 17:34	Kb24030511.D
trans-1,2-Dichloroethene	156-60-5	<0.182	U	0.182	0.728	03/05/2024 17:34	Kb24030511.D
cis-1,2-Dichloroethene	156-59-2	<0.182	U	0.182	0.728	03/05/2024 17:34	Kb24030511.D
Trichloroethene	79-01-6	<0.196	U	0.196	0.784	03/05/2024 17:34	Kb24030511.D
Tetrachloroethene	127-18-4	<0.232	U	0.232	0.927	03/05/2024 17:34	Kb24030511.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*92.2%*	*70-130*		*03/05/2024 17:34*	*Kb24030511.D*
Surrogate: Toluene-d8	2037-26-5	*76.9%*	*70-130*		*03/05/2024 17:34*	*Kb24030511.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

QC Information/Summary

526 Underwood Lane
Bel Air, MD 21014 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B010 - Instrument: K System - File ID: Ka24020216.D

B24B010-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.7	10	2.5	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	52.4	10	2.5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	51.2	10	2.5	ng	50.0		102	70-130			
Trichloroethene	52.9	10	2.5	ng	50.0		106	70-130			
Tetrachloroethene	54.0	10	2.5	ng	50.0		108	70-130			
Surrogate: 1,2-DCA-d4	*51.6*			*ng*	50.0		*103*	*70-130*			
Surrogate: Toluene-d8	*49.5*			*ng*	50.0		*99.0*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24B010 - Instrument: K System - File ID: Ka24020219.D

B24B010-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*102*			*ng*	100		*102*	*70-130*			
Surrogate: Toluene-d8	*94.8*			*ng*	100		*94.8*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24C011 - Batch: 24C0011 - Instrument: K System - File ID: Kb24030502.D

24C0011-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	49.0	10	2.5	ng	50.0		98.1	70-130			
trans-1,2-Dichloroethene	50.4	10	2.5	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	49.1	10	2.5	ng	50.0		98.2	70-130			
Trichloroethene	53.0	10	2.5	ng	50.0		106	70-130			
Tetrachloroethene	52.8	10	2.5	ng	50.0		106	70-130			
Surrogate: 1,2-DCA-d4	*50.3*			*ng*	50.0		*101*	*70-130*			
Surrogate: Toluene-d8	*49.1*			*ng*	50.0		*98.1*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24C011 - Batch: 24C0011 - Instrument: K System - File ID: Kb24030503.D

24C0011-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.219	0.877	0.219	µg/m³							U
trans-1,2-Dichloroethene	<0.175	0.702	0.175	µg/m³							U
cis-1,2-Dichloroethene	<0.175	0.702	0.175	µg/m³							U
Trichloroethene	<0.189	0.756	0.189	µg/m³							U
Tetrachloroethene	<0.223	0.893	0.223	µg/m³							U
Surrogate: 1,2-DCA-d4	*102*			*ng*	100		*102*	*70-130*			
Surrogate: Toluene-d8	*96.8*			*ng*	100		*96.8*	*70-130*			

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24C011 - Instrument: K System - File ID: Kb24030504.D

B24C011-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.0	10	2.5	ng	50.0		102	70-130			
trans-1,2-Dichloroethene	51.9	10	2.5	ng	50.0		104	70-130			
cis-1,2-Dichloroethene	50.0	10	2.5	ng	50.0		100	70-130			
Trichloroethene	53.0	10	2.5	ng	50.0		106	70-130			
Tetrachloroethene	52.1	10	2.5	ng	50.0		104	70-130			
Surrogate: 1,2-DCA-d4	*52.7*			*ng*	50.0		*105*	*70-130*			
Surrogate: Toluene-d8	*49.0*			*ng*	50.0		*98.1*	*70-130*			

526 Underwood Lane
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24C011 - Instrument: K System - File ID: Kb24030512.D

B24C011-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	47.5	10	2.5	ng	50.0		95.0	70-130			
trans-1,2-Dichloroethene	50.3	10	2.5	ng	50.0		101	70-130			
cis-1,2-Dichloroethene	48.4	10	2.5	ng	50.0		96.7	70-130			
Trichloroethene	47.6	10	2.5	ng	50.0		95.2	70-130			
Tetrachloroethene	52.1	10	2.5	ng	50.0		104	70-130			
Surrogate: 1,2-DCA-d4	*54.3*			*ng*	50.0		*109*	*70-130*			
Surrogate: Toluene-d8	*49.0*			*ng*	50.0		*98.0*	*70-130*			

526 Underwood Lane
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1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Organics in Air by EPA TO-17 Using ChloroSorber Packed Tube - Quality Control Summary

Sequence: B24C011 - Instrument: K System - File ID: Kb24030513.D

B24C011-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<2.5	10	2.5	ng							U
trans-1,2-Dichloroethene	<2.5	10	2.5	ng							U
cis-1,2-Dichloroethene	<2.5	10	2.5	ng							U
Trichloroethene	<2.5	10	2.5	ng							U
Tetrachloroethene	<2.5	10	2.5	ng							U
Surrogate: 1,2-DCA-d4	*99.2*			*ng*	100		*99.2*	*70-130*			
Surrogate: Toluene-d8	*94.8*			*ng*	100		*94.8*	*70-130*			

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526 Underwood Lane
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 24C0011-BS1 ***File ID: Kb24030502.D*** Analyzed: 3/5/24 14:12

LCSD: B24C011-ICV1 ***File ID: Kb24030504.D*** Analyzed: 3/5/24 13:20

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	49.03	98.06		50	50.95	102.00	70-130	3.84	30	
trans-1,2-Dichloroethene	156-60-5	50.41	100.82		50	51.88	104.00	70-130	2.87	30	
cis-1,2-Dichloroethene	156-59-2	49.11	98.22		50	50.03	100.00	70-130	1.86	30	
Trichloroethene	79-01-6	52.98	105.96		50	53.01	106.00	70-130	0.06	30	
Tetrachloroethene	127-18-4	52.83	105.66		50	52.12	104.00	70-130	1.35	30	

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Additional QC Information

BEACON ENVIRONMENTAL

526 Underwood Lane
Bel Air, MD 21014 USA
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007579-01 **Sample Name:** 04C_SUMP01_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	20,044	1.00	0.561	U	U	Kb24030505.D
trans-1,2-Dichloroethene	20,044	1.00	0.702	U	U	Kb24030505.D
cis-1,2-Dichloroethene	20,044	1.00	0.702	U	U	Kb24030505.D
Trichloroethene	20,044	1.00	0.652	U	U	Kb24030505.D
Tetrachloroethene	20,044	1.00	0.551	U	U	Kb24030505.D
Lab ID: 0007579-02 **Sample Name:** 04C_IAB01_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	20,100	1.00	0.561	U	U	Kb24030506.D
trans-1,2-Dichloroethene	20,100	1.00	0.702	U	U	Kb24030506.D
cis-1,2-Dichloroethene	20,100	1.00	0.702	U	U	Kb24030506.D
Trichloroethene	20,100	1.00	0.652	13.02	0.994	Kb24030506.D
Tetrachloroethene	20,100	1.00	0.551	U	U	Kb24030506.D
Lab ID: 0007579-03 **Sample Name:** 04C_IA102_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	20,086	1.00	0.561	U	U	Kb24030507.D
trans-1,2-Dichloroethene	20,086	1.00	0.702	U	U	Kb24030507.D
cis-1,2-Dichloroethene	20,086	1.00	0.702	U	U	Kb24030507.D
Trichloroethene	20,086	1.00	0.652	7.66	0.585	Kb24030507.D
Tetrachloroethene	20,086	1.00	0.551	U	U	Kb24030507.D
Lab ID: 0007579-04 **Sample Name:** 04D_IAB01_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	19,977	1.00	0.561	U	U	Kb24030508.D
trans-1,2-Dichloroethene	19,977	1.00	0.702	U	U	Kb24030508.D
cis-1,2-Dichloroethene	19,977	1.00	0.702	U	U	Kb24030508.D
Trichloroethene	19,977	1.00	0.652	U	U	Kb24030508.D
Tetrachloroethene	19,977	1.00	0.551	U	U	Kb24030508.D
Lab ID: 0007579-05 **Sample Name:** 04D_IA102_20240301					**x̄ Temp (°C):** 21.00	
Vinyl Chloride	19,967	1.00	0.564	U	U	Kb24030509.D
trans-1,2-Dichloroethene	19,967	1.00	0.705	U	U	Kb24030509.D
cis-1,2-Dichloroethene	19,967	1.00	0.705	U	U	Kb24030509.D
Trichloroethene	19,967	1.00	0.655	U	U	Kb24030509.D
Tetrachloroethene	19,967	1.00	0.554	U	U	Kb24030509.D

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007579-06 **Sample Name:** 04D_IA203_20240301					**x̄ Temp (°C):** 21.00	
Vinyl Chloride	19,972	1.00	0.564	U	U	Kb24030510.D
trans-1,2-Dichloroethene	19,972	1.00	0.705	U	U	Kb24030510.D
cis-1,2-Dichloroethene	19,972	1.00	0.705	U	U	Kb24030510.D
Trichloroethene	19,972	1.00	0.655	U	U	Kb24030510.D
Tetrachloroethene	19,972	1.00	0.554	U	U	Kb24030510.D
Lab ID: 0007579-07 **Sample Name:** 04_OA01_20240301					**x̄ Temp (°C):** 0.00	
Vinyl Chloride	20,210	1.00	0.544	U	U	Kb24030511.D
trans-1,2-Dichloroethene	20,210	1.00	0.680	U	U	Kb24030511.D
cis-1,2-Dichloroethene	20,210	1.00	0.680	U	U	Kb24030511.D
Trichloroethene	20,210	1.00	0.631	U	U	Kb24030511.D
Tetrachloroethene	20,210	1.00	0.534	U	U	Kb24030511.D

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where: C = concentration (µg/m³)
M = mass (ng)
DF = dilution factor
Uc = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
Tu = uptake rate study temperature
Ts = sample average temperature

Note: Tu is 16.65°C

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007579-01	**Sample Name:** 04C_SUMP01_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	20,044	1.00	0.561	10.00	2.50	0.889	0.222
trans-1,2-Dichloroethene	20,044	1.00	0.702	10.00	2.50	0.711	0.178
cis-1,2-Dichloroethene	20,044	1.00	0.702	10.00	2.50	0.711	0.178
Trichloroethene	20,044	1.00	0.652	10.00	2.50	0.766	0.191
Tetrachloroethene	20,044	1.00	0.551	10.00	2.50	0.905	0.226
Lab ID: 0007579-02	**Sample Name:** 04C_IAB01_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	20,100	1.00	0.561	10.00	2.50	0.886	0.222
trans-1,2-Dichloroethene	20,100	1.00	0.702	10.00	2.50	0.709	0.177
cis-1,2-Dichloroethene	20,100	1.00	0.702	10.00	2.50	0.709	0.177
Trichloroethene	20,100	1.00	0.652	10.00	2.50	0.764	0.191
Tetrachloroethene	20,100	1.00	0.551	10.00	2.50	0.902	0.226
Lab ID: 0007579-03	**Sample Name:** 04C_IA102_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	20,086	1.00	0.561	10.00	2.50	0.887	0.222
trans-1,2-Dichloroethene	20,086	1.00	0.702	10.00	2.50	0.710	0.177
cis-1,2-Dichloroethene	20,086	1.00	0.702	10.00	2.50	0.710	0.177
Trichloroethene	20,086	1.00	0.652	10.00	2.50	0.764	0.191
Tetrachloroethene	20,086	1.00	0.551	10.00	2.50	0.903	0.226
Lab ID: 0007579-04	**Sample Name:** 04D_IAB01_20240301					**x̄ Temp (°C):** 18.00	
Vinyl Chloride	19,977	1.00	0.561	10.00	2.50	0.892	0.223
trans-1,2-Dichloroethene	19,977	1.00	0.702	10.00	2.50	0.713	0.178
cis-1,2-Dichloroethene	19,977	1.00	0.702	10.00	2.50	0.713	0.178
Trichloroethene	19,977	1.00	0.652	10.00	2.50	0.768	0.192
Tetrachloroethene	19,977	1.00	0.551	10.00	2.50	0.908	0.227
Lab ID: 0007579-05	**Sample Name:** 04D_IA102_20240301					**x̄ Temp (°C):** 21.00	
Vinyl Chloride	19,967	1.00	0.564	10.00	2.50	0.888	0.222
trans-1,2-Dichloroethene	19,967	1.00	0.705	10.00	2.50	0.710	0.178
cis-1,2-Dichloroethene	19,967	1.00	0.705	10.00	2.50	0.710	0.178
Trichloroethene	19,967	1.00	0.655	10.00	2.50	0.765	0.191
Tetrachloroethene	19,967	1.00	0.554	10.00	2.50	0.904	0.226

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng) LOQ	M Initial (ng) LOD	C Calculated (µg/m³) LOQ	C Calculated (µg/m³) LOD
Lab ID: 0007579-06	**Sample Name:** 04D_IA203_20240301					**x̄ Temp (°C):** 21.00	
Vinyl Chloride	19,972	1.00	0.564	10.00	2.50	0.887	0.222
trans-1,2-Dichloroethene	19,972	1.00	0.705	10.00	2.50	0.710	0.177
cis-1,2-Dichloroethene	19,972	1.00	0.705	10.00	2.50	0.710	0.177
Trichloroethene	19,972	1.00	0.655	10.00	2.50	0.765	0.191
Tetrachloroethene	19,972	1.00	0.554	10.00	2.50	0.904	0.226
Lab ID: 0007579-07	**Sample Name:** 04_OA01_20240301					**x̄ Temp (°C):** 0.00	
Vinyl Chloride	20,210	1.00	0.544	10.00	2.50	0.910	0.228
trans-1,2-Dichloroethene	20,210	1.00	0.680	10.00	2.50	0.728	0.182
cis-1,2-Dichloroethene	20,210	1.00	0.680	10.00	2.50	0.728	0.182
Trichloroethene	20,210	1.00	0.631	10.00	2.50	0.784	0.196
Tetrachloroethene	20,210	1.00	0.534	10.00	2.50	0.927	0.232

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912023-14	Utah Department of Health	12/31/2024	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

J	Value reported below limit of quantitation (LOQ).
S5	Surrogate recovery was out of laboratory and method acceptance limits.
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230714R01
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007579
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 03/18/2024

Sample Management Records

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800-878-5510 Toll Free

PASSIVE AIR SAMPLING - SORBENT TUBE | CHAIN-OF-CUSTODY

Client Information			
Company: The Sigma Group Inc	Project Manager: Stephen Meer	Client PO: 21801	
Address: 1300 W Canal St	Project Name: Oakfield Properties	Turn around time (check one): [X] Normal [ ] Rush (specify) ____ days	
City / State / Zip: Milwaukee WI 53233	Location: Oakfield WI	Analysis: [X] Method TO-17 [ ] Method 325	
Phone: 4146434200	Submitted by: Chelsea Frymark		
	Email: CFrymark@thesigmagroup.com		

Location ID	Tube ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Target Compounds	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04C-SUMP01-20240301	CS0655	2/14/24	11:23	3/1/24	9:27	18	PCE, TCE,	X			
04C-IA801-20240301	CS0661	2/14/24	10:20	3/1/24	9:20	18	cis12DCE, transDCE	X			
04C-IA102-20240301	CS0665	2/14/24	10:29	3/1/24	9:15	18	vinyl chloride	X			
04D-IA801-20240301	CS0998	2/14/24	11:58	3/1/24	8:55	18		X			
04D-IA102-20240301	CS0783	2/14/24	12:11	3/1/24	8:58	21		X			
04D-IA203-20240301	1078789	2/14/24	12:05	3/1/24	8:57	21		X			
04-OA01-20240301	CS0689	2/14/24	8:45	3/1/24	9:35	0			X		

Special Notes / Instructions:

For Lab Use Only	Beacon Job No: 7579	Beacon Proposal: 230714R01	

FedEx condition: Good custody seal: n/a

Nicole Reiff 3/4/24 10:50

Appendix K

Sewer Gas Laboratory Analytical Reports

Beacon Environmental
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230317R02

Laboratory Work Order: 0007049

Project Description:
Oakfield Properties
Oakfield, WI

Prepared for:
Steve Meer
The Sigma Group
1300 West Canal Street
Milwaukee, WI 53233

Ryan W. Schneider
Senior Project Manager

July 06, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

Table of Contents

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Forest Hill, MD 21050 USA
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CERTIFICATE OF ANALYSIS

The Sigma Group		**Site Name:**	Oakfield Properties	**Beacon Proposal:**	230317R02
1300 West Canal Street		**Site Location:**	Oakfield, WI	**Lab Work Order:**	0007049
Milwaukee, WI 53233		**Project Manager:**	Steve Meer	**Reported:**	07/06/2023

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007049-01	04R_SSG01_20230623	06/26/2023	TO-17 (Passive)	Sewer Gas
Sampler Type:	Beacon Passive Sampler			
0007049-02	04R_SSG02_20230623	06/26/2023	TO-17 (Passive)	Sewer Gas
Sampler Type:	Beacon Passive Sampler			
0007049-03	04R_SSG03_20230623	06/26/2023	TO-17 (Passive)	Sewer Gas
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 3
Samples Analyzed: 3

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Case Narrative

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in µg/m3. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling.*

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs)
The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

Calibration Verification
All continuing calibration verification (CCV) values are within ±30% of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates
Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination
No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples
Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion
Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

STATEMENT OF DATA QUALIFICATIONS

Qualifier Summary:

Analysis: TO-17 (Passive) / Organics in Air by EPA TO-17 Using Beacon Sampler

0007049-01 **04R_SSG01_20230623**

Compound	Q	Q Explanation
1,4-Dichlorobenzene-d4	I1	Internal Standard recovery was above laboratory and method acceptance limits, results biased low.
Chlorobenzene-d5	I1	Internal Standard recovery was above laboratory and method acceptance limits, results biased low.
Fluorobenzene	I1	Internal Standard recovery was above laboratory and method acceptance limits, results biased low.

0007049-03 **04R_SSG03_20230623**

Compound	Q	Q Explanation
Chlorobenzene-d5	I1	Internal Standard recovery was above laboratory and method acceptance limits, results biased low.

End of Case Narrative

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Analytical Results

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Summary of Compound Detections- Concentration

Lab Sample ID: 0007049-01 — **04R_SSG01_20230623** — Sewer Gas — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Chloroform	67-66-3	**2.38**		2.920	1.39	S23070308.D

Lab Sample ID: 0007049-02 — **04R_SSG02_20230623** — Sewer Gas — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Methylene Chloride	75-09-2	**1.68**		2.182	1.39	S23070309.D
Chloroform	67-66-3	**1.55**		2.920	1.39	S23070309.D
1,4-Dichlorobenzene	106-46-7	**0.651**		7.414	0.649	S23070309.D

Lab Sample ID: 0007049-03 — **04R_SSG03_20230623** — Sewer Gas — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Methylene Chloride	75-09-2	**6.70**		2.181	1.39	S23070310.D
Chloroform	67-66-3	**19.6**		2.919	1.39	S23070310.D
p & m-Xylene	179601-23-1	**3.15**		5.909	1.39	S23070310.D
o-Xylene	95-47-6	**1.73**		6.198	1.39	S23070310.D

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Forest Hill, MD 21050 USA
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Data Summary Table- Concentration

Compound	Frequency	LOQ (µg/m³)	Max Value (µg/m³)
Methylene Chloride	2	1.39	6.70
Chloroform	3	1.39	19.6
p & m-Xylene	1	1.39	3.15
o-Xylene	1	1.39	1.73
1,4-Dichlorobenzene	1	0.649	0.651

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Detailed Analytical Results

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007049-01

04R_SSG01_20230623

Sewer Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.601		0.601	07/03/2023 14:52	S23070308.D
1,1-Dichloroethene	75-35-4	<1.47		1.47	07/03/2023 14:52	S23070308.D
Methylene Chloride	75-09-2	<1.39		1.39	07/03/2023 14:52	S23070308.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	<0.547		0.547	07/03/2023 14:52	S23070308.D
trans-1,2-Dichloroethene	156-60-5	<1.11		1.11	07/03/2023 14:52	S23070308.D
Methyl-t-butyl ether	1634-04-4	<2.43		2.43	07/03/2023 14:52	S23070308.D
1,1-Dichloroethane	75-34-3	<0.572		0.572	07/03/2023 14:52	S23070308.D
cis-1,2-Dichloroethene	156-59-2	<0.918		0.918	07/03/2023 14:52	S23070308.D
Chloroform	67-66-3	**2.38**		1.39	07/03/2023 14:52	S23070308.D
1,2-Dichloroethane	107-06-2	<0.869		0.869	07/03/2023 14:52	S23070308.D
1,1,1-Trichloroethane	71-55-6	<0.463		0.463	07/03/2023 14:52	S23070308.D
Carbon Tetrachloride	56-23-5	<1.13		1.13	07/03/2023 14:52	S23070308.D
Benzene	71-43-2	<2.30		2.30	07/03/2023 14:52	S23070308.D
Trichloroethene	79-01-6	<1.47		1.47	07/03/2023 14:52	S23070308.D
1,4-Dioxane	123-91-1	<1.19		1.19	07/03/2023 14:52	S23070308.D
1,1,2-Trichloroethane	79-00-5	<1.47		1.47	07/03/2023 14:52	S23070308.D
Toluene	108-88-3	<3.04		3.04	07/03/2023 14:52	S23070308.D
1,2-Dibromoethane (EDB)	106-93-4	<1.25		1.25	07/03/2023 14:52	S23070308.D
Tetrachloroethene	127-18-4	<1.19		1.19	07/03/2023 14:52	S23070308.D
1,1,1,2-Tetrachloroethane	630-20-6	<1.19		1.19	07/03/2023 14:52	S23070308.D
Chlorobenzene	108-90-7	<0.572		0.572	07/03/2023 14:52	S23070308.D
Ethylbenzene	100-41-4	<1.43		1.43	07/03/2023 14:52	S23070308.D
p & m-Xylene	179601-23-1	<1.38		1.38	07/03/2023 14:52	S23070308.D
o-Xylene	95-47-6	<1.38		1.38	07/03/2023 14:52	S23070308.D
1,2,3-Trichloropropane	96-18-4	<0.649		0.649	07/03/2023 14:52	S23070308.D
Isopropylbenzene	98-82-8	<1.47		1.47	07/03/2023 14:52	S23070308.D
1,3,5-Trimethylbenzene	108-67-8	<1.47		1.47	07/03/2023 14:52	S23070308.D
1,2,4-Trimethylbenzene	95-63-6	<1.47		1.47	07/03/2023 14:52	S23070308.D
1,3-Dichlorobenzene	541-73-1	<0.649		0.649	07/03/2023 14:52	S23070308.D
1,4-Dichlorobenzene	106-46-7	<0.649		0.649	07/03/2023 14:52	S23070308.D
1,2-Dichlorobenzene	95-50-1	<0.649		0.649	07/03/2023 14:52	S23070308.D
1,2,4-Trichlorobenzene	120-82-1	<1.25		1.25	07/03/2023 14:52	S23070308.D
Naphthalene	91-20-3	<1.52		1.52	07/03/2023 14:52	S23070308.D
1,2,3-Trichlorobenzene	87-61-6	<1.25		1.25	07/03/2023 14:52	S23070308.D
2-Methylnaphthalene	91-57-6	<1.60		1.60	07/03/2023 14:52	S23070308.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*92.6%*	*70-130*		*07/03/2023 14:52*	*S23070308.D*
Surrogate: Toluene-d8	2037-26-5	*101%*	*70-130*		*07/03/2023 14:52*	*S23070308.D*
Surrogate: Bromofluorobenzene	460-00-4	*94.6%*	*70-130*		*07/03/2023 14:52*	*S23070308.D*

BEACON ENVIRONMENTAL

2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007049-02

04R_SSG02_20230623

Sewer Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.601		0.601	07/03/2023 15:20	S23070309.D
1,1-Dichloroethene	75-35-4	<1.48		1.48	07/03/2023 15:20	S23070309.D
Methylene Chloride	75-09-2	**1.68**		1.39	07/03/2023 15:20	S23070309.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	<0.547		0.547	07/03/2023 15:20	S23070309.D
trans-1,2-Dichloroethene	156-60-5	<1.11		1.11	07/03/2023 15:20	S23070309.D
Methyl-t-butyl ether	1634-04-4	<2.44		2.44	07/03/2023 15:20	S23070309.D
1,1-Dichloroethane	75-34-3	<0.573		0.573	07/03/2023 15:20	S23070309.D
cis-1,2-Dichloroethene	156-59-2	<0.919		0.919	07/03/2023 15:20	S23070309.D
Chloroform	67-66-3	**1.55**		1.39	07/03/2023 15:20	S23070309.D
1,2-Dichloroethane	107-06-2	<0.870		0.870	07/03/2023 15:20	S23070309.D
1,1,1-Trichloroethane	71-55-6	<0.464		0.464	07/03/2023 15:20	S23070309.D
Carbon Tetrachloride	56-23-5	<1.13		1.13	07/03/2023 15:20	S23070309.D
Benzene	71-43-2	<2.30		2.30	07/03/2023 15:20	S23070309.D
Trichloroethene	79-01-6	<1.48		1.48	07/03/2023 15:20	S23070309.D
1,4-Dioxane	123-91-1	<1.19		1.19	07/03/2023 15:20	S23070309.D
1,1,2-Trichloroethane	79-00-5	<1.48		1.48	07/03/2023 15:20	S23070309.D
Toluene	108-88-3	<3.04		3.04	07/03/2023 15:20	S23070309.D
1,2-Dibromoethane (EDB)	106-93-4	<1.25		1.25	07/03/2023 15:20	S23070309.D
Tetrachloroethene	127-18-4	<1.19		1.19	07/03/2023 15:20	S23070309.D
1,1,1,2-Tetrachloroethane	630-20-6	<1.19		1.19	07/03/2023 15:20	S23070309.D
Chlorobenzene	108-90-7	<0.573		0.573	07/03/2023 15:20	S23070309.D
Ethylbenzene	100-41-4	<1.43		1.43	07/03/2023 15:20	S23070309.D
p & m-Xylene	179601-23-1	<1.38		1.38	07/03/2023 15:20	S23070309.D
o-Xylene	95-47-6	<1.38		1.38	07/03/2023 15:20	S23070309.D
1,2,3-Trichloropropane	96-18-4	<0.649		0.649	07/03/2023 15:20	S23070309.D
Isopropylbenzene	98-82-8	<1.47		1.47	07/03/2023 15:20	S23070309.D
1,3,5-Trimethylbenzene	108-67-8	<1.47		1.47	07/03/2023 15:20	S23070309.D
1,2,4-Trimethylbenzene	95-63-6	<1.47		1.47	07/03/2023 15:20	S23070309.D
1,3-Dichlorobenzene	541-73-1	<0.649		0.649	07/03/2023 15:20	S23070309.D
1,4-Dichlorobenzene	106-46-7	**0.651**		0.649	07/03/2023 15:20	S23070309.D
1,2-Dichlorobenzene	95-50-1	<0.649		0.649	07/03/2023 15:20	S23070309.D
1,2,4-Trichlorobenzene	120-82-1	<1.25		1.25	07/03/2023 15:20	S23070309.D
Naphthalene	91-20-3	<1.52		1.52	07/03/2023 15:20	S23070309.D
1,2,3-Trichlorobenzene	87-61-6	<1.25		1.25	07/03/2023 15:20	S23070309.D
2-Methylnaphthalene	91-57-6	<1.60		1.60	07/03/2023 15:20	S23070309.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*94.6%*	*70-130*		*07/03/2023 15:20*	*S23070309.D*
Surrogate: Toluene-d8	2037-26-5	*100%*	*70-130*		*07/03/2023 15:20*	*S23070309.D*
Surrogate: Bromofluorobenzene	460-00-4	*94.3%*	*70-130*		*07/03/2023 15:20*	*S23070309.D*

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Lab Sample ID: 0007049-03

04R_SSG03_20230623

Sewer Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.602		0.602	07/03/2023 15:47	S23070310.D
1,1-Dichloroethene	75-35-4	<1.48		1.48	07/03/2023 15:47	S23070310.D
Methylene Chloride	75-09-2	**6.70**		1.39	07/03/2023 15:47	S23070310.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	<0.548		0.548	07/03/2023 15:47	S23070310.D
trans-1,2-Dichloroethene	156-60-5	<1.11		1.11	07/03/2023 15:47	S23070310.D
Methyl-t-butyl ether	1634-04-4	<2.44		2.44	07/03/2023 15:47	S23070310.D
1,1-Dichloroethane	75-34-3	<0.574		0.574	07/03/2023 15:47	S23070310.D
cis-1,2-Dichloroethene	156-59-2	<0.920		0.920	07/03/2023 15:47	S23070310.D
Chloroform	67-66-3	**19.6**		1.39	07/03/2023 15:47	S23070310.D
1,2-Dichloroethane	107-06-2	<0.871		0.871	07/03/2023 15:47	S23070310.D
1,1,1-Trichloroethane	71-55-6	<0.465		0.465	07/03/2023 15:47	S23070310.D
Carbon Tetrachloride	56-23-5	<1.13		1.13	07/03/2023 15:47	S23070310.D
Benzene	71-43-2	<2.30		2.30	07/03/2023 15:47	S23070310.D
Trichloroethene	79-01-6	<1.48		1.48	07/03/2023 15:47	S23070310.D
1,4-Dioxane	123-91-1	<1.19		1.19	07/03/2023 15:47	S23070310.D
1,1,2-Trichloroethane	79-00-5	<1.48		1.48	07/03/2023 15:47	S23070310.D
Toluene	108-88-3	<3.05		3.05	07/03/2023 15:47	S23070310.D
1,2-Dibromoethane (EDB)	106-93-4	<1.25		1.25	07/03/2023 15:47	S23070310.D
Tetrachloroethene	127-18-4	<1.19		1.19	07/03/2023 15:47	S23070310.D
1,1,1,2-Tetrachloroethane	630-20-6	<1.19		1.19	07/03/2023 15:47	S23070310.D
Chlorobenzene	108-90-7	<0.574		0.574	07/03/2023 15:47	S23070310.D
Ethylbenzene	100-41-4	<1.43		1.43	07/03/2023 15:47	S23070310.D
p & m-Xylene	179601-23-1	**3.15**		1.39	07/03/2023 15:47	S23070310.D
o-Xylene	95-47-6	**1.73**		1.39	07/03/2023 15:47	S23070310.D
1,2,3-Trichloropropane	96-18-4	<0.650		0.650	07/03/2023 15:47	S23070310.D
Isopropylbenzene	98-82-8	<1.47		1.47	07/03/2023 15:47	S23070310.D
1,3,5-Trimethylbenzene	108-67-8	<1.47		1.47	07/03/2023 15:47	S23070310.D
1,2,4-Trimethylbenzene	95-63-6	<1.47		1.47	07/03/2023 15:47	S23070310.D
1,3-Dichlorobenzene	541-73-1	<0.650		0.650	07/03/2023 15:47	S23070310.D
1,4-Dichlorobenzene	106-46-7	<0.650		0.650	07/03/2023 15:47	S23070310.D
1,2-Dichlorobenzene	95-50-1	<0.650		0.650	07/03/2023 15:47	S23070310.D
1,2,4-Trichlorobenzene	120-82-1	<1.25		1.25	07/03/2023 15:47	S23070310.D
Naphthalene	91-20-3	<1.52		1.52	07/03/2023 15:47	S23070310.D
1,2,3-Trichlorobenzene	87-61-6	<1.25		1.25	07/03/2023 15:47	S23070310.D
2-Methylnaphthalene	91-57-6	<1.60		1.60	07/03/2023 15:47	S23070310.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*95.4%*	*70-130*		*07/03/2023 15:47*	*S23070310.D*
Surrogate: Toluene-d8	2037-26-5	*100%*	*70-130*		*07/03/2023 15:47*	*S23070310.D*
Surrogate: Bromofluorobenzene	460-00-4	*95.3%*	*70-130*		*07/03/2023 15:47*	*S23070310.D*

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

QC Information/Summary

2203A Commerce Road, Suite 1
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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23D075 - Instrument: S System - File ID: S23042719.D

B23D075-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.7	10	ng	50.0		85.4	70-130			
1,1-Dichloroethene	51.7	10	ng	50.0		103	70-130			
Methylene Chloride	49.6	10	ng	50.0		99.2	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	50.7	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	59.4	10	ng	50.0		119	70-130			
Methyl-t-butyl ether	47.4	25	ng	50.0		94.7	70-130			
1,1-Dichloroethane	50.0	10	ng	50.0		100	70-130			
cis-1,2-Dichloroethene	58.9	10	ng	50.0		118	70-130			
Chloroform	59.8	10	ng	50.0		120	70-130			
1,2-Dichloroethane	51.7	10	ng	50.0		103	70-130			
1,1,1-Trichloroethane	51.3	10	ng	50.0		103	70-130			
Carbon Tetrachloride	53.0	10	ng	50.0		106	70-130			
Benzene	60.9	25	ng	50.0		122	70-130			
Trichloroethene	59.9	10	ng	50.0		120	70-130			
1,4-Dioxane	48.2	10	ng	50.0		96.4	70-130			
1,1,2-Trichloroethane	51.1	10	ng	50.0		102	70-130			
Toluene	64.2	25	ng	50.0		128	70-130			
1,2-Dibromoethane (EDB)	50.7	10	ng	50.0		101	70-130			
Tetrachloroethene	57.2	10	ng	50.0		114	70-130			
1,1,1,2-Tetrachloroethane	51.2	10	ng	50.0		102	70-130			
Chlorobenzene	50.6	10	ng	50.0		101	70-130			
Ethylbenzene	59.1	25	ng	50.0		118	70-130			
p & m-Xylene	58.6	25	ng	50.0		117	70-130			
o-Xylene	58.2	25	ng	50.0		116	70-130			
1,2,3-Trichloropropane	47.9	10	ng	50.0		95.7	70-130			
Isopropylbenzene	48.7	25	ng	50.0		97.4	70-130			
1,3,5-Trimethylbenzene	50.1	25	ng	50.0		100	70-130			
1,2,4-Trimethylbenzene	50.1	25	ng	50.0		100	70-130			
1,3-Dichlorobenzene	49.3	10	ng	50.0		98.6	70-130			
1,4-Dichlorobenzene	50.4	10	ng	50.0		101	70-130			
1,2-Dichlorobenzene	50.8	10	ng	50.0		102	70-130			
1,2,4-Trichlorobenzene	53.2	10	ng	50.0		106	70-130			
Naphthalene	53.8	25	ng	50.0		108	70-130			
1,2,3-Trichlorobenzene	54.2	10	ng	50.0		108	70-130			
2-Methylnaphthalene	54.2	25	ng	50.0		108	70-130			
Surrogate: 1,2-DCA-d4	*53.2*		*ng*	50.0		*106*	*70-130*			
Surrogate: Toluene-d8	*57.7*		*ng*	50.0		*115*	*70-130*			
Surrogate: Bromofluorobenzene	*53.3*		*ng*	50.0		*107*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23D075 - Instrument: S System - File ID: S23042720.D

B23D075-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
1,1-Dichloroethene	<5	10	ng							U
Methylene Chloride	<5	10	ng							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
Methyl-t-butyl ether	<10	25	ng							U
1,1-Dichloroethane	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Chloroform	<5	10	ng							U
1,2-Dichloroethane	<5	10	ng							U
1,1,1-Trichloroethane	<5	10	ng							U
Carbon Tetrachloride	<5	10	ng							U
Benzene	<10	25	ng							U
Trichloroethene	<5	10	ng							U
1,4-Dioxane	<5	10	ng							U
1,1,2-Trichloroethane	<5	10	ng							U
Toluene	<10	25	ng							U
1,2-Dibromoethane (EDB)	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
1,1,1,2-Tetrachloroethane	<5	10	ng							U
Chlorobenzene	<5	10	ng							U
Ethylbenzene	<10	25	ng							U
p & m-Xylene	<10	25	ng							U
o-Xylene	<10	25	ng							U
1,2,3-Trichloropropane	<5	10	ng							U
Isopropylbenzene	<10	25	ng							U
1,3,5-Trimethylbenzene	<10	25	ng							U
1,2,4-Trimethylbenzene	<10	25	ng							U
1,3-Dichlorobenzene	<5	10	ng							U
1,4-Dichlorobenzene	<5	10	ng							U
1,2-Dichlorobenzene	<5	10	ng							U
1,2,4-Trichlorobenzene	<5	10	ng							U
Naphthalene	<5	25	ng							U
1,2,3-Trichlorobenzene	<5	10	ng							U
2-Methylnaphthalene	<5	25	ng							U
Surrogate: 1,2-DCA-d4	*101*		*ng*	100		*101*	*70-130*			
Surrogate: Toluene-d8	*105*		*ng*	100		*105*	*70-130*			
Surrogate: Bromofluorobenzene	*97.2*		*ng*	100		*97.2*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23G009 - Batch: 23G0009 - Instrument: S System - File ID: S23070302.D

23G0009-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	41.7	10	ng	50.0		83.4	70-130			
1,1-Dichloroethene	45.1	10	ng	50.0		90.3	70-130			
Methylene Chloride	47.6	10	ng	50.0		95.2	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	46.4	10	ng	50.0		92.8	70-130			
trans-1,2-Dichloroethene	49.8	10	ng	50.0		99.7	70-130			
Methyl-t-butyl ether	47.0	25	ng	50.0		93.9	70-130			
1,1-Dichloroethane	46.6	10	ng	50.0		93.2	70-130			
cis-1,2-Dichloroethene	47.8	10	ng	50.0		95.6	70-130			
Chloroform	45.9	10	ng	50.0		91.8	70-130			
1,2-Dichloroethane	46.1	10	ng	50.0		92.2	70-130			
1,1,1-Trichloroethane	42.6	10	ng	50.0		85.2	70-130			
Carbon Tetrachloride	40.7	10	ng	50.0		81.4	70-130			
Benzene	50.2	25	ng	50.0		100	70-130			
Trichloroethene	46.7	10	ng	50.0		93.3	70-130			
1,4-Dioxane	49.3	10	ng	50.0		98.5	70-130			
1,1,2-Trichloroethane	47.0	10	ng	50.0		94.1	70-130			
Toluene	52.0	25	ng	50.0		104	70-130			
1,2-Dibromoethane (EDB)	44.2	10	ng	50.0		88.4	70-130			
Tetrachloroethene	49.0	10	ng	50.0		98.0	70-130			
1,1,1,2-Tetrachloroethane	41.2	10	ng	50.0		82.3	70-130			
Chlorobenzene	49.5	10	ng	50.0		99.0	70-130			
Ethylbenzene	49.6	25	ng	50.0		99.1	70-130			
p & m-Xylene	49.7	25	ng	50.0		99.5	70-130			
o-Xylene	50.4	25	ng	50.0		101	70-130			
1,2,3-Trichloropropane	47.3	10	ng	50.0		94.6	70-130			
Isopropylbenzene	50.0	25	ng	50.0		100	70-130			
1,3,5-Trimethylbenzene	47.9	25	ng	50.0		95.8	70-130			
1,2,4-Trimethylbenzene	48.0	25	ng	50.0		95.9	70-130			
1,3-Dichlorobenzene	49.5	10	ng	50.0		99.0	70-130			
1,4-Dichlorobenzene	49.7	10	ng	50.0		99.3	70-130			
1,2-Dichlorobenzene	48.8	10	ng	50.0		97.7	70-130			
1,2,4-Trichlorobenzene	47.2	10	ng	50.0		94.4	70-130			
Naphthalene	40.2	25	ng	50.0		80.4	70-130			
1,2,3-Trichlorobenzene	40.9	10	ng	50.0		81.8	70-130			
2-Methylnaphthalene	42.0	25	ng	50.0		84.1	70-130			
Surrogate: 1,2-DCA-d4	*46.9*		*ng*	50.0		*93.9*	*70-130*			
Surrogate: Toluene-d8	*52.4*		*ng*	50.0		*105*	*70-130*			
Surrogate: Bromofluorobenzene	*48.1*		*ng*	50.0		*96.1*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23G009 - Batch: 23G0009 - Instrument: S System - File ID: S23070303.D

23G0009-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.601	0.601	µg/m³							U
1,1-Dichloroethene	<1.47	1.47	µg/m³							U
Methylene Chloride	<1.39	1.39	µg/m³							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<0.547	0.547	µg/m³							U
trans-1,2-Dichloroethene	<1.11	1.11	µg/m³							U
Methyl-t-butyl ether	<2.43	2.43	µg/m³							U
1,1-Dichloroethane	<0.573	0.573	µg/m³							U
cis-1,2-Dichloroethene	<0.918	0.918	µg/m³							U
Chloroform	<1.39	1.39	µg/m³							U
1,2-Dichloroethane	<0.869	0.869	µg/m³							U
1,1,1-Trichloroethane	<0.463	0.463	µg/m³							U
Carbon Tetrachloride	<1.13	1.13	µg/m³							U
Benzene	<2.30	2.30	µg/m³							U
Trichloroethene	<1.47	1.47	µg/m³							U
1,4-Dioxane	<1.19	1.19	µg/m³							U
1,1,2-Trichloroethane	<1.47	1.47	µg/m³							U
Toluene	<3.04	3.04	µg/m³							U
1,2-Dibromoethane (EDB)	<1.25	1.25	µg/m³							U
Tetrachloroethene	<1.19	1.19	µg/m³							U
1,1,1,2-Tetrachloroethane	<1.19	1.19	µg/m³							U
Chlorobenzene	<0.573	0.573	µg/m³							U
Ethylbenzene	<1.43	1.43	µg/m³							U
p & m-Xylene	<1.38	1.38	µg/m³							U
o-Xylene	<1.38	1.38	µg/m³							U
1,2,3-Trichloropropane	<0.649	0.649	µg/m³							U
Isopropylbenzene	<1.47	1.47	µg/m³							U
1,3,5-Trimethylbenzene	<1.47	1.47	µg/m³							U
1,2,4-Trimethylbenzene	<1.47	1.47	µg/m³							U
1,3-Dichlorobenzene	<0.649	0.649	µg/m³							U
1,4-Dichlorobenzene	<0.649	0.649	µg/m³							U
1,2-Dichlorobenzene	<0.649	0.649	µg/m³							U
1,2,4-Trichlorobenzene	<1.25	1.25	µg/m³							U
Naphthalene	<1.52	1.52	µg/m³							U
1,2,3-Trichlorobenzene	<1.25	1.25	µg/m³							U
2-Methylnaphthalene	<1.60	1.60	µg/m³							U
Surrogate: 1,2-DCA-d4	*90.8*		*ng*	100		*90.8*	*70-130*			
Surrogate: Toluene-d8	*104*		*ng*	100		*104*	*70-130*			
Surrogate: Bromofluorobenzene	*89.8*		*ng*	100		*89.8*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23G009 - Instrument: S System - File ID: S23070304.D

B23G009-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	43.3	10	ng	50.0		86.7	70-130			
1,1-Dichloroethene	44.3	10	ng	50.0		88.5	70-130			
Methylene Chloride	46.7	10	ng	50.0		93.4	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	47.0	10	ng	50.0		94.0	70-130			
trans-1,2-Dichloroethene	50.3	10	ng	50.0		101	70-130			
Methyl-t-butyl ether	46.3	25	ng	50.0		92.6	70-130			
1,1-Dichloroethane	46.2	10	ng	50.0		92.4	70-130			
cis-1,2-Dichloroethene	48.5	10	ng	50.0		97.1	70-130			
Chloroform	45.9	10	ng	50.0		91.8	70-130			
1,2-Dichloroethane	46.9	10	ng	50.0		93.7	70-130			
1,1,1-Trichloroethane	43.2	10	ng	50.0		86.3	70-130			
Carbon Tetrachloride	41.0	10	ng	50.0		82.0	70-130			
Benzene	50.8	25	ng	50.0		102	70-130			
Trichloroethene	48.2	10	ng	50.0		96.4	70-130			
1,4-Dioxane	48.8	10	ng	50.0		97.6	70-130			
1,1,2-Trichloroethane	47.8	10	ng	50.0		95.7	70-130			
Toluene	52.6	25	ng	50.0		105	70-130			
1,2-Dibromoethane (EDB)	44.8	10	ng	50.0		89.6	70-130			
Tetrachloroethene	50.0	10	ng	50.0		99.9	70-130			
1,1,1,2-Tetrachloroethane	42.0	10	ng	50.0		84.0	70-130			
Chlorobenzene	50.5	10	ng	50.0		101	70-130			
Ethylbenzene	50.8	25	ng	50.0		102	70-130			
p & m-Xylene	51.2	25	ng	50.0		102	70-130			
o-Xylene	51.5	25	ng	50.0		103	70-130			
1,2,3-Trichloropropane	48.3	10	ng	50.0		96.6	70-130			
Isopropylbenzene	50.8	25	ng	50.0		102	70-130			
1,3,5-Trimethylbenzene	49.0	25	ng	50.0		97.9	70-130			
1,2,4-Trimethylbenzene	49.2	25	ng	50.0		98.4	70-130			
1,3-Dichlorobenzene	50.6	10	ng	50.0		101	70-130			
1,4-Dichlorobenzene	50.1	10	ng	50.0		100	70-130			
1,2-Dichlorobenzene	50.7	10	ng	50.0		101	70-130			
1,2,4-Trichlorobenzene	45.7	10	ng	50.0		91.5	70-130			
Naphthalene	39.9	25	ng	50.0		79.8	70-130			
1,2,3-Trichlorobenzene	41.4	10	ng	50.0		82.8	70-130			
2-Methylnaphthalene	39.0	25	ng	50.0		78.1	70-130			
Surrogate: 1,2-DCA-d4	*45.6*		*ng*	50.0		*91.3*	*70-130*			
Surrogate: Toluene-d8	*51.7*		*ng*	50.0		*103*	*70-130*			
Surrogate: Bromofluorobenzene	*46.6*		*ng*	50.0		*93.3*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23G009 - Instrument: S System - File ID: S23070311.D

B23G009-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.6	10	ng	50.0		85.3	70-130			
1,1-Dichloroethene	45.8	10	ng	50.0		91.7	70-130			
Methylene Chloride	48.2	10	ng	50.0		96.3	70-130			
1,1,2-Trichlorotrifluoroethane (Fr.113)	46.0	10	ng	50.0		92.1	70-130			
trans-1,2-Dichloroethene	48.5	10	ng	50.0		97.0	70-130			
Methyl-t-butyl ether	46.4	25	ng	50.0		92.7	70-130			
1,1-Dichloroethane	48.3	10	ng	50.0		96.7	70-130			
cis-1,2-Dichloroethene	47.5	10	ng	50.0		95.0	70-130			
Chloroform	47.9	10	ng	50.0		95.8	70-130			
1,2-Dichloroethane	47.9	10	ng	50.0		95.8	70-130			
1,1,1-Trichloroethane	44.3	10	ng	50.0		88.6	70-130			
Carbon Tetrachloride	42.2	10	ng	50.0		84.4	70-130			
Benzene	49.6	25	ng	50.0		99.1	70-130			
Trichloroethene	47.6	10	ng	50.0		95.2	70-130			
1,4-Dioxane	50.3	10	ng	50.0		101	70-130			
1,1,2-Trichloroethane	48.4	10	ng	50.0		96.8	70-130			
Toluene	51.3	25	ng	50.0		103	70-130			
1,2-Dibromoethane (EDB)	45.0	10	ng	50.0		89.9	70-130			
Tetrachloroethene	52.2	10	ng	50.0		104	70-130			
1,1,1,2-Tetrachloroethane	43.4	10	ng	50.0		86.7	70-130			
Chlorobenzene	48.9	10	ng	50.0		97.7	70-130			
Ethylbenzene	49.9	25	ng	50.0		99.8	70-130			
p & m-Xylene	49.6	25	ng	50.0		99.2	70-130			
o-Xylene	50.1	25	ng	50.0		100	70-130			
1,2,3-Trichloropropane	48.0	10	ng	50.0		96.0	70-130			
Isopropylbenzene	49.8	25	ng	50.0		99.5	70-130			
1,3,5-Trimethylbenzene	49.5	25	ng	50.0		99.0	70-130			
1,2,4-Trimethylbenzene	49.4	25	ng	50.0		98.7	70-130			
1,3-Dichlorobenzene	50.2	10	ng	50.0		100	70-130			
1,4-Dichlorobenzene	48.2	10	ng	50.0		96.4	70-130			
1,2-Dichlorobenzene	50.2	10	ng	50.0		100	70-130			
1,2,4-Trichlorobenzene	44.4	10	ng	50.0		88.8	70-130			
Naphthalene	38.6	25	ng	50.0		77.2	70-130			
1,2,3-Trichlorobenzene	41.8	10	ng	50.0		83.6	70-130			
2-Methylnaphthalene	39.9	25	ng	50.0		79.7	70-130			
Surrogate: 1,2-DCA-d4	*48.8*		*ng*	50.0		*97.7*	*70-130*			
Surrogate: Toluene-d8	*53.4*		*ng*	50.0		*107*	*70-130*			
Surrogate: Bromofluorobenzene	*46.8*		*ng*	50.0		*93.5*	*70-130*			

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23G009 - Instrument: S System - File ID: S23070312.D

B23G009-CCB1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
1,1-Dichloroethene	<5	10	ng							U
Methylene Chloride	<5	10	ng							U
1,1,2-Trichlorotrifluoroethane (Fr.113)	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
Methyl-t-butyl ether	<10	25	ng							U
1,1-Dichloroethane	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Chloroform	<5	10	ng							U
1,2-Dichloroethane	<5	10	ng							U
1,1,1-Trichloroethane	<5	10	ng							U
Carbon Tetrachloride	<5	10	ng							U
Benzene	<10	25	ng							U
Trichloroethene	<5	10	ng							U
1,4-Dioxane	<5	10	ng							U
1,1,2-Trichloroethane	<5	10	ng							U
Toluene	<10	25	ng							U
1,2-Dibromoethane (EDB)	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
1,1,1,2-Tetrachloroethane	<5	10	ng							U
Chlorobenzene	<5	10	ng							U
Ethylbenzene	<10	25	ng							U
p & m-Xylene	<10	25	ng							U
o-Xylene	<10	25	ng							U
1,2,3-Trichloropropane	<5	10	ng							U
Isopropylbenzene	<10	25	ng							U
1,3,5-Trimethylbenzene	<10	25	ng							U
1,2,4-Trimethylbenzene	<10	25	ng							U
1,3-Dichlorobenzene	<5	10	ng							U
1,4-Dichlorobenzene	<5	10	ng							U
1,2-Dichlorobenzene	<5	10	ng							U
1,2,4-Trichlorobenzene	<5	10	ng							U
Naphthalene	<5	25	ng							U
1,2,3-Trichlorobenzene	<5	10	ng							U
2-Methylnaphthalene	<5	25	ng							U
Surrogate: 1,2-DCA-d4	*90.8*		*ng*	100		*90.8*	*70-130*			
Surrogate: Toluene-d8	*103*		*ng*	100		*103*	*70-130*			
Surrogate: Bromofluorobenzene	*91.4*		*ng*	100		*91.4*	*70-130*			

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23G0009-BS1 File ID: S23070302.D Analyzed: 7/3/23 13:00

LCSD: B23G009-ICV1 File ID: S23070304.D Analyzed: 7/3/23 12:13

Analyte	CAS#	LCS Result (ng)	%REC	Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	41.68	83.36		50	43.34	86.70	70-130	3.90	30	
1,1-Dichloroethene	75-35-4	45.13	90.26		50	44.26	88.50	70-130	1.95	30	
Methylene Chloride	75-09-2	47.58	95.16		50	46.7	93.40	70-130	1.87	30	
1,1,2-Trichlorotrifluoroethane (Fr.113)	76-13-1	46.40	92.8		50	47.02	94.00	70-130	1.33	30	
trans-1,2-Dichloroethene	156-60-5	49.84	99.68		50	50.26	101.00	70-130	0.84	30	
Methyl-t-butyl ether	1634-04-4	46.97	93.94		50	46.32	92.60	70-130	1.39	30	
1,1-Dichloroethane	75-34-3	46.58	93.16		50	46.2	92.40	70-130	0.82	30	
cis-1,2-Dichloroethene	156-59-2	47.82	95.64		50	48.53	97.10	70-130	1.47	30	
Chloroform	67-66-3	45.91	91.82		50	45.88	91.80	70-130	0.07	30	
1,2-Dichloroethane	107-06-2	46.09	92.18		50	46.86	93.70	70-130	1.66	30	
1,1,1-Trichloroethane	71-55-6	42.62	85.24		50	43.15	86.30	70-130	1.24	30	
Carbon Tetrachloride	56-23-5	40.70	81.4		50	41.02	82.00	70-130	0.78	30	
Benzene	71-43-2	50.15	100.3		50	50.76	102.00	70-130	1.21	30	
Trichloroethene	79-01-6	46.65	93.3		50	48.19	96.40	70-130	3.25	30	
1,4-Dioxane	123-91-1	49.26	98.52		50	48.79	97.60	70-130	0.96	30	
1,1,2-Trichloroethane	79-00-5	47.03	94.06		50	47.84	95.70	70-130	1.71	30	
Toluene	108-88-3	52.00	104		50	52.56	105.00	70-130	1.07	30	
1,2-Dibromoethane (EDB)	106-93-4	44.21	88.42		50	44.82	89.60	70-130	1.37	30	
Tetrachloroethene	127-18-4	49.02	98.04		50	49.95	99.90	70-130	1.88	30	
1,1,1,2-Tetrachloroethane	630-20-6	41.16	82.32		50	42.01	84.00	70-130	2.04	30	
Chlorobenzene	108-90-7	49.48	98.96		50	50.5	101.00	70-130	2.04	30	
Ethylbenzene	100-41-4	49.55	99.1		50	50.79	102.00	70-130	2.47	30	
p & m-Xylene	179601-23-1	49.74	99.48		50	51.22	102.00	70-130	2.93	30	
o-Xylene	95-47-6	50.42	100.84		50	51.49	103.00	70-130	2.10	30	
1,2,3-Trichloropropane	96-18-4	47.29	94.58		50	48.32	96.60	70-130	2.15	30	
Isopropylbenzene	98-82-8	50.00	100		50	50.78	102.00	70-130	1.55	30	
1,3,5-Trimethylbenzene	108-67-8	47.89	95.78		50	48.96	97.90	70-130	2.21	30	
1,2,4-Trimethylbenzene	95-63-6	47.96	95.92		50	49.19	98.40	70-130	2.53	30	
1,3-Dichlorobenzene	541-73-1	49.48	98.96		50	50.61	101.00	70-130	2.26	30	
1,4-Dichlorobenzene	106-46-7	49.67	99.34		50	50.12	100.00	70-130	0.90	30	
1,2-Dichlorobenzene	95-50-1	48.84	97.68		50	50.73	101.00	70-130	3.80	30	
1,2,4-Trichlorobenzene	120-82-1	47.22	94.44		50	45.74	91.50	70-130	3.18	30	
Naphthalene	91-20-3	40.19	80.38		50	39.88	79.80	70-130	0.77	30	
1,2,3-Trichlorobenzene	87-61-6	40.88	81.76		50	41.38	82.80	70-130	1.22	30	
2-Methylnaphthalene	91-57-6	42.03	84.06		50	39.03	78.10	70-130	7.40	30	

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Additional QC Information

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2203A Commerce Road, Suite 1
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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Lab ID: 0007049-01 **Sample Name:** 04R_SSG01_20230623 **x̄ Temp (°C):** 28.90

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Vinyl Chloride	20,130	1.00	0.827	U	U	S23070308.D
1,1-Dichloroethene	20,130	1.00	0.337	U	U	S23070308.D
Methylene Chloride	20,130	1.00	0.357 g	U	U	S23070308.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	20,130	1.00	0.909 g	U	U	S23070308.D
trans-1,2-Dichloroethene	20,130	1.00	0.449	U	U	S23070308.D
Methyl-t-butyl ether	20,130	1.00	0.510 g	U	U	S23070308.D
1,1-Dichloroethane	20,130	1.00	0.868	U	U	S23070308.D
cis-1,2-Dichloroethene	20,130	1.00	0.541	U	U	S23070308.D
Chloroform	20,130	1.00	0.357 g	17.15	2.38	S23070308.D
1,2-Dichloroethane	20,130	1.00	0.572	U	U	S23070308.D
1,1,1-Trichloroethane	20,130	1.00	1.072	U	U	S23070308.D
Carbon Tetrachloride	20,130	1.00	0.439 g	U	U	S23070308.D
Benzene	20,130	1.00	0.541	U	U	S23070308.D
Trichloroethene	20,130	1.00	0.337	U	U	S23070308.D
1,4-Dioxane	20,130	1.00	0.419 g	U	U	S23070308.D
1,1,2-Trichloroethane	20,130	1.00	0.337 g	U	U	S23070308.D
Toluene	20,130	1.00	0.408	U	U	S23070308.D
1,2-Dibromoethane (EDB)	20,130	1.00	0.398 g	U	U	S23070308.D
Tetrachloroethene	20,130	1.00	0.419	U	U	S23070308.D
1,1,1,2-Tetrachloroethane	20,130	1.00	0.419 g	U	U	S23070308.D
Chlorobenzene	20,130	1.00	0.868 g	U	U	S23070308.D
Ethylbenzene	20,130	1.00	0.868	U	U	S23070308.D
p & m-Xylene	20,130	1.00	0.898	U	U	S23070308.D
o-Xylene	20,130	1.00	0.898	U	U	S23070308.D
1,2,3-Trichloropropane	20,130	1.00	0.766 g	U	U	S23070308.D
Isopropylbenzene	20,130	1.00	0.847 g	U	U	S23070308.D
1,3,5-Trimethylbenzene	20,130	1.00	0.847 g	U	U	S23070308.D
1,2,4-Trimethylbenzene	20,130	1.00	0.847 g	U	U	S23070308.D
1,3-Dichlorobenzene	20,130	1.00	0.766 g	U	U	S23070308.D
1,4-Dichlorobenzene	20,130	1.00	0.766 g	U	U	S23070308.D
1,2-Dichlorobenzene	20,130	1.00	0.766 g	U	U	S23070308.D
1,2,4-Trichlorobenzene	20,130	1.00	0.398 g	U	U	S23070308.D
Naphthalene	20,130	1.00	0.817 g	U	U	S23070308.D
1,2,3-Trichlorobenzene	20,130	1.00	0.398 g	U	U	S23070308.D
2-Methylnaphthalene	20,130	1.00	0.776 g	U	U	S23070308.D

BEACON ENVIRONMENTAL

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007049-02 **Sample Name:** 04R_SSG02_20230623					**X̄ Temp (°C):** 28.90	
Vinyl Chloride	20,110	1.00	0.827	U	U	S23070309.D
1,1-Dichloroethene	20,110	1.00	0.337	U	U	S23070309.D
Methylene Chloride	20,110	1.00	0.357 g	12.10	1.68	S23070309.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	20,110	1.00	0.909 g	U	U	S23070309.D
trans-1,2-Dichloroethene	20,110	1.00	0.449	U	U	S23070309.D
Methyl-t-butyl ether	20,110	1.00	0.510 g	U	U	S23070309.D
1,1-Dichloroethane	20,110	1.00	0.868	U	U	S23070309.D
cis-1,2-Dichloroethene	20,110	1.00	0.541	U	U	S23070309.D
Chloroform	20,110	1.00	0.357 g	11.12	1.55	S23070309.D
1,2-Dichloroethane	20,110	1.00	0.572	U	U	S23070309.D
1,1,1-Trichloroethane	20,110	1.00	1.072	U	U	S23070309.D
Carbon Tetrachloride	20,110	1.00	0.439 g	U	U	S23070309.D
Benzene	20,110	1.00	0.541	U	U	S23070309.D
Trichloroethene	20,110	1.00	0.337	U	U	S23070309.D
1,4-Dioxane	20,110	1.00	0.419 g	U	U	S23070309.D
1,1,2-Trichloroethane	20,110	1.00	0.337 g	U	U	S23070309.D
Toluene	20,110	1.00	0.408	U	U	S23070309.D
1,2-Dibromoethane (EDB)	20,110	1.00	0.398 g	U	U	S23070309.D
Tetrachloroethene	20,110	1.00	0.419	U	U	S23070309.D
1,1,1,2-Tetrachloroethane	20,110	1.00	0.419 g	U	U	S23070309.D
Chlorobenzene	20,110	1.00	0.868 g	U	U	S23070309.D
Ethylbenzene	20,110	1.00	0.868	U	U	S23070309.D
p & m-Xylene	20,110	1.00	0.898	U	U	S23070309.D
o-Xylene	20,110	1.00	0.898	U	U	S23070309.D
1,2,3-Trichloropropane	20,110	1.00	0.766 g	U	U	S23070309.D
Isopropylbenzene	20,110	1.00	0.847 g	U	U	S23070309.D
1,3,5-Trimethylbenzene	20,110	1.00	0.847 g	U	U	S23070309.D
1,2,4-Trimethylbenzene	20,110	1.00	0.847 g	U	U	S23070309.D
1,3-Dichlorobenzene	20,110	1.00	0.766 g	U	U	S23070309.D
1,4-Dichlorobenzene	20,110	1.00	0.766 g	10.02	0.651	S23070309.D
1,2-Dichlorobenzene	20,110	1.00	0.766 g	U	U	S23070309.D
1,2,4-Trichlorobenzene	20,110	1.00	0.398 g	U	U	S23070309.D
Naphthalene	20,110	1.00	0.817 g	U	U	S23070309.D
1,2,3-Trichlorobenzene	20,110	1.00	0.398 g	U	U	S23070309.D
2-Methylnaphthalene	20,110	1.00	0.776 g	U	U	S23070309.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m³	File ID
Lab ID: 0007049-03 **Sample Name:** 04R_SSG03_20230623					**X̄ Temp (°C):** 28.90	
Vinyl Chloride	20,080	1.00	0.827	U	U	S23070310.D
1,1-Dichloroethene	20,080	1.00	0.337	U	U	S23070310.D
Methylene Chloride	20,080	1.00	0.357 g	48.10	6.70	S23070310.D
1,1,2-Trichlorotrifluoroethane (Fr.113)	20,080	1.00	0.909 g	U	U	S23070310.D
trans-1,2-Dichloroethene	20,080	1.00	0.449	U	U	S23070310.D
Methyl-t-butyl ether	20,080	1.00	0.510 g	U	U	S23070310.D
1,1-Dichloroethane	20,080	1.00	0.868	U	U	S23070310.D
cis-1,2-Dichloroethene	20,080	1.00	0.541	U	U	S23070310.D
Chloroform	20,080	1.00	0.357 g	140.66	19.6	S23070310.D
1,2-Dichloroethane	20,080	1.00	0.572	U	U	S23070310.D
1,1,1-Trichloroethane	20,080	1.00	1.072	U	U	S23070310.D
Carbon Tetrachloride	20,080	1.00	0.439 g	U	U	S23070310.D
Benzene	20,080	1.00	0.541	U	U	S23070310.D
Trichloroethene	20,080	1.00	0.337	U	U	S23070310.D
1,4-Dioxane	20,080	1.00	0.419 g	U	U	S23070310.D
1,1,2-Trichloroethane	20,080	1.00	0.337 g	U	U	S23070310.D
Toluene	20,080	1.00	0.408	U	U	S23070310.D
1,2-Dibromoethane (EDB)	20,080	1.00	0.398 g	U	U	S23070310.D
Tetrachloroethene	20,080	1.00	0.419	U	U	S23070310.D
1,1,1,2-Tetrachloroethane	20,080	1.00	0.419 g	U	U	S23070310.D
Chlorobenzene	20,080	1.00	0.868 g	U	U	S23070310.D
Ethylbenzene	20,080	1.00	0.868	U	U	S23070310.D
p & m-Xylene	20,080	1.00	0.898	56.88	3.15	S23070310.D
o-Xylene	20,080	1.00	0.898	31.29	1.73	S23070310.D
1,2,3-Trichloropropane	20,080	1.00	0.766 g	U	U	S23070310.D
Isopropylbenzene	20,080	1.00	0.847 g	U	U	S23070310.D
1,3,5-Trimethylbenzene	20,080	1.00	0.847 g	U	U	S23070310.D
1,2,4-Trimethylbenzene	20,080	1.00	0.847 g	U	U	S23070310.D
1,3-Dichlorobenzene	20,080	1.00	0.766 g	U	U	S23070310.D
1,4-Dichlorobenzene	20,080	1.00	0.766 g	U	U	S23070310.D
1,2-Dichlorobenzene	20,080	1.00	0.766 g	U	U	S23070310.D
1,2,4-Trichlorobenzene	20,080	1.00	0.398 g	U	U	S23070310.D
Naphthalene	20,080	1.00	0.817 g	U	U	S23070310.D
1,2,3-Trichlorobenzene	20,080	1.00	0.398 g	U	U	S23070310.D
2-Methylnaphthalene	20,080	1.00	0.776 g	U	U	S23070310.D

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Calculations:

$$C = \frac{1000 \times M \times DF}{Uc \times t}$$

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where:
- C = concentration (µg/m^3)
- M = mass (ng)
- DF = dilution factor
- Uc = uptake rate (ml/min), corrected
- t = sampling time (minutes)
- U = compound specific uptake rate
- Tu = uptake rate study temperature
- Ts = sample average temperature

Note: Tu is 16.65°C

[g] = Uptake rate determined using Graham's Law of Diffusion.

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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CERTIFICATE OF ANALYSIS

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Lab ID: 0007049-01 **Sample Name:** 04R_SSG01_20230623 **X̄ Temp (°C):** 28.90

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m³
Vinyl Chloride	20,130	1.00	0.827	10.0	0.601
1,1-Dichloroethene	20,130	1.00	0.337	10.0	1.47
Methylene Chloride	20,130	1.00	0.357 g	10.0	1.39
1,1,2-Trichlorotrifluoroethane (Fr.113)	20,130	1.00	0.909 g	10.0	0.547
trans-1,2-Dichloroethene	20,130	1.00	0.449	10.0	1.11
Methyl-t-butyl ether	20,130	1.00	0.510 g	25.0	2.43
1,1-Dichloroethane	20,130	1.00	0.868	10.0	0.572
cis-1,2-Dichloroethene	20,130	1.00	0.541	10.0	0.918
Chloroform	20,130	1.00	0.357 g	10.0	1.39
1,2-Dichloroethane	20,130	1.00	0.572	10.0	0.869
1,1,1-Trichloroethane	20,130	1.00	1.072	10.0	0.463
Carbon Tetrachloride	20,130	1.00	0.439 g	10.0	1.13
Benzene	20,130	1.00	0.541	25.0	2.30
Trichloroethene	20,130	1.00	0.337	10.0	1.47
1,4-Dioxane	20,130	1.00	0.419 g	10.0	1.19
1,1,2-Trichloroethane	20,130	1.00	0.337 g	10.0	1.47
Toluene	20,130	1.00	0.408	25.0	3.04
1,2-Dibromoethane (EDB)	20,130	1.00	0.398 g	10.0	1.25
Tetrachloroethene	20,130	1.00	0.419	10.0	1.19
1,1,1,2-Tetrachloroethane	20,130	1.00	0.419 g	10.0	1.19
Chlorobenzene	20,130	1.00	0.868 g	10.0	0.572
Ethylbenzene	20,130	1.00	0.868	25.0	1.43
p & m-Xylene	20,130	1.00	0.898	25.0	1.38
o-Xylene	20,130	1.00	0.898	25.0	1.38
1,2,3-Trichloropropane	20,130	1.00	0.766 g	10.0	0.649
Isopropylbenzene	20,130	1.00	0.847 g	25.0	1.47
1,3,5-Trimethylbenzene	20,130	1.00	0.847 g	25.0	1.47
1,2,4-Trimethylbenzene	20,130	1.00	0.847 g	25.0	1.47
1,3-Dichlorobenzene	20,130	1.00	0.766 g	10.0	0.649
1,4-Dichlorobenzene	20,130	1.00	0.766 g	10.0	0.649
1,2-Dichlorobenzene	20,130	1.00	0.766 g	10.0	0.649
1,2,4-Trichlorobenzene	20,130	1.00	0.398 g	10.0	1.25
Naphthalene	20,130	1.00	0.817 g	25.0	1.52
1,2,3-Trichlorobenzene	20,130	1.00	0.398 g	10.0	1.25
2-Methylnaphthalene	20,130	1.00	0.776 g	25.0	1.60

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Lab ID: 0007049-02 **Sample Name:** 04R_SSG02_20230623 **X̄ Temp (°C):** 28.90

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m³
Vinyl Chloride	20,110	1.00	0.827	10.0	0.601
1,1-Dichloroethene	20,110	1.00	0.337	10.0	1.48
Methylene Chloride	20,110	1.00	0.357 g	10.0	1.39
1,1,2-Trichlorotrifluoroethane (Fr.113)	20,110	1.00	0.909 g	10.0	0.547
trans-1,2-Dichloroethene	20,110	1.00	0.449	10.0	1.11
Methyl-t-butyl ether	20,110	1.00	0.510 g	25.0	2.44
1,1-Dichloroethane	20,110	1.00	0.868	10.0	0.573
cis-1,2-Dichloroethene	20,110	1.00	0.541	10.0	0.919
Chloroform	20,110	1.00	0.357 g	10.0	1.39
1,2-Dichloroethane	20,110	1.00	0.572	10.0	0.870
1,1,1-Trichloroethane	20,110	1.00	1.072	10.0	0.464
Carbon Tetrachloride	20,110	1.00	0.439 g	10.0	1.13
Benzene	20,110	1.00	0.541	25.0	2.30
Trichloroethene	20,110	1.00	0.337	10.0	1.48
1,4-Dioxane	20,110	1.00	0.419 g	10.0	1.19
1,1,2-Trichloroethane	20,110	1.00	0.337 g	10.0	1.48
Toluene	20,110	1.00	0.408	25.0	3.04
1,2-Dibromoethane (EDB)	20,110	1.00	0.398 g	10.0	1.25
Tetrachloroethene	20,110	1.00	0.419	10.0	1.19
1,1,1,2-Tetrachloroethane	20,110	1.00	0.419 g	10.0	1.19
Chlorobenzene	20,110	1.00	0.868 g	10.0	0.573
Ethylbenzene	20,110	1.00	0.868	25.0	1.43
p & m-Xylene	20,110	1.00	0.898	25.0	1.38
o-Xylene	20,110	1.00	0.898	25.0	1.38
1,2,3-Trichloropropane	20,110	1.00	0.766 g	10.0	0.649
Isopropylbenzene	20,110	1.00	0.847 g	25.0	1.47
1,3,5-Trimethylbenzene	20,110	1.00	0.847 g	25.0	1.47
1,2,4-Trimethylbenzene	20,110	1.00	0.847 g	25.0	1.47
1,3-Dichlorobenzene	20,110	1.00	0.766 g	10.0	0.649
1,4-Dichlorobenzene	20,110	1.00	0.766 g	10.0	0.649
1,2-Dichlorobenzene	20,110	1.00	0.766 g	10.0	0.649
1,2,4-Trichlorobenzene	20,110	1.00	0.398 g	10.0	1.25
Naphthalene	20,110	1.00	0.817 g	25.0	1.52
1,2,3-Trichlorobenzene	20,110	1.00	0.398 g	10.0	1.25
2-Methylnaphthalene	20,110	1.00	0.776 g	25.0	1.60

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The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Lab ID: 0007049-03 **Sample Name:** 04R_SSG03_20230623 **X̄ Temp (°C):** 28.90

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m³
Vinyl Chloride	20,080	1.00	0.827	10.0	0.602
1,1-Dichloroethene	20,080	1.00	0.337	10.0	1.48
Methylene Chloride	20,080	1.00	0.357 g	10.0	1.39
1,1,2-Trichlorotrifluoroethane (Fr.113)	20,080	1.00	0.909 g	10.0	0.548
trans-1,2-Dichloroethene	20,080	1.00	0.449	10.0	1.11
Methyl-t-butyl ether	20,080	1.00	0.510 g	25.0	2.44
1,1-Dichloroethane	20,080	1.00	0.868	10.0	0.574
cis-1,2-Dichloroethene	20,080	1.00	0.541	10.0	0.920
Chloroform	20,080	1.00	0.357 g	10.0	1.39
1,2-Dichloroethane	20,080	1.00	0.572	10.0	0.871
1,1,1-Trichloroethane	20,080	1.00	1.072	10.0	0.465
Carbon Tetrachloride	20,080	1.00	0.439 g	10.0	1.13
Benzene	20,080	1.00	0.541	25.0	2.30
Trichloroethene	20,080	1.00	0.337	10.0	1.48
1,4-Dioxane	20,080	1.00	0.419 g	10.0	1.19
1,1,2-Trichloroethane	20,080	1.00	0.337 g	10.0	1.48
Toluene	20,080	1.00	0.408	25.0	3.05
1,2-Dibromoethane (EDB)	20,080	1.00	0.398 g	10.0	1.25
Tetrachloroethene	20,080	1.00	0.419	10.0	1.19
1,1,1,2-Tetrachloroethane	20,080	1.00	0.419 g	10.0	1.19
Chlorobenzene	20,080	1.00	0.868 g	10.0	0.574
Ethylbenzene	20,080	1.00	0.868	25.0	1.43
p & m-Xylene	20,080	1.00	0.898	25.0	1.39
o-Xylene	20,080	1.00	0.898	25.0	1.39
1,2,3-Trichloropropane	20,080	1.00	0.766 g	10.0	0.650
Isopropylbenzene	20,080	1.00	0.847 g	25.0	1.47
1,3,5-Trimethylbenzene	20,080	1.00	0.847 g	25.0	1.47
1,2,4-Trimethylbenzene	20,080	1.00	0.847 g	25.0	1.47
1,3-Dichlorobenzene	20,080	1.00	0.766 g	10.0	0.650
1,4-Dichlorobenzene	20,080	1.00	0.766 g	10.0	0.650
1,2-Dichlorobenzene	20,080	1.00	0.766 g	10.0	0.650
1,2,4-Trichlorobenzene	20,080	1.00	0.398 g	10.0	1.25
Naphthalene	20,080	1.00	0.817 g	25.0	1.52
1,2,3-Trichlorobenzene	20,080	1.00	0.398 g	10.0	1.25
2-Methylnaphthalene	20,080	1.00	0.776 g	25.0	1.60

2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

The Sigma Group		**Site Name:**	Oakfield Properties	**Beacon Proposal:**	230317R02
1300 West Canal Street		**Site Location:**	Oakfield, WI	**Lab Work Order:**	0007049
Milwaukee, WI 53233		**Project Manager:**	Steve Meer	**Reported:**	07/06/2023

Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside $\pm$0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

I1	Internal Standard recovery was above laboratory and method acceptance limits, results biased low.

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Forest Hill, MD 21050 USA
1.410.838.8780

The Sigma Group	**Site Name:** Oakfield Properties	**Beacon Proposal:** 230317R02
1300 West Canal Street	**Site Location:** Oakfield, WI	**Lab Work Order:** 0007049
Milwaukee, WI 53233	**Project Manager:** Steve Meer	**Reported:** 07/06/2023

Sample Management Records

BEACON ENVIRONMENTAL
2203A Commerce Rd, Suite 1
Forest Hill, MD 21050, USA
1-410-838-8780
800-878-5510 Toll Free

PASSIVE AIR SAMPLING - BEACON SAMPLER | CHAIN-OF-CUSTODY

Client Information		Project Manager: Steve Meer	Client PO: 21801				
Company: The Sigma Group, Inc.		Project Name: Oakfield Properties	Turn around time (check one): [X] Normal [ ] Rush (specify) ____ days				
Address: 1300 W. Canal St.		Location: Oakfield Wisconsin					
City / State / Zip: Milwaukee WI		Submitted by: Ryan Adamec	Analysis: [X] Method TO-17 [ ] Method 8260C				
Phone: (414) 643-4124		Email: Smeer@thesigmagroup.com					

Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
04R_SSG01_20230623	6/9/23	12:20	6/23/23	11:50	28.9					X
04R_SSG02_20230623	6/9/23	12:30	6/23/23	11:40	28.9					X
04R_SSG03_20230623	6/9/23	12:50	6/23/23	11:30	28.9					X

Special Notes / Instructions: Run full suite VOCs

Relinquished by (signature): Ryan Adamec	Date / Time: 6/23/23 2:00 pm	Received by (signature): Nicole Keiper	Date / Time: 6/26/23 12:10
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7049	Beacon Proposal: 230317R02	
Courier Name: FedEx	Shipment Condition: Good	Custody Seal Intact: [X] Yes [ ] No [ ] n/a	Custody Seal No: 5504783

Appendix L

Sump Water Laboraotry Analytical Reports

Synergy Environmental Lab, LLC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

STEVE MEER
THE SIGMA GROUP, INC.
1300 W. CANAL STREET
MILWAUKEE, WI 53233

Report Date *15-Dec-23*

Project Name OAKFIELD
Project # 21801

Invoice # E43315

Lab Code 5043315A
Sample ID 04C_SUMPW_20231208
Sample Matrix Water
Sample Date 12/8/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		12/13/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		12/13/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		12/13/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		12/13/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		12/13/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		12/13/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			1	8260B		12/13/2023	CJR	1
SUR - 4-Bromofluorobenzene	114	REC %			1	8260B		12/13/2023	CJR	1
SUR - Dibromofluoromethane	89	REC %			1	8260B		12/13/2023	CJR	1
SUR - Toluene-d8	114	REC %			1	8260B		12/13/2023	CJR	1

Project Name OAKFIELD **Invoice #** E43315
Project # 21801

Lab Code 5043315B
Sample ID EQUIP
Sample Matrix Water
Sample Date 12/8/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		12/13/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		12/13/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		12/13/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		12/13/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		12/13/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		12/13/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		12/13/2023	CJR	1
SUR - 4-Bromofluorobenzene	114	REC %			1	8260B		12/13/2023	CJR	1
SUR - Dibromofluoromethane	83	REC %			1	8260B		12/13/2023	CJR	1
SUR - Toluene-d8	119	REC %			1	8260B		12/13/2023	CJR	1

Lab Code 5043315C
Sample ID TRIP
Sample Matrix Water
Sample Date 12/8/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		12/13/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		12/13/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		12/13/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		12/13/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		12/13/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		12/13/2023	CJR	1
SUR - Toluene-d8	110	REC %			1	8260B		12/13/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		12/13/2023	CJR	1
SUR - 4-Bromofluorobenzene	114	REC %			1	8260B		12/13/2023	CJR	1
SUR - Dibromofluoromethane	84	REC %			1	8260B		12/13/2023	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature

CHAIN OF 'STODY RECORD

Sy.iergy
Environmental Lab, LLC

www.synergy-lab.net
1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • mrsynergy@wi.twcbc.com

Chain # 45367

Page ____ of ____

Sample Handling Request

____ Rush Analysis   Date Required: ______
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
QUOTE # :	
Project #:	21801
Sampler: (signature)	Oakfield cengraft
Project (Name / Location):	

Reports To:	Steve Meer	Invoice To:	
Company	The Sigma Group Inc	Company	
Address	1300 W Canal St.	Address	
City State Zip	Milwaukee WI 53233	City State Zip	Same
Phone	414 643 4200	Phone	
Email	smeer@thesigmagroup.com	Email	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	VOC AIR (TO - 15)	8-RCRA METALS	Other Analysis: *	PID/FID
5043315 A	04C_SUMPW_20231208	12/8	800	N	3	W	HCl																X	
	~~W~~	12/8	800	N		~~W~~	~~HCl~~																X	
B	Equip	↓	↓	↓	2	W	HCl																X	
C	Trip				1	W	HCl																X	

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

* PCE, TCE, cis12DCE, trans 12DCE, 11DCE, vinyl chloride

Sample Integrity - To be completed by receiving lab.

Method of Shipment: CS

Temp. of Temp. Blank: ______ °C On Ice: X

Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
[signature]	1230	12/11/23			

Received in Laboratory By: [signature]   Time: 12/12/23   Date: 800

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

STEPHEN MEER
THE SIGMA GROUP, INC.
1300 W. CANAL STREET
MILWAUKEE, WI 53233

Report Date *21-Jun-23*

Project Name OAKFIELD **Invoice #** E42531
Project # 21801

Lab Code 5042531A
Sample ID 04A_SUMPW_2023
Sample Matrix Water
Sample Date 6/12/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		6/19/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		6/19/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		6/19/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		6/19/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		6/19/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		6/19/2023	CJR	1
SUR - Toluene-d8	94	REC %			1	8260B		6/19/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B		6/19/2023	CJR	1
SUR - 4-Bromofluorobenzene	88	REC %			1	8260B		6/19/2023	CJR	1
SUR - Dibromofluoromethane	85	REC %			1	8260B		6/19/2023	CJR	1

Lab Code 5042531B
Sample ID 04C_SUMPW_2023
Sample Matrix Water
Sample Date 6/12/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		6/14/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		6/14/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		6/14/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		6/14/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		6/14/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		6/14/2023	CJR	1
SUR - Dibromofluoromethane	84	REC %			1	8260B		6/14/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		6/14/2023	CJR	1
SUR - 4-Bromofluorobenzene	88	REC %			1	8260B		6/14/2023	CJR	1
SUR - Toluene-d8	95	REC %			1	8260B		6/14/2023	CJR	1

Project Name OAKFIELD **Invoice #** E42531
Project # 21801

Lab Code 5042531C
Sample ID EQUIP
Sample Matrix Water
Sample Date 6/12/2023

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		6/14/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		6/14/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		6/14/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		6/14/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		6/14/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		6/14/2023	CJR	1
SUR - Toluene-d8	95	REC %			1	8260B		6/14/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %			1	8260B		6/14/2023	CJR	1
SUR - 4-Bromofluorobenzene	86	REC %			1	8260B		6/14/2023	CJR	1
SUR - Dibromofluoromethane	86	REC %			1	8260B		6/14/2023	CJR	1

Lab Code 5042531D
Sample ID TRIP
Sample Matrix Water
Sample Date 6/12/2023

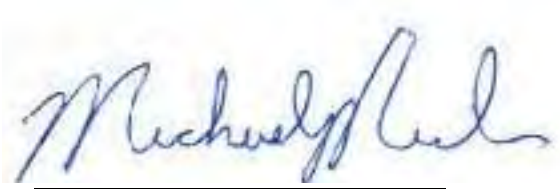
	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
1,1-Dichloroethene	< 0.43	ug/l	0.43	1.76	1	8260B		6/14/2023	CJR	1
cis-1,2-Dichloroethene	< 0.32	ug/l	0.32	1.29	1	8260B		6/14/2023	CJR	1
trans-1,2-Dichloroethene	< 0.5	ug/l	0.5	2.02	1	8260B		6/14/2023	CJR	1
Tetrachloroethene	< 0.47	ug/l	0.47	1.91	1	8260B		6/14/2023	CJR	1
Trichloroethene (TCE)	< 0.38	ug/l	0.38	1.55	1	8260B		6/14/2023	CJR	1
Vinyl Chloride	< 0.15	ug/l	0.15	0.61	1	8260B		6/14/2023	CJR	1
SUR - Toluene-d8	95	REC %			1	8260B		6/14/2023	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B		6/14/2023	CJR	1
SUR - 4-Bromofluorobenzene	88	REC %			1	8260B		6/14/2023	CJR	1
SUR - Dibromofluoromethane	85	REC %			1	8260B		6/14/2023	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF ISTODY RECORD

Synergy
Environmental Lab, LLC

www.synergy-lab.net
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920-830-2455 • mrsynergy@wi.twcbc.com

Chain # 45879
Page 1 of 1

Sample Handling Request
___ Rush Analysis Date Required: ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
QUOTE # :	
Project #:	21801
Sampler: (signature)	
Project (Name / Location):	Oakfield
Reports To:	Stephen Meer
Company	The Sigma Group Inc
Address	1300 W Canal St
City State Zip	Milwaukee WI 53233
Phone	414 643 4200
Email	SMeer@thesigmagroup.com
Invoice To:	
Company	
Address	Same
City State Zip	
Phone	
Email	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
542531 A	OHA_SUMAN_2023 Qe12	6/12	1125	N	3	GW	HCl
B	OHC_SUMPW_2023 Qe12	6/12	1245	N	3	GW	HCl
C	Equip	6/12	100		2	W	HCl
D	trip	—	—		1	W	HCl

Analysis Requested

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	VOC AIR (TO - 15)	8-RCRA METALS	&	Other Analysis	PID/ FID
														X			
														X			
														X			
														X			

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)
PCE, TCE, cis 1,2 DCE, trans 1,2 DCE, VC, 1,1 DCE

Sample Integrity - To be completed by receiving lab.
Method of Shipment: CS
Temp. of Temp. Blank: ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	1215	6/13/23			

Received in Laboratory By: Time: 815 Date: 06-14-23