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VAP COMPLIANT LIMITED PHASE II INVESTIGATION

**Euclid-Woodlawn Redevelopment Site
12500-12524 Euclid Avenue & 1810 Woodlawn Avenue
East Cleveland, Cuyahoga County, Ohio 44112**

August 20, 2024

PREPARED FOR: Ohio Environmental Protection Agency
Division of Environmental Response and Revitalization
50 W. Town Street Suite 700
Columbus, Ohio 43215
Project Number: 2296.16

PREPARED BY: Partners Environmental Consulting, Inc.
31100 Solon Road, Suite G
Solon, Ohio 44139
Phone: (800) 763-1363
Fax: (518) 734-0132

This report has been prepared by Partners for the benefit of our Client in accordance with the approved scope of work. Partners assumes no liability for the unauthorized use of information, conclusions or recommendations included in this report by a third party.

31100 Solon Road, Suite G, Solon, Ohio 44139
www.partnersenv.com
phone: (800) 763-1363

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1.0 INTRODUCTION

Partners was contracted by the Ohio Environmental Protection Agency (EPA/Client) to conduct an Ohio EPA Voluntary Action Program (VAP) compliant Limited Phase II Investigation (Phase II) at the Euclid-Woodlawn Redevelopment Site located at 12500-12524 Euclid Avenue and 1810 Woodlawn Avenue in East Cleveland, Cuyahoga County, Ohio. The location of the Property is depicted on **Figure 1**. To be clear, the procedures for this assessment are VAP compliant. This assessment does encompass all aspects of a VAP Phase II Property Assessment.

The Property is listed on the Cuyahoga County Auditor's website as three (3) individual tax parcels identified as Parcel Numbers (PNs) 672-13-009, 672-13-010, and 672-13-011. The Property is currently comprised of approximately 0.75 acres of vacant land and gravel parking. The Property is currently owned by the Cuyahoga County Land Reutilization Corporation (CCLRC).

Historically the Property has been utilized as a gasoline filling station, auto sales and service, commercial printing and a dry-cleaning facility.

2.0 PREVIOUS INVESTIGATIONS

Partners has extensive experience with this Property and has worked closely with CCLRC to work towards the redevelopment of the Property. Partners has prepared the following reports for the Property and adjoining sites.

- *Phase I Environmental Site Assessment, Micky's Parcels Site, 12550-12558 Euclid Avenue, 1819-1823 and 1810 Woodlawn Avenue, East Cleveland, Ohio* dated May 23, 2019.
- *Limited Phase II Investigation, Mickey's Parcels Site, 12550 Euclid Avenue, East Cleveland, Cuyahoga County, Ohio, for University Circle, Inc.,* dated August 15, 2019.
- *Supplemental Phase II Investigation, Mickey's Parcels Site, 12550 Euclid Avenue, East Cleveland, Cuyahoga County, Ohio, for University Circle, Inc.,* dated November 27, 2019.
- *Phase I Environmental Site Assessment, Micky's Parcels Site, 12520-12570 Euclid Avenue and 1810 Woodlawn Avenue, East Cleveland, Ohio* dated January 22, 2021.
- *Limited Phase II Investigation, Vacant Commercial Building, 12524 Euclid Avenue, East Cleveland, Ohio* dated January 28, 2022.
- *Phase I Environmental Site Assessment, Former Gasoline Filling Station, 12500 Euclid Avenue, East Cleveland, Ohio* dated October 13, 2021.
- *Limited Phase II Investigation, Former Gasoline Filling Station, 12500 Euclid Avenue, East Cleveland, Ohio* dated February 10, 2022.
- *Closure Assessment, 1810 Woodlawn Avenue, East Cleveland, Ohio* dated July 12, 2022.

Findings of the previous assessments have revealed concentrations of trichloroethene (TCE) exceeding applicable standards in soil, groundwater and soil gas/sub-slab vapor. Analytical testing of soil, groundwater, sub-slab vapor, and soil gas from these previous reports is summarized in **Tables 3A** through **3C**. In short, the previous assessments have identified chlorinated solvents, and TCE in particular, to be the primary COCs driving human health risk. Copies of these reports can be found in **Appendix D**.

3.0 LIMITED PHASE II INVESTIGATION ACTIVITIES

The Limited Phase II Investigation Activities were completed to investigate and delineate potential source areas to determine the horizontal and vertical extent of the trichloroethene (TCE) exceedances of certain VAP standards in soil and groundwater at the Property. The information gathered through these activities will be used to evaluate the feasibility and cost to eliminate soil contamination through removal and disposal and/or in-situ treatment of impacted soils as well as to optimize a groundwater remediation plan.

3.1 Scope of Work

The Limited Phase II activities included soil boring installation and sampling and groundwater monitoring well installation and sampling. Partners advanced a total of 46 soil borings, installed three (3) new groundwater monitoring wells, redeveloped two (2) existing groundwater monitoring wells, and sampled all five (5) wells.

3.2 Methods of Assessment

3.2.1 Soil Boring, Sampling, Field Screening and Analysis

A total of 46 soil borings were installed at the Property as described below.

On May 13, 2024, through May 15, 2024, a total of 30 soil borings were advanced in a grid pattern on the Property. The soil borings were positioned in rows designated A through F with five (5) borings per each letter designation. Four (4) additional borings were placed in areas of previously identified TCE contamination.

On June 5, 2024, Partners installed an additional three (3) soil borings which were converted into groundwater monitoring wells (MW-200 through MW-202).

Once the initial soil results were reviewed, it was determined that additional delineation of soil was necessary to determine the extents of TCE exceedances. On July 1, 2024, an additional nine (9) soil borings were installed in a grid pattern on the southern portion of the Property. The soil borings were positioned in rows designated G through J with between one (1) and three (3) borings per each letter designation.

The borings were advanced continuously from the ground surface to a depth of approximately 12 feet below ground surface (bgs) with a track-mounted, direct push (Geoprobe™) sampling system. The Geoprobe™ drives a two (2)-inch outside diameter (OD), stainless steel tube containing a new disposable acetate liner into the subsurface to obtain soil samples. The soil is forced into the liners at continuous four (4)-foot vertical intervals and is then retrieved to the surface. Each four (4)-foot soil sample was further divided into two (2)-foot sample intervals, visually observed, sampled, logged, and classified according to the Unified Soil Classification System (USCS) by a member of Partners' field staff. The soil boring locations are depicted on **Figure 2**.

Soil samples were divided into two (2) portions. One (1) portion was placed in new pre-cleaned Terracore™ sampling system containers or two (2) ounce laboratory supplied glass jars for preservation prior to selection of samples for laboratory analysis. The second portion was placed into new re-sealable plastic bags for screening purposes. Samples selected for laboratory analysis were labeled and placed in a cooler containing ice, pending submission to a National Environmental Laboratories Accreditation Conference (NELAC) certified laboratory for chemical analysis. Two (2) sample intervals were submitted to the laboratory from each boring. New disposable nitrile gloves were worn and changed between each sample to prevent cross-contamination. The sampling equipment was decontaminated between events with an Alconox® detergent wash and deionized water rinse.

Soil samples were field screened for the presence of organic vapors using a MiniRAE 3000 Photoionization Detector (PID) manufactured by Honeywell RAE Systems. The PID was calibrated prior to field activities using a known concentration of a gas standard in accordance with the manufacturers' specifications. Soil sample PID readings are included on the soil boring logs in **Appendix A**. Sampling forms are presented in **Appendix B**.

Select soil samples were submitted for laboratory analysis based on a combination of historical information, field observations (visual or odor), PID screening results, the most likely depth of a release, and/or the potential point of compliance. Based on the conditions under assessment, selected soil samples were analyzed for some or all of the following parameters:

- Volatile organic compounds (VOCs) by the USEPA Method 8260 with Terracore field preservation (68 samples).

In addition to the VOC analysis TCLP samples were selected from each boring for waste characterization purposes and sent to the laboratory on 'hold' prior to receiving VOC analysis results and analyzed for the following parameters:

- TCLP (VOCs), semi-volatile organic compounds (SVOCs), and RCRA 8 Metals (two [2] samples).

Soil samples were labeled, placed in a cooler with ice, and submitted for analysis under appropriate chain-of-custody control to ALS Environmental located in Cincinnati, Ohio. The laboratory analytical report is included in **Appendix C**.

3.2.2 Groundwater Monitoring Well Installation, Sampling, and Analysis

Following the receipt of soil analysis on June 5th, 2024, three (3) additional soil borings were installed as described above and were completed as groundwater monitoring wells (MW-200, MW-201 and MW-202). The monitoring wells were constructed with two (2)-inch diameter polyvinyl chloride (PVC) riser and 0.010" slotted screen (10-feet in length) positioned to span the groundwater interface. The monitoring well riser and screen were connected using threaded joints. The annular space was filled with sand to approximately two (2)-feet above the screened interval. Hydrated bentonite chips filled the remaining annular space to the surface. The wells were completed at the surface with steel flush-mount protective covers set in a concrete pad. The monitoring wells were installed through 4.25-inch inner diameter hollow stem augers (HSA). The monitoring well logs are included in **Appendix A**. The monitoring well locations are depicted on **Figure 2**.

The three (3) new monitoring wells are designated as MW-200, MW-201, and MW-202. The two (2) existing monitoring wells on the Property are designated as MW-04 and MW-05. On June 11, 2024, the five (5) wells on the Property were developed by pumping and surging approximately three (3) well volumes from each well, or until the development groundwater was visibly clear. A whaler pump was used to develop the monitoring wells. Static water level was measured to the nearest 0.01-ft using a hydrocarbon/water interface probe. Groundwater flow direction is depicted on **Figure 3**.

On June 13, 2024, the five (5) groundwater monitoring wells were sampled using a QED SamplePro portable micropurge bladder pump, QED Micropurge Basics controller with a compressed gas cylinder, and disposable polyethylene bladders/tubing. Groundwater samples were obtained by using standard low flow sampling techniques. Based on aquifer characteristics and monitoring well diameter, flow rates of approximately 200 milliliters (ml) per minute were utilized. A Horiba U-52 Water Quality Monitoring System with a flow-through cell was used by Partners to monitor groundwater quality data (including pH, conductivity, turbidity, dissolved oxygen, oxidation reduction potential, and temperature). Sampling forms are presented in **Appendix B**.

Groundwater samples were collected, placed in a cooler with ice and submitted for laboratory analyses under appropriate chain-of-custody control to ALS Environmental located in Cincinnati, Ohio. The laboratory analytical report is included in **Appendix C**.

Groundwater samples were collected and submitted for laboratory analyses of VOCs by USEPA Method 8260.

3.2.3 Investigation Derived Waste

Soil media generated from soil boring field activities, excess soil cuttings, and field screened soil was containerized in four (4) Department of Transportation (DOT)-approved 55-gallon drums. Purge and decontamination water generated during groundwater development and sampling activities was containerized in one (1) Department of Transportation (DOT)-approved 55-gallon drum. The drums were properly labeled and temporarily staged on the Property. Based on data collected during this investigation, the containerized soil is characterized as hazardous. It is in the process of being removed for off-Property disposal at a facility licensed to accept hazardous waste.

4.0 POTENTIALLY APPLICABLE COMPARISON STANDARDS

Although the Property is not going through the Ohio EPA VAP, the program has promulgated standards under state environmental law that establish levels that are considered protective of human health and the environment. These standards were used for evaluation of Property conditions. Partners understands that the potential land use of the Property has not been determined.

Evaluation of Soil

The Ohio VAP Generic Numerical Direct Contact Soil Standards (GDSCS) for the Residential Land Use Category, Commercial/Industrial Land Use Category, and Construction/Excavation Activities Category (Ohio Administrative Code [OAC] 3745-300-08) were used for evaluation of the results of soil analyses.

Soil Samples were also compared to the Ohio EPA VAP Derived Leach-Based Soil values for Soil Type II.

Toxicity Characteristic Leaching Procedure (TCLP) samples were compared to the Maximum Concentration of Contaminants for the Toxicity Characteristic Table in the CFR Title 40 261.24.

Evaluation of Groundwater

Results of groundwater analyses were compared to the Ohio VAP Generic and Risk-Based Unrestricted Potable Use Standards (UPUS, OAC Rule 3745-300-08, Appendix Table VIII and IX). The UPUS standards were developed based on the assumption that groundwater will be used as a source for drinking, cooking, and bathing.

Results of groundwater sampling were also compared to the USEPA Vapor Intrusion Screening Levels (VISL) Target Groundwater Concentrations for Residential Land Use and Commercial Land Use and with a carcinogenic risk of $1E^{-5}$, hazard quotient of 1, an attenuation factor (AF) of 0.001, and a groundwater temperature of 11 degrees Celsius in accordance with the Ohio EPA document *Sample Collection and Evaluation of Vapor Intrusion to Indoor Air for Remedial Response, RCRA and VAP*.

5.0 FINDINGS

The results of the current analytical testing are presented in **Tables 1 and 2**.

5.1 Subsurface Conditions

The subsurface profile may be generalized as brown to gray lean clay fill with varying amounts of gravel, concrete rubble, and brick rubble from the ground surface to depths ranging from 0.5 feet bgs to 12.0 feet bgs. The fill materials are underlain by brown silty sand and light brown to gray lean clay to 14.0 feet bgs. Native soils were observed to have hydrocarbon odors and staining at various locations. Native soils were underlain by weathered gray shale bedrock in the southern portion of the Property from approximately nine (9.0) feet to the terminal depth of the borings.

5.2 Soil Analytical Results

VOCs: Results of current analytical testing indicate that 23 VOC analytes were detected in the soil samples at concentrations above laboratory reporting limits (RLs). All VOC analytical results were below the respective Ohio VAP GDSCS standards and Leach-Based Soil Values cited for comparison except for the following:

Trichloroethene (TCE) was detected above the Ohio EPA Generic Leach-Based Soil Values for Soil Type II (0.023 mg/kg) in the following samples:

- F-1 (2-4) soil sample had TCE at a concentration of 0.043 mg/kg.
- F-3 (6-8') soil sample had TCE at a concentration of 0.092 mg/kg.
- F-3 (8-10') soil sample had TCE at a concentration of 7.8 mg/kg.
- PMW-200 (8-10') soil sample had TCE at a concentration of 4.0 mg/kg.
- G -2.5 (4-6') soil sample had TCE at a concentration of 0.027 mg/kg.
- G -2.5 (4-6') Duplicate sample had TCE at a concentration of 0.033 mg/kg.

- G-3.5 (6-8') soil sample had TCE at a concentration of 0.081 mg/kg.
- G-1.5 (4-6') soil sample had TCE at a concentration of 0.055 mg/kg.
- G-1.5 (10-12') soil sample had TCE at a concentration of 0.16 mg/kg.
- SB-02 (2-4') soil sample had TCE at a concentration of 111 mg/kg.
- SB-03 (6-8') soil sample had TCE at a concentration of 0.672 mg/kg.
- MW-01 (10-12') soil sample had TCE at a concentration of 0.167 mg/kg.
- SB-09 (10-12') soil sample had TCE at a concentration of 0.699 mg/kg.
- SB-10 (14-16') soil sample had TCE at a concentration of 6.04 mg/kg.
- SB-11 (0-2') soil sample had TCE at a concentration of 0.229 mg/kg.
- SB-11 (14-16') soil sample had TCE at a concentration of 0.12 mg/kg.
- SB-12 (0-2') soil sample had TCE at a concentration of 0.0316 mg/kg.
- SB-12 (10-12') soil sample had TCE at a concentration of 0.224 mg/kg.
- SB-14 (10-12') soil sample had TCE at a concentration of 3.63 mg/kg.
- PMW-100 (8-10') soil sample had TCE at a concentration of 0.523 mg/kg.
- SB-01 (8-10') soil sample had TCE at a concentration of 0.133 mg/kg.
- MW-01 (8-10') soil sample had TCE at a concentration of 0.347 mg/kg.

Benzene was detected slightly above the Ohio EPA Generic Leach-Based Soil Values for Soil Type II (0.009 mg/kg) in the following samples:

- F-2 (6-8') Duplicate soil sample had benzene at a concentration of 0.014 mg/kg.
- F-5 (6-8') soil sample had benzene at a concentration of 0.0098 mg/kg.
- SB-13 (6-8') soil sample had benzene at a concentration of 0.159 mg/kg.

Cis-1,2-dichloroethene was detected slightly above the Ohio EPA Generic Leach-Based Soil Values for Soil Type II (0.07 mg/kg) in the following sample:

- G-1.5 (10-12') Duplicate soil sample had cis-1,2-dichloroethene at a concentration of 0.090 mg/kg.

The results of the soil testing are summarized in **Table 1**. A Distribution of VOCs in soil is presented on **Figure 4**. VOCs in Soil Exceeding Leach-Based Values is presented as **Figure 4A**.

TCLP VOCs: Results of analytical testing indicate that two (2) VOC analytes were detected in the TCLP soil samples at concentrations above laboratory RLs. All TCLP VOC analytical results were below the Maximum Concentration Table for Toxicity Characteristics cited for comparison except for the following:

Trichloroethene (TCE) was detected above the TCLP Maximum Concentration Table (0.5 mg/l) in the following sample:

- F-3A (8-10') soil sample had a TCE at concentration of 4.6 mg/l.

Soil in the area of soil boring F-3A at a depth of 8-10 feet below ground surface, if removed, will be considered hazardous waste.

TCLP SVOCs: Results of analytical testing indicate that no SVOC analytes were detected in the TCLP soil samples at concentrations above laboratory RLs. All laboratory RLs are below cited comparison standards.

TCLP Metals: Results of analytical testing indicate that no metals were detected in the TCLP soil samples at concentrations above laboratory RLs, except barium. The barium concentrations were well below cited comparison standards.

The results of the TCLP soil testing are summarized in **Table 4**.

5.3 Groundwater Analytical Results

VOCs: Results of analytical testing indicate that five (5) VOC analytes were detected in groundwater at concentrations above laboratory reporting limits (RLs). All detected VOC concentrations were well below the applicable Ohio VAP UPUS and USEPA VISL cited for comparison with the following exceptions:

1,1-Dichloroethene was detected above the Ohio EPA UPUS (7 ug/l) in the following samples:

- MW-200 groundwater sample had a 1,1-dichloroethene concentration of 7.3 ug/l.
- MW-200 Duplicate groundwater sample had a 1,1-dichloroethene concentration of 7.4 ug/l.

Cis-1,2-Dichloroethene was detected above UPUS (70 ug/l) in the following samples:

- MW-200 groundwater sample had a cis-1,2-dichloroethene concentration of 86 ug/l.
- MW-200 Duplicate groundwater sample had a cis-1,2-dichloroethene concentration of 85 ug/l.

Trichloroethene was detected above the US EPA Vapor Intrusion Screening Levels (VISL) for Commercial Use (41.6 ug/l), US EPA VISL for Residential Use (9.9 ug/l), and/or Ohio EPA UPUS (5 ug/l) in the following samples:

- MW-200 groundwater sample had a trichloroethene concentration of 980 ug/l, which exceeds UPUS, Residential VISL, and Commercial VISL values.
- MW-200 Duplicate groundwater sample had a trichloroethene concentration of 970 ug/l, which exceeds UPUS, Residential VISL, and Commercial VISL values.
- MW-201 groundwater sample had a trichloroethene concentration of 17 ug/l, which exceeds the UPUS and Residential VISL values.
- MW-202 groundwater sample had a trichloroethene concentration of 7.6 ug/l, which exceeds the UPUS value.

Vinyl chloride was detected above the Ohio EPA UPUS (2 ug/l) in the following sample:

- MW-200 groundwater sample had a vinyl chloride concentration of 4.9 ug/l, which exceeds the UPUS value.
- MW-200 Duplicate groundwater sample had a vinyl chloride concentration of 5.0 ug/l, which exceeds the UPUS value.

The results of groundwater testing are summarized in **Table 2**. Distribution of VOCs in groundwater is presented in **Figure 5**.

6.0 LIMITATIONS

The analytical results and conclusions presented in this report are based on the completion of a limited number of soil borings, monitoring wells, and previously installed soil gas vapor points, and limited analytical testing. Although the results presented above provide a reasonable indication of conditions in the areas evaluated, they may not be indicative of conditions in areas of the Property not evaluated by Partners.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the Limited Phase II, Partners presents the following summary and conclusions regarding the Property.

Soil Testing

Based on the results of analytical testing, soil has been impacted by trichloroethene and benzene at concentrations exceeding the Ohio VAP Leach Based soil values.

A Remedial Action Plan (RAP) should be developed to address soils impacted by chlorinated solvents.

Groundwater Testing

VOC analytical results for trichloroethene, 1,1-dichloroethene, and vinyl chloride exceeded cited comparison standards.

Partners recommends a remedial action plan be developed to address groundwater impacted by chlorinated solvents to ensure residential VISL standards are not, and will not be, exceeded at the Property boundary. Any new construction should evaluate the need for the installation of a vapor mitigation system after remedial measures are implemented.

8.0 CLOSING

Thank you for the opportunity to serve your needs. Please call us at (800) 763-1363 if you have any questions or if we can be of any further assistance.

Sincerely,
Partners

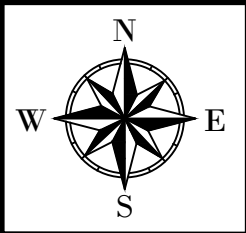


Jeremy Kendle
Project Manager



Chris Butcher
Senior Project Manager

FIGURES

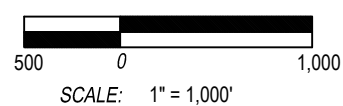


PROPERTY LOCATION MAP

EUCLID-WOODLAWN REDEVELOPMENT SITE
12500-12524 EUCLID AVENUE & 1810 WOODLAWN AVENUE
EAST CLEVELAND, CUYAHOGA COUNTY, OHIO

FOR: OHIO DERR
2296.16

PARTNERS
31100 Solon Road, Suite G
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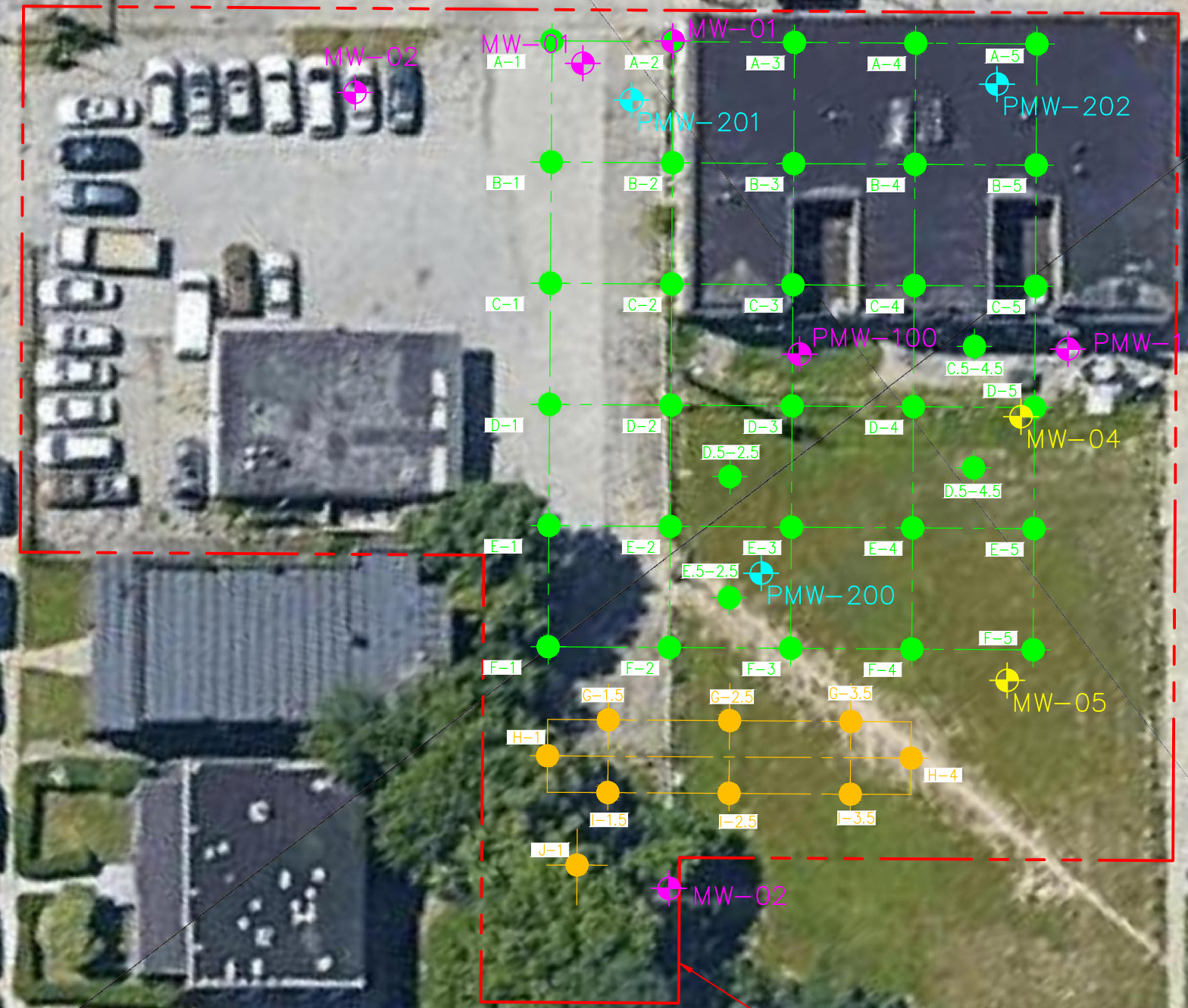
FIGURE

1



LAKEVIEW ROAD

WOODLAWN AVENUE



LEGEND

- MONITORING WELL LOCATION (JUNE 2024)
- MONITORING WELL LOCATION (OCTOBER 2019)
- FORMER MONITORING WELL LOCATION (REMOVED)
- SOIL BORING LOCATION (MAY 2024)
- SOIL BORING LOCATION (JULY 2024)

SAMPLE LOCATION MAP

Euclid-Woodlawn Redevelopment Site
12500 - 12524 Euclid Avenue and 1810 Woodlawn Avenue
East Cleveland, Cuyahoga County, Ohio

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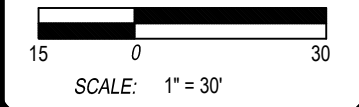
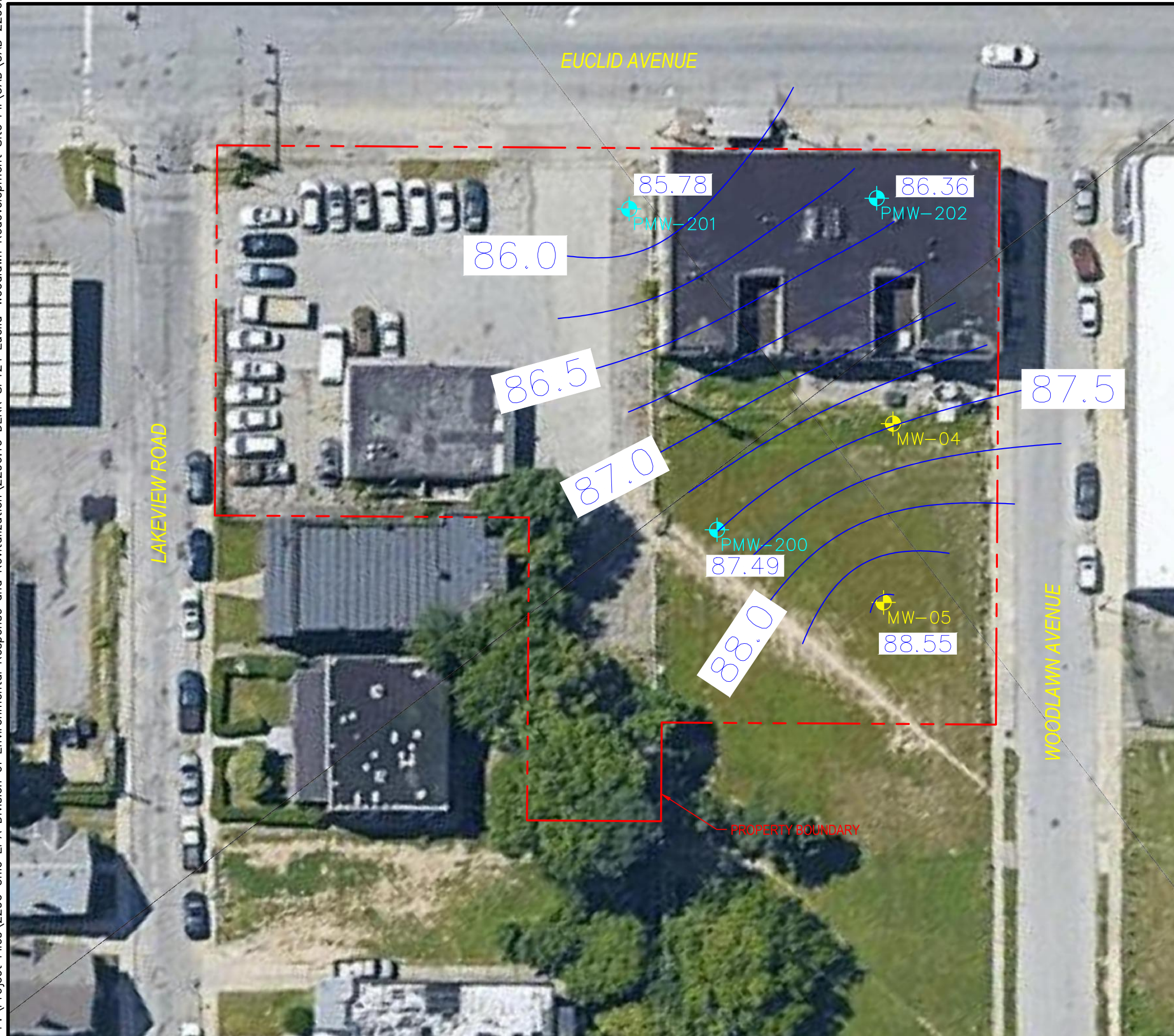
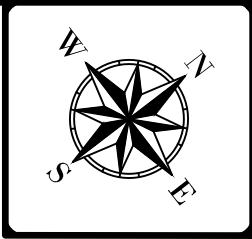

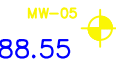



FIGURE
2



LEGEND

- 
- MONITORING WELL LOCATION (INSTALLED JUNE 2024) WITH GROUNDWATER ELEVATION
- 
- MONITORING WELL LOCATION (INSTALLED OCTOBER 2019) WITH GROUNDWATER ELEVATION
- 
- GROUNDWATER CONTOURS WITH ELEVATION INTERVAL

Notes

1. Groundwater elevation contour interval = 0.25 feet
2. Groundwater elevation information from MW-04 is not included on this map.

**GROUNDWATER FLOW DIRECTION MAP
JUNE 2024**

Euclid-Woodlawn Redevelopment Site
 12500 - 12524 Euclid Avenue and 1810 Woodlawn Avenue
 East Cleveland, Cuyahoga County, Ohio

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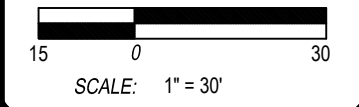
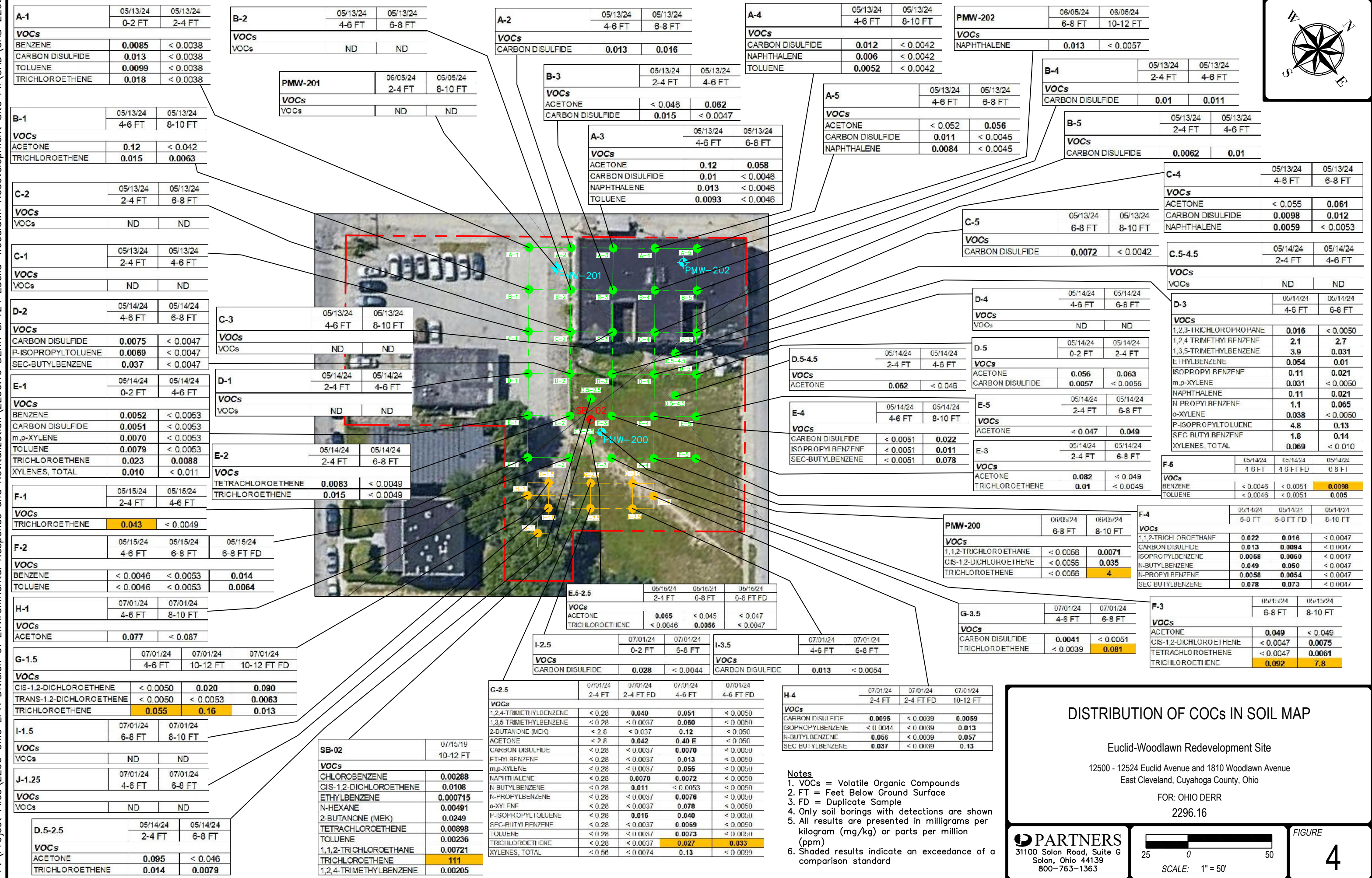


FIGURE
3



DISTRIBUTION OF COCs IN SOIL MAP

Euclid-Woodlawn Redevelopment Site
 12500 - 12524 Euclid Avenue and 1810 Woodlawn Avenue
 East Cleveland, Cuyahoga County, Ohio

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 Solon, Ohio 44139
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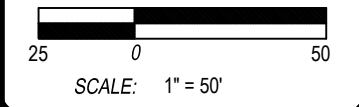


FIGURE
4

- Notes**
- VOCs = Volatile Organic Compounds
 - FT = Feet Below Ground Surface
 - FD = Duplicate Sample
 - Only soil borings with detections are shown
 - All results are presented in milligrams per kilogram (mg/kg) or parts per million (ppm)
 - Shaded results indicate an exceedance of a comparison standard

A-1	05/13/24	05/13/24	
	0-2 FT	2-4 FT	
VOCs			
BENZENE	0.0085	< 0.0038	
CARBON DISULFIDE	0.013	< 0.0038	
TOLUENE	0.0099	< 0.0038	
TRICHLOROETHENE	0.018	< 0.0038	

B-1	05/13/24	05/13/24	
	4-6 FT	8-10 FT	
VOCs			
ACETONE	0.12	< 0.042	
TRICHLOROETHENE	0.015	0.0063	

C-2	05/13/24	05/13/24	
	2-4 FT	6-8 FT	
VOCs			
VOCs	ND	ND	

C-1	05/13/24	05/13/24	
	2-4 FT	4-6 FT	
VOCs			
VOCs	ND	ND	

D-2	05/14/24	05/14/24	
	4-6 FT	6-8 FT	
VOCs			
CARBON DISULFIDE	0.0075	< 0.0047	
P-ISOPROPYLTOLUENE	0.0069	< 0.0047	
SEC-BUTYLBENZENE	0.037	< 0.0047	

E-1	05/14/24	05/14/24	
	0-2 FT	4-6 FT	
VOCs			
BENZENE	0.0052	< 0.0053	
CARBON DISULFIDE	0.0051	< 0.0053	
m,p-XYLENE	0.0070	< 0.0053	
TOLUENE	0.0079	< 0.0053	
TRICHLOROETHENE	0.023	0.0088	
XYLENES, TOTAL	0.010	< 0.011	

F-1	05/15/24	05/15/24	
	2-4 FT	4-6 FT	
VOCs			
TRICHLOROETHENE	0.043	< 0.0049	

F-2	05/15/24	05/15/24	05/15/24
	4-6 FT	6-8 FT	6-8 FT FD
VOCs			
BENZENE	< 0.0046	< 0.0053	0.014
TOLUENE	< 0.0046	< 0.0053	0.0064

H-1	07/01/24	07/01/24	
	4-6 FT	8-10 FT	
VOCs			
ACETONE	0.077	< 0.087	

G-1.5	07/01/24	07/01/24	07/01/24
	4-6 FT	10-12 FT	10-12 FT FD
VOCs			
CIS-1,2-DICHLOROETHENE	< 0.0050	0.020	0.090
TRANS-1,2-DICHLOROETHENE	< 0.0050	< 0.0053	0.0063
TRICHLOROETHENE	0.055	0.16	0.013

I-1.5	07/01/24	07/01/24	
	6-8 FT	8-10 FT	
VOCs			
VOCs	ND	ND	

J-1.25	07/01/24	07/01/24	
	4-6 FT	6-8 FT	
VOCs			
VOCs	ND	ND	

D.5-2.5	05/14/24	05/14/24	
	2-4 FT	6-8 FT	
VOCs			
ACETONE	0.095	< 0.046	
TRICHLOROETHENE	0.014	0.0079	

B-2	05/13/24	05/13/24	
	4-6 FT	6-8 FT	
VOCs			
VOCs	ND	ND	

PMW-201	06/05/24	05/05/24	
	2-4 FT	6-10 FT	
VOCs			
VOCs	ND	ND	

C-3	05/13/24	05/13/24	
	4-6 FT	8-10 FT	
VOCs			
VOCs	ND	ND	

D-1	05/14/24	05/14/24	
	2-4 FT	4-6 FT	
VOCs			
VOCs	ND	ND	

E-2	05/14/24	05/14/24	
	2-4 FT	6-8 FT	
VOCs			
TETRACHLOROETHENE	0.0083	< 0.0049	
TRICHLOROETHENE	0.015	< 0.0049	

A-2	05/13/24	05/13/24	
	4-6 FT	6-8 FT	
VOCs			
CARBON DISULFIDE	0.013	0.016	

B-3	05/13/24	05/13/24	
	2-4 FT	4-6 FT	
VOCs			
ACETONE	< 0.046	0.062	
CARBON DISULFIDE	0.015	< 0.0047	

A-3	05/13/24	05/13/24	
	4-6 FT	6-8 FT	
VOCs			
ACETONE	0.12	0.058	
CARBON DISULFIDE	0.01	< 0.0046	
NAPHTHALENE	0.013	< 0.0046	
TOLUENE	0.0093	< 0.0046	

A-4	05/13/24	05/13/24	
	4-6 FT	8-10 FT	
VOCs			
CARBON DISULFIDE	0.012	< 0.0042	
NAPHTHALENE	0.006	< 0.0042	
TOLUENE	0.0052	< 0.0042	

A-5	05/13/24	05/13/24	
	4-6 FT	6-8 FT	
VOCs			
ACETONE	< 0.052	0.056	
CARBON DISULFIDE	0.011	< 0.0045	
NAPHTHALENE	0.0084	< 0.0045	

B-4	05/13/24	05/13/24	
	2-4 FT	4-6 FT	
VOCs			
CARBON DISULFIDE	0.01	0.011	

B-5	05/13/24	05/13/24	
	2-4 FT	4-6 FT	
VOCs			
CARBON DISULFIDE	0.0062	0.01	

C-4	05/13/24	05/13/24	
	4-6 FT	6-8 FT	
VOCs			
ACETONE	< 0.055	0.061	
CARBON DISULFIDE	0.0098	0.012	
NAPHTHALENE	0.0059	< 0.0053	

C.5-4.5	05/14/24	05/14/24	
	2-4 FT	4-6 FT	
VOCs			
VOCs	ND	ND	

D-3	05/11/24	05/11/24	
	4-6 FT	6-8 FT	
VOCs			
1,2,3-TRICHLOROPROPANE	0.016	< 0.0050	
1,2,4-TRIMETHYLBENZENE	2.1	2.7	
1,3,5-TRIMETHYLBENZENE	3.9	0.031	
ETHYLBENZENE	0.054	0.01	
ISOPROPYLBENZENE	0.11	0.021	
m,p-XYLENE	0.031	< 0.0050	
NAPHTHALENE	0.11	0.021	
n-PROPYLBENZENE	1.1	0.065	
o-XYLENE	0.038	< 0.0050	
P-ISOPROPYLTOLUENE	4.8	0.13	
SFC-BUTYLBENZENE	1.8	0.14	
XYLENES, TOTAL	0.069	< 0.010	

F-5	05/14/24	05/14/24	05/14/24
	4-6 FT	4-6 FT FD	6-8 FT
VOCs			
BENZENE	< 0.0046	< 0.0051	0.0098
TOLUENE	< 0.0046	< 0.0051	0.005

F-4	05/11/24	05/11/24	05/11/24
	6-8 FT	6-8 FT FD	8-10 FT
VOCs			
1,1,2-TRICHLOROETHANE	0.022	0.016	< 0.0047
CARBON DISULFIDE	0.013	0.0094	< 0.0047
ISOPROPYLBENZENE	0.0058	0.0050	< 0.0047
n-BUTYLBENZENE	0.049	0.050	< 0.0047
n-PROPYLBENZENE	0.058	0.0054	< 0.0047
SEC-BUTYLBENZENE	0.078	0.073	< 0.0047

G-3.5	07/01/24	07/01/24	
	4-6 FT	6-8 FT	
VOCs			
CARBON DISULFIDE	0.0041	< 0.0051	
TRICHLOROETHENE	< 0.0039	0.081	

I-2.5	07/01/24	07/01/24	
	0-2 FT	6-8 FT	
VOCs			
CARBON DISULFIDE	0.028	< 0.0044	

I-3.5	07/01/24	07/01/24	
	4-6 FT	6-8 FT	
VOCs			
CARBON DISULFIDE	0.013	< 0.0054	

G-2.5	07/01/24	07/01/24	07/01/24
	2-4 FT	2-4 FT FD	4-6 FT
VOCs			
1,2,4-TRIMETHYLBENZENE	< 0.28	0.040	0.051
1,3,5-TRIMETHYLBENZENE	< 0.28	< 0.0037	0.060
2-BUTANONE (MEK)	< 0.28	< 0.037	0.12
ACETONE	< 0.28	0.042	0.40 E
CARBON DISULFIDE	< 0.28	< 0.0037	0.0070
ETHYLBENZENE	< 0.28	< 0.0037	0.013
m,p-XYLENE	< 0.28	< 0.0037	0.056
NAPHTHALENE	< 0.28	0.0070	0.072
n-BUTYLBENZENE	< 0.28	0.011	< 0.0053
n-PROPYLBENZENE	< 0.28	< 0.0037	0.0076
o-XYLENE	< 0.28	< 0.0037	0.078
P-ISOPROPYLTOLUENE	< 0.28	0.016	0.040
SFC-BUTYLBENZENE	< 0.28	< 0.0037	0.0069
TOLUENE	< 0.28	< 0.0037	0.0073
TRICHLOROETHENE	< 0.28	< 0.0037	0.027
XYLENES, TOTAL	< 0.56	< 0.0074	0.13

H-4	07/01/24	07/01/24	07/01/24
	2-4 FT	2-4 FT FD	10-12 FT
VOCs			
CARBON DISULFIDE	0.0095	< 0.0039	0.0059
ISOPROPYLBENZENE	< 0.0041	< 0.0039	0.013
n-BUTYLBENZENE	0.056	< 0.0039	0.057
SEC-BUTYLBENZENE	0.037	< 0.0039	0.13

PMW-200	06/05/24	05/05/24	
	6-8 FT	10-12 FT	
VOCs			
NAPHTHALENE	0.013	< 0.0057	

PMW-200	05/14/24	05/14/24	
	2-4 FT	4-6 FT	
VOCs			
ACETONE	0.062	< 0.046	

E-4	05/14/24	05/14/24	
	4-6 FT	8-10 FT	
VOCs			
CARBON DISULFIDE	< 0.0051	0.022	
ISOPROPYLBENZENE	< 0.0051	0.011	
SEC-BUTYLBENZENE	< 0.0051	0.078	

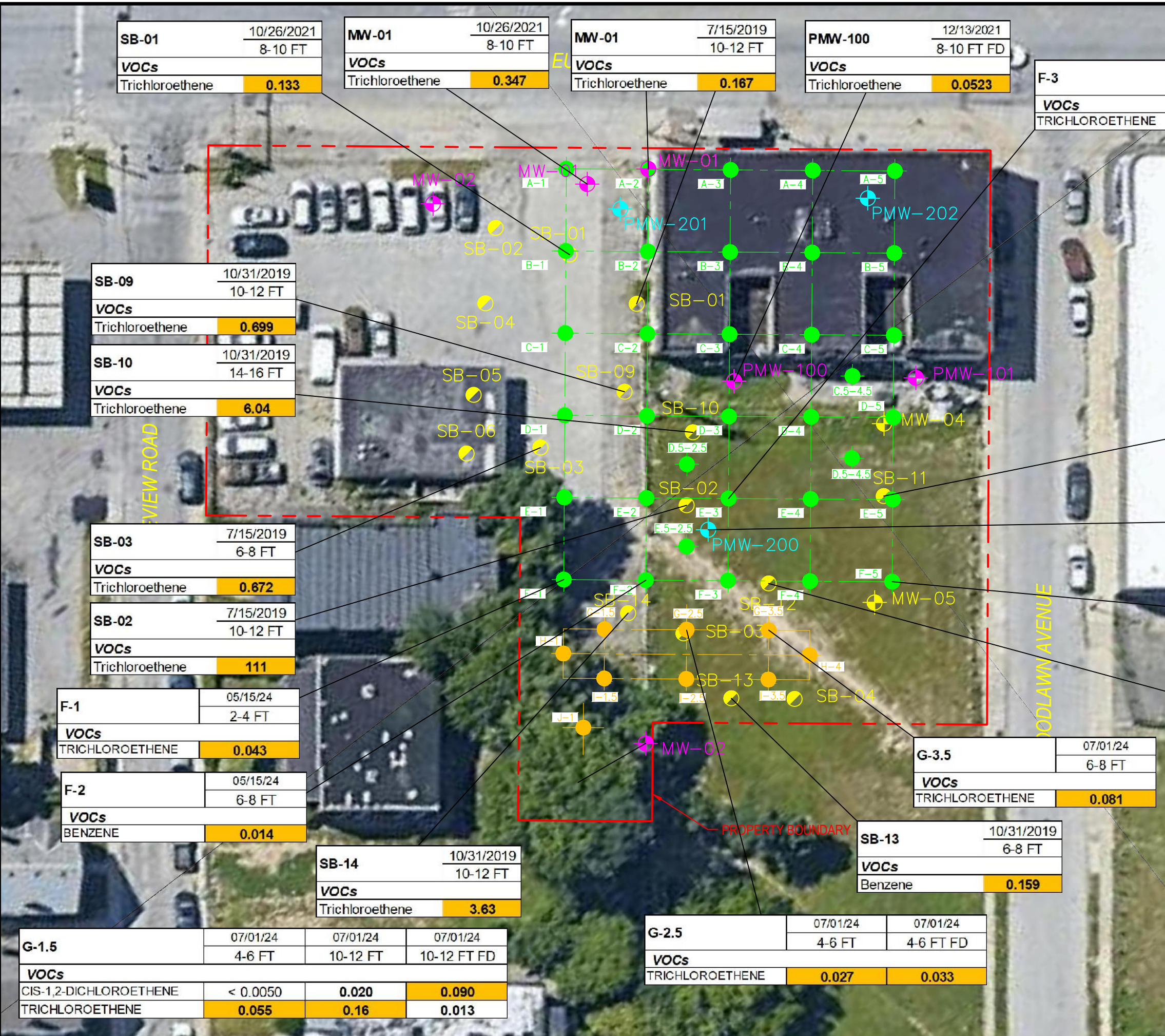
E-5	05/14/24	05/14/24	
	2-4 FT	6-8 FT	
VOCs			
ACETONE	< 0.047	0.049	

E-3	05/14/24	05/14/24	
	2-4 FT	6-8 FT	
VOCs			
ACETONE	0.082	< 0.049	
TRICHLOROETHENE	0.01	< 0.0049	

PMW-200	05/14/24	05/14/24	
	6-8 FT	8-10 FT	
VOCs			
1,1,2-TRICHLOROETHANE	< 0.0058	0.0071	
CIS-1,2-DICHLOROETHENE	< 0.0056	0.035	
TRICHLOROETHENE	< 0.0056	4	

D-4	05/14/24	05/14/24	
	4-6 FT	6-8 FT	
VOCs			
VOCs	ND	ND	

D-5	05/14/24	05/14/24	
	0-2 FT	2-4 FT	
VOCs			
ACETONE	0.056		



SB-01	10/26/2021	8-10 FT
VOCs		
Trichloroethene	0.133	

MW-01	10/26/2021	8-10 FT
VOCs		
Trichloroethene	0.347	

MW-01	7/15/2019	10-12 FT
VOCs		
Trichloroethene	0.167	

PMW-100	12/13/2021	8-10 FT FD
VOCs		
Trichloroethene	0.0523	

F-3	05/15/24	05/15/24
	6-8 FT	8-10 FT
VOCs		
TRICHLOROETHENE	0.092	7.8

SB-09	10/31/2019	10-12 FT
VOCs		
Trichloroethene	0.699	

SB-10	10/31/2019	14-16 FT
VOCs		
Trichloroethene	6.04	

SB-03	7/15/2019	6-8 FT
VOCs		
Trichloroethene	0.672	

SB-02	7/15/2019	10-12 FT
VOCs		
Trichloroethene	111	

F-1	05/15/24	2-4 FT
VOCs		
TRICHLOROETHENE	0.043	

F-2	05/15/24	6-8 FT
VOCs		
BENZENE	0.014	

SB-14	10/31/2019	10-12 FT
VOCs		
Trichloroethene	3.63	

G-1.5	07/01/24	07/01/24	07/01/24
	4-6 FT	10-12 FT	10-12 FT FD
VOCs			
CIS-1,2-DICHLOROETHENE	< 0.0050	0.020	0.090
TRICHLOROETHENE	0.055	0.16	0.013

G-2.5	07/01/24	07/01/24
	4-6 FT	4-6 FT FD
VOCs		
TRICHLOROETHENE	0.027	0.033

SB-13	10/31/2019	6-8 FT
VOCs		
Benzene	0.159	

G-3.5	07/01/24	6-8 FT
VOCs		
TRICHLOROETHENE	0.081	

SB-11	10/31/2019	10/31/2019
	0-2 FT	14-16 FT
VOCs		
Trichloroethene	0.229	0.12

PMW-200	06/05/24	8-10 FT
	VOCs	
TRICHLOROETHENE	4	

F-5	05/14/24	6-8 FT
	VOCs	
BENZENE	0.0098	

SB-12	10/31/2019	10/31/2019
	0-2 FT	10-12 FT
VOCs		
Trichloroethene	0.0316	0.224

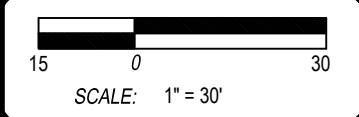
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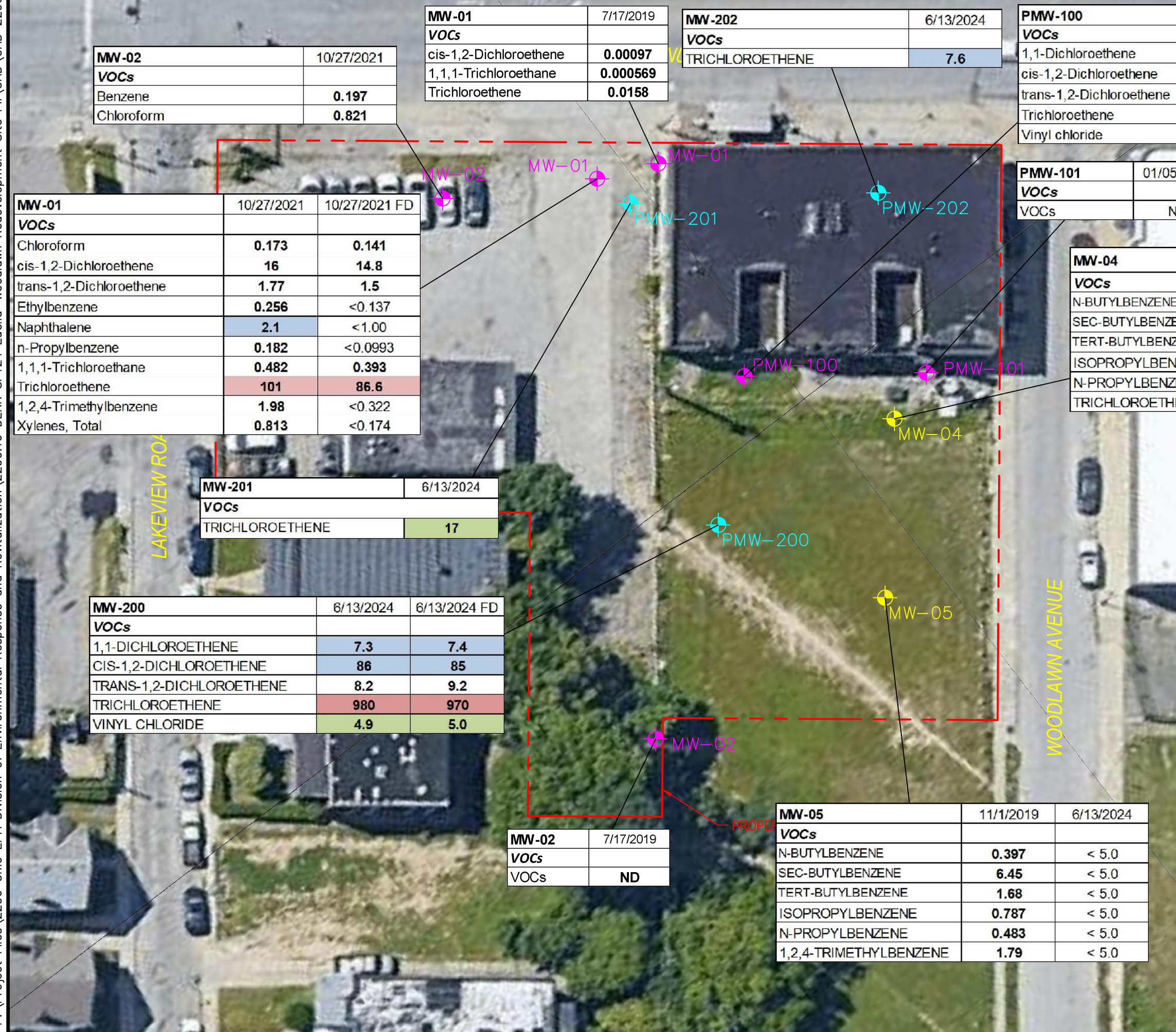
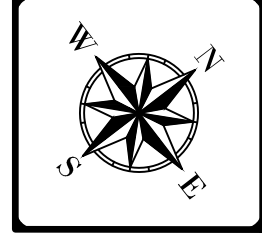
- MONITORING WELL LOCATION (JUNE 2024)
- MONITORING WELL LOCATION (OCTOBER 2019)
- FORMER MONITORING WELL LOCATION (REMOVED)
- SOIL BORING LOCATION (MAY 2024)
- SOIL BORING LOCATION (JULY 2024)

VOCs IN SOIL EXCEEDING LEACH-BASED VALUES

Euclid-Woodlawn Redevelopment Site
 12500 - 12524 Euclid Avenue and 1810 Woodlawn Avenue
 East Cleveland, Cuyahoga County, Ohio
 FOR: OHIO DERR
 2296.16

PARTNERS
 31100 Solon Road, Suite G
 Solon, Ohio 44139
 800-763-1363





MW-02	10/27/2021
VOCs	
Benzene	0.197
Chloroform	0.821

MW-01	7/17/2019
VOCs	
cis-1,2-Dichloroethene	0.00097
1,1,1-Trichloroethane	0.000569
Trichloroethene	0.0158

MW-202	6/13/2024
VOCs	
TRICHLOROETHENE	7.6

PMW-100	01/05/2022
VOCs	
1,1-Dichloroethene	0.652
cis-1,2-Dichloroethene	7.95
trans-1,2-Dichloroethene	0.655
Trichloroethene	401
Vinyl chloride	0.53

PMW-101	01/05/2022	01/05/2022 FD
VOCs		
VOCs	ND	ND

MW-01	10/27/2021	10/27/2021 FD
VOCs		
Chloroform	0.173	0.141
cis-1,2-Dichloroethene	16	14.8
trans-1,2-Dichloroethene	1.77	1.5
Ethylbenzene	0.256	<0.137
Naphthalene	2.1	<1.00
n-Propylbenzene	0.182	<0.0993
1,1,1-Trichloroethane	0.482	0.393
Trichloroethene	101	86.6
1,2,4-Trimethylbenzene	1.98	<0.322
Xylenes, Total	0.813	<0.174

MW-04	11/1/2019	6/13/2024
VOCs		
N-BUTYLBENZENE	0.409	< 5.0
SEC-BUTYLBENZENE	7.37	< 5.0
TERT-BUTYLBENZENE	1.87	< 5.0
ISOPROPYLBENZENE	4.74	< 5.0
N-PROPYLBENZENE	1.27	< 5.0
TRICHLOROETHENE	10	< 5.0

MW-201	6/13/2024
VOCs	
TRICHLOROETHENE	17

MW-200	6/13/2024	6/13/2024 FD
VOCs		
1,1-DICHLOROETHENE	7.3	7.4
CIS-1,2-DICHLOROETHENE	86	85
TRANS-1,2-DICHLOROETHENE	8.2	9.2
TRICHLOROETHENE	980	970
VINYL CHLORIDE	4.9	5.0

MW-02	7/17/2019
VOCs	
VOCs	ND

MW-05	11/1/2019	6/13/2024
VOCs		
N-BUTYLBENZENE	0.397	< 5.0
SEC-BUTYLBENZENE	6.45	< 5.0
TERT-BUTYLBENZENE	1.68	< 5.0
ISOPROPYLBENZENE	0.787	< 5.0
N-PROPYLBENZENE	0.483	< 5.0
1,2,4-TRIMETHYLBENZENE	1.79	< 5.0

LEGEND

- MONITORING WELL LOCATION (JUNE 2024)
- MONITORING WELL LOCATION (OCTOBER 2019)
- FORMER MONITORING WELL LOCATION (REMOVED)

Notes

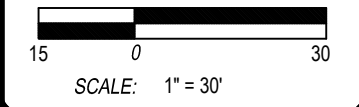
1. VOCs = Volatile Organic Compounds
2. FD = Duplicate Sample
3. Only detections are shown
4. All results are presented in micrograms per liter (ug/l) or parts per billion (ppb)
5. Shaded results indicate an exceedance of a comparison standard (see below).

Comparison Standards		
VAP Standard	USEPA	
UPUS	Residential VISL	Commercial VISL

DISTRIBUTION OF VOCs IN GROUNDWATER MAP

Euclid-Woodlawn Redevelopment Site
 12500 - 12524 Euclid Avenue and 1810 Woodlawn Avenue
 East Cleveland, Cuyahoga County, Ohio
 FOR: OHIO DERR
 2296.16

PARTNERS
 31100 Solon Road, Suite G
 Solon, Ohio 44139
 800-763-1363



TABLES

Table 1: Summary of VOCs in Soil
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio

Sample ID (Depth ¹)	Ohio EPA Generic Leach-Based Soil Values	VAP Standards			F-4 (6-8)	DUP-2 (F-4 [6-8])	F-4 (8-10)	F-5 (4-6)	DUP-1 (F-5 [4-6])	F-5 (6-8)	PMW-200 (6-8)	PMW-200 (8-10)	PMW-201 (2-4)	PMW-201 (8-10)	PMW-202 (6-8)	PMW-202 (10-12)	H-4 (2-4)	DUP-07012024 (2-4) (H-4 [2-4])	H-4 (10-12)	G-2.5 (2-4)	DUP-07012024 (G-2.5 [2-4])	G-2.5 (4-6)	DUP-07012024 (4-6) (G-2.5 [4-6])	G-3.5 (4-6)	G-3.5 (6-8)	I-3.5 (4-6)	
		Soil Type II ⁷	Residential Land Use ³	Commercial/Industrial Land Use ⁴																							Construction & Excavation Activities ⁵
Collection Date	Units ²				05/14/24	05/14/24	05/14/24	05/14/24	05/14/24	05/14/24	06/05/24	06/05/24	06/05/24	06/05/24	06/05/24	06/05/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24		
Parameter					Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
Volatile Organic Compounds - VOCs																											
1,1,1,2-TETRACHLOROETHANE	mg/kg	NE	49	230	680	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,1,1-TRICHLOROETHANE	mg/kg	0.74	640	640	640	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,1,2,2-TETRACHLOROETHANE	mg/kg	NE	15	71	670	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,1,2-TRICHLOROETHANE	mg/kg	NE	28	130	1,200	0.022	0.016	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	0.0071	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,1-DICHLOROETHANE	mg/kg	NE	89	390	1,700	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,1-DICHLOROETHENE	mg/kg	0.10	360	1,200	360	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,1-DICHLOROPROPENE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2,3-TRICHLOROBENZENE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2,3-TRICHLOROPROPANE	mg/kg	NE	0.1	4.4	19	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2,4-TRICHLOROBENZENE	mg/kg	NE	140	400	400	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2,4-TRIMETHYLBENZENE	mg/kg	NE	220	220	220	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	0.040	0.051	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	NE	0.37	1.6	15	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2-DIBROMOETHANE	mg/kg	NE	0.89	4.2	39	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2-DICHLOROBENZENE	mg/kg	NE	380	380	380	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2-DICHLOROETHANE	mg/kg	0.002	11	52	480	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,2-DICHLOROPROPANE	mg/kg	NE	39	170	180	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,3,5-TRIMETHYLBENZENE	mg/kg	NE	180	180	180	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	0.060	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,3-DICHLOROBENZENE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,3-DICHLOROPROPANE	mg/kg	NE	1,500	1,500	1,500	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
1,4-DICHLOROBENZENE	mg/kg	NE	65	290	2,600	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
2,2-DICHLOROPROPANE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
2-BUTANONE (MEK)	mg/kg	1.8	28,000	28,000	28,000	< 0.045	< 0.041	< 0.047	< 0.046	< 0.051	< 0.050	< 0.056	< 0.060	< 0.056	< 0.057	< 0.059	< 0.057	< 0.044	< 0.039	< 0.049	< 2.8	< 0.037	0.12	< 0.050	< 0.039	< 0.051	< 0.051
2-CHLOROTOLUENE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
2-HEXANONE (MBK)	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
4-CHLOROTOLUENE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
4-METHYL-2-PENTANONE (MIBK)	mg/kg	NE	3,400	3,400	3,400	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	< 0.0050	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
ACETONE	mg/kg	NE	110,000	110,000	110,000	< 0.045	< 0.041	< 0.047	< 0.046	< 0.051	< 0.050	< 0.056	< 0.060	< 0.056	< 0.057	< 0.059	< 0.057	< 0.044	< 0.039	< 0.049	< 2.8	0.042	0.40 E	< 0.050	< 0.039	< 0.051	< 0.051
BENZENE	mg/kg	0.009	28	130	1,200	< 0.0045	< 0.0041	< 0.0047	< 0.0046	< 0.0051	0.0098	< 0.0056	< 0.0060	< 0.0056	< 0.0057	< 0.0059	< 0.0057	< 0.0044	< 0.0039	< 0.0049	< 0.28	< 0.0037	< 0.0053	< 0.0050	< 0.0039	< 0.0051	< 0.0051
BROMOBENZENE	mg/kg	NE	NE	NE	NE	< 0.0045	< 0.0041	< 0.0047	< 0.0046	<																	

Table 1: Summary of VOCs in Soil
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio

Sample ID (Depth ¹)	Ohio EPA Generic Leach-Based Soil Values	VAP Standards			I-3.5 (6-8)	I-2.5 (0-2)	I-2.5 (6-8)	J-1.25 (4-6)	J-1.25 (6-8)	I-1.5 (6-8)	I-1.5 (8-10)	G-1.5 (4-6)	G-1.5 (10-12)	DUP-07072024 (10-12) (G1.5 [1-12])	H-1 (4-6)	H-1 (8-10)
		Soil Type II ⁷	Residential Land Use ³	Commercial/Industrial Land Use ⁴	Construction & Excavation Activities ⁵	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Parameter	Units ²															
Volatile Organic Compounds - VOCs																
1,1,1,2-TETRACHLOROETHANE	mg/kg	NE	49	230	680	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1,1-TRICHLOROETHANE	mg/kg	0.74	640	640	640	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1,2,2-TETRACHLOROETHANE	mg/kg	NE	15	71	670	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1,2-TRICHLOROETHANE	mg/kg	NE	28	130	1,200	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1-DICHLOROETHANE	mg/kg	NE	89	390	1,700	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1-DICHLOROETHENE	mg/kg	0.10	360	1,200	360	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1-DICHLOROPROPENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,3-TRICHLOROBENZENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,3-TRICHLOROPROPANE	mg/kg	NE	0.1	4.4	19	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,4-TRICHLOROBENZENE	mg/kg	NE	140	400	400	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,4-TRIMETHYLBENZENE	mg/kg	NE	220	220	220	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	NE	0.37	1.6	15	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DIBROMOETHANE	mg/kg	NE	0.89	4.2	39	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DICHLOROBENZENE	mg/kg	NE	380	380	380	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DICHLOROETHANE	mg/kg	0.002	11	52	480	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DICHLOROPROPANE	mg/kg	NE	39	170	180	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,3,5-TRIMETHYLBENZENE	mg/kg	NE	180	180	180	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,3-DICHLOROBENZENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,3-DICHLOROPROPANE	mg/kg	NE	1,500	1,500	1,500	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,4-DICHLOROBENZENE	mg/kg	NE	65	290	2,600	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
2,2-DICHLOROPROPANE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
2-BUTANONE (MEK)	mg/kg	1.8	28,000	28,000	28,000	< 0.054	< 0.094	< 0.044	< 0.049	< 0.054	< 0.050	< 0.050	< 0.050	< 0.053	< 0.057	< 0.063
2-CHLOROTOLUENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
2-HEXANONE (MBK)	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
4-CHLOROTOLUENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
4-METHYL-2-PENTANONE (MIBK)	mg/kg	NE	3,400	3,400	3,400	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
ACETONE	mg/kg	NE	110,000	110,000	110,000	< 0.054	< 0.094	< 0.044	< 0.049	< 0.054	< 0.050	< 0.050	< 0.050	< 0.053	< 0.057	< 0.063
BENZENE	mg/kg	0.009	28	130	1,200	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOBENZENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOCHLOROMETHANE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMODICHLOROMETHANE	mg/kg	NE	7.3	33	300	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOFORM	mg/kg	NE	460	910	910	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOMETHANE	mg/kg	NE	17	76	550	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CARBON DISULFIDE	mg/kg	NE	740	740	740	< 0.0054	0.028	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CARBON TETRACHLORIDE	mg/kg	0.25	16	74	460	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROBENZENE	mg/kg	NE	660	760	760	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROETHANE	mg/kg	NE	2,100	2,100	2,100	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROFORM	mg/kg	NE	7.9	35	320	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROMETHANE	mg/kg	NE	280	1,200	1,300	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CIS-1,2-DICHLOROETHENE	mg/kg	0.07	310	2,400	2,400	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	0.020	0.090	< 0.0063
CIS-1,3-DICHLOROPROPENE	mg/kg	NE	1,900	1,900	1,900	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
DIBROMOCHLOROMETHANE	mg/kg	NE	130	800	800	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
DIBROMOMETHANE	mg/kg	NE	59 ⁶	250 ⁶	870 ⁶	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
DICHLORODIFLUOROMETHANE	mg/kg	NE	850	850	850	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
ETHYLBENZENE	mg/kg	7.9	140	480	480	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
HEXACHLOROBUTADIENE	mg/kg	NE	17	17	17	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
ISOPROPYLBENZENE	mg/kg	NE	270	270	270	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
m,p-XYLENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
METHYL TERT-BUTYL ETHER	mg/kg	NE	1,100	5,400	8,900	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
METHYLENE CHLORIDE	mg/kg	NE	740	3,300	3,300	< 0.022	< 0.038	< 0.018	< 0.020	< 0.022	< 0.020	< 0.020	< 0.020	< 0.021	< 0.023	< 0.025
NAPHTHALENE	mg/kg	0.28	96	420	560	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
N-BUTYLBENZENE	mg/kg	NE	96	420	560	< 0.0054	< 0.0094									

**Table 2: Summary of VOCs in Groundwater
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio**

Sample ID		VAP Standard	USEPA		MW-04	MW-05	MW-200	DUP61324 (MW-200)	MW-201
Collection Date			UPUS ²	Residential VISL ³	Commercial VISL ⁴	6/13/2024	6/13/2024	6/13/2024	6/13/2024
Parameter	Units ¹				Result	Result	Result	Result	Result
Volatile Organic Compounds - VOCs									
1,1,1,2-TETRACHLOROETHANE	µg/l	5.7	91.5	400	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1-TRICHLOROETHANE	µg/l	200	13,600	57,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-TETRACHLOROETHANE	µg/l	0.76	74.8	327	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-TRICHLOROETHANE	µg/l	5	13.1	55	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-DICHLOROETHANE	µg/l	28	135	590	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-DICHLOROETHENE	µg/l	7	320	1,340	< 5.0	< 5.0	7.3	7.4	< 5.0
1,1-DICHLOROPROPENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,3-TRICHLOROBENZENE	µg/l	NE	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,3-TRICHLOROPROPANE	µg/l	0.0075	51.8	218	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-TRICHLOROBENZENE	µg/l	70	103	432	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-TRIMETHYLBENZENE	µg/l	56	626	2,630	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-DIBROMO-3-CHLOROPROPANE	µg/l	0.2	0.752	9.1	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-DIBROMOETHANE	µg/l	0.05	3.71	16.2	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-DICHLOROBENZENE	µg/l	600	6,540	27,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-DICHLOROETHANE	µg/l	5	43.3	189	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-DICHLOROPROPANE	µg/l	5	70.5	296	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3,5-TRIMETHYLBENZENE	µg/l	60	439	1,840	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3-DICHLOROBENZENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3-DICHLOROPROPANE	µg/l	370	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,4-DICHLOROBENZENE	µg/l	75	63.8	279	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2,2-DICHLOROPROPANE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-BUTANONE (MEK)	µg/l	5,600	4,300,000	18,100,000	< 50	< 50	< 50	< 50	< 50
2-CHLOROTOLUENE	µg/l	NE	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-HEXANONE	µg/l	NE	18,700	78,700	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-CHLOROTOLUENE	µg/l	NE	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-METHYL-2-PENTANONE (MIBK)	µg/l	6,300	1,190,000	5,020,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ACETONE	µg/l	14,000	NIT	NIT	< 50	< 50	< 50	< 50	< 50
BENZENE	µg/l	5	29.7	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOBENZENE	µg/l	NE	1,680	7,060	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOCHLOROMETHANE	µg/l	NE	1,270	5,330	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMODICHLOROMETHANE	µg/l	80	17.1	74.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOFORM	µg/l	80	2,770	12,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOMETHANE	µg/l	7.5	270	111	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CARBON DISULFIDE	µg/l	810	2,060	8,650	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CARBON TETRACHLORIDE	µg/l	5	7.59	33.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROBENZENE	µg/l	100	883	3,710	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROETHANE	µg/l	21,000	14,300	60,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROFORM	µg/l	80	14.5	63.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROMETHANE	µg/l	190	368	1,550	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CIS-1,2-DICHLOROETHENE	µg/l	70	455	1,910	< 5.0	< 5.0	86	85	< 5.0
CIS-1,3-DICHLOROPROPENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
DIBROMOCHLOROMETHANE	µg/l	80	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
DIBROMOMETHANE	µg/l	10 ⁵	244	1,030	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
DICHLORODIFLUOROMETHANE	µg/l	3,600	10.1	42.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ETHYLBENZENE	µg/l	700	77.2	337	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
HEXACHLOROBUTADIENE	µg/l	1	8.34	36.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ISOPROPYLBENZENE	µg/l	450	2,420	10,200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
M,P-XYLENE	µg/l	NE	NE	NE	< 10	< 10	< 10	< 10	< 10
METHYL TERT-BUTYL ETHER	µg/l	140	7,860	34,300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
METHYLENE CHLORIDE	µg/l	5	8,050	33,800	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
NAPHTHALENE	µg/l	1.7	127	556	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
N-BUTYLBENZENE	µg/l	1,000	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
N-PROPYLBENZENE	µg/l	660	2,430	10,200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
O-XYLENE	µg/l	NE	1,110	4,680	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
P-ISOPROPYLTOLUENE	µg/l	180 ⁵	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
SEC-BUTYLBENZENE	µg/l	2,000 ⁵	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
STYRENE	µg/l	100	22,200	93,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TERT-BUTYLBENZENE	µg/l	690 ⁵	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TETRACHLOROETHENE	µg/l	5	122	510	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TOLUENE	µg/l	1,000	39,200	164,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Partners

**Table 2: Summary of VOCs in Groundwater
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio**

Sample ID		VAP Standard	USEPA		MW-04	MW-05	MW-200	DUP61324 (MW-200)	MW-201
Collection Date					6/13/2024	6/13/2024	6/13/2024	6/13/2024	6/13/2024
Parameter	Units ¹	UPUS ²	Residential VISL ³	Commercial VISL ⁴	Result	Result	Result	Result	Result
Volatile Organic Compounds - VOCs									
TRANS-1,2-DICHLOROETHENE	µg/l	100	191	800	< 5.0	< 5.0	8.2	9.2	< 5.0
TRANS-1,3-DICHLOROPROPENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TRICHLOROETHENE	µg/l	5	9.9	41.6	< 5.0	< 5.0	980	970	17
TRICHLOROFLUOROMETHANE	µg/l	5,200	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
VINYL CHLORIDE	µg/l	2	2.08	34.6	< 2.0	< 2.0	4.9	5.0	< 2.0
XYLENES, TOTAL	µg/l	10,000	856	3,600	< 15	< 15	< 15	< 15	< 15

Notes

1. µg/l = Micrograms per liter - parts per billion (ppb).
2. Ohio EPA Generic Unrestricted Potable Use Standards (UPUS)
3. USEPA VISL Target Groundwater Concentration for Residential Use.
4. USEPA VISL Target Groundwater Concentration for Commercial Use.
5. Supplemental criteria from the Ohio VAP CIDARS.

Bold numbers indicate a concentration above laboratory reporting limits.

Bold and shaded numbers indicate a concentration above a comparison standard.

NE - No existing standard per the referenced agency

NIT: No inhalation toxicity.

Laboratory Qualifiers:

Table 1: Summary of VOCs in Soil
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio

Sample ID (Depth ¹)	Ohio EPA Generic Leach-Based Soil Values	VAP Standards			I-3.5 (6-8)	I-2.5 (0-2)	I-2.5 (6-8)	J-1.25 (4-6)	J-1.25 (6-8)	I-1.5 (6-8)	I-1.5 (8-10)	G-1.5 (4-6)	G-1.5 (10-12)	DUP-07072024 (10-12) (G1.5 [1-12])	H-1 (4-6)	H-1 (8-10)
		Soil Type II ⁷	Residential Land Use ³	Commercial/Industrial Land Use ⁴	Construction & Excavation Activities ⁵	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24	07/01/24
Parameter	Units ²				Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Volatile Organic Compounds - VOCs																
1,1,1,2-TETRACHLOROETHANE	mg/kg	NE	49	230	680	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1,1-TRICHLOROETHANE	mg/kg	0.74	640	640	640	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1,2,2-TETRACHLOROETHANE	mg/kg	NE	15	71	670	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1,2-TRICHLOROETHANE	mg/kg	NE	28	130	1,200	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1-DICHLOROETHANE	mg/kg	NE	89	390	1,700	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1-DICHLOROETHENE	mg/kg	0.10	360	1,200	360	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,1-DICHLOROPROPENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,3-TRICHLOROBENZENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,3-TRICHLOROPROPANE	mg/kg	NE	0.1	4.4	19	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,4-TRICHLOROBENZENE	mg/kg	NE	140	400	400	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2,4-TRIMETHYLBENZENE	mg/kg	NE	220	220	220	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	NE	0.37	1.6	15	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DIBROMOETHANE	mg/kg	NE	0.89	4.2	39	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DICHLOROBENZENE	mg/kg	NE	380	380	380	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DICHLOROETHANE	mg/kg	0.002	11	52	480	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,2-DICHLOROPROPANE	mg/kg	NE	39	170	180	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,3,5-TRIMETHYLBENZENE	mg/kg	NE	180	180	180	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,3-DICHLOROBENZENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,3-DICHLOROPROPANE	mg/kg	NE	1,500	1,500	1,500	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
1,4-DICHLOROBENZENE	mg/kg	NE	65	290	2,600	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
2,2-DICHLOROPROPANE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
2-BUTANONE (MEK)	mg/kg	1.8	28,000	28,000	28,000	< 0.054	< 0.094	< 0.044	< 0.049	< 0.054	< 0.050	< 0.050	< 0.050	< 0.053	< 0.057	< 0.063
2-CHLOROTOLUENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
2-HEXANONE (MBK)	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
4-CHLOROTOLUENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
4-METHYL-2-PENTANONE (MIBK)	mg/kg	NE	3,400	3,400	3,400	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
ACETONE	mg/kg	NE	110,000	110,000	110,000	< 0.054	< 0.094	< 0.044	< 0.049	< 0.054	< 0.050	< 0.050	< 0.050	< 0.053	< 0.057	< 0.063
BENZENE	mg/kg	0.009	28	130	1,200	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOBENZENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOCHLOROMETHANE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMODICHLOROMETHANE	mg/kg	NE	7.3	33	300	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOFORM	mg/kg	NE	460	910	910	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
BROMOMETHANE	mg/kg	NE	17	76	550	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CARBON DISULFIDE	mg/kg	NE	740	740	740	< 0.0054	0.028	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CARBON TETRACHLORIDE	mg/kg	0.25	16	74	460	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROBENZENE	mg/kg	NE	660	760	760	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROETHANE	mg/kg	NE	2,100	2,100	2,100	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROFORM	mg/kg	NE	7.9	35	320	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CHLOROMETHANE	mg/kg	NE	280	1,200	1,300	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
CIS-1,2-DICHLOROETHENE	mg/kg	0.07	310	2,400	2,400	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	0.020	0.090	< 0.0063
CIS-1,3-DICHLOROPROPENE	mg/kg	NE	1,900	1,900	1,900	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
DIBROMOCHLOROMETHANE	mg/kg	NE	130	800	800	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
DIBROMOMETHANE	mg/kg	NE	59 ⁶	250 ⁶	870 ⁶	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
DICHLORODIFLUOROMETHANE	mg/kg	NE	850	850	850	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
ETHYLBENZENE	mg/kg	7.9	140	480	480	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
HEXACHLOROBUTADIENE	mg/kg	NE	17	17	17	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
ISOPROPYLBENZENE	mg/kg	NE	270	270	270	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
m,p-XYLENE	mg/kg	NE	NE	NE	NE	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
METHYL TERT-BUTYL ETHER	mg/kg	NE	1,100	5,400	8,900	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050	< 0.0050	< 0.0053	< 0.0057	< 0.0063
METHYLENE CHLORIDE	mg/kg	NE	740	3,300	3,300	< 0.022	< 0.038	< 0.018	< 0.020	< 0.022	< 0.020	< 0.020	< 0.020	< 0.021	< 0.023	< 0.025
NAPHTHALENE	mg/kg	0.28	96	420	560	< 0.0054	< 0.0094	< 0.0044	< 0.0049	< 0.0054	< 0.0050	< 0.0050				

**Table 2: Summary of VOCs in Groundwater
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio**

Sample ID		VAP Standard	USEPA		MW-04	MW-05	MW-200	DUP61324 (MW-200)	MW-201
Collection Date			UPUS ²	Residential VISL ³	Commercial VISL ⁴	6/13/2024	6/13/2024	6/13/2024	6/13/2024
Parameter	Units ¹				Result	Result	Result	Result	Result
Volatile Organic Compounds - VOCs									
1,1,1,2-TETRACHLOROETHANE	µg/l	5.7	91.5	400	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1-TRICHLOROETHANE	µg/l	200	13,600	57,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2,2-TETRACHLOROETHANE	µg/l	0.76	74.8	327	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-TRICHLOROETHANE	µg/l	5	13.1	55	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-DICHLOROETHANE	µg/l	28	135	590	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1-DICHLOROETHENE	µg/l	7	320	1,340	< 5.0	< 5.0	7.3	7.4	< 5.0
1,1-DICHLOROPROPENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,3-TRICHLOROBENZENE	µg/l	NE	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,3-TRICHLOROPROPANE	µg/l	0.0075	51.8	218	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-TRICHLOROBENZENE	µg/l	70	103	432	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-TRIMETHYLBENZENE	µg/l	56	626	2,630	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-DIBROMO-3-CHLOROPROPANE	µg/l	0.2	0.752	9.1	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-DIBROMOETHANE	µg/l	0.05	3.71	16.2	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1,2-DICHLOROBENZENE	µg/l	600	6,540	27,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-DICHLOROETHANE	µg/l	5	43.3	189	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2-DICHLOROPROPANE	µg/l	5	70.5	296	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3,5-TRIMETHYLBENZENE	µg/l	60	439	1,840	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3-DICHLOROBENZENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,3-DICHLOROPROPANE	µg/l	370	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,4-DICHLOROBENZENE	µg/l	75	63.8	279	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2,2-DICHLOROPROPANE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-BUTANONE (MEK)	µg/l	5,600	4,300,000	18,100,000	< 50	< 50	< 50	< 50	< 50
2-CHLOROTOLUENE	µg/l	NE	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
2-HEXANONE	µg/l	NE	18,700	78,700	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-CHLOROTOLUENE	µg/l	NE	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-METHYL-2-PENTANONE (MIBK)	µg/l	6,300	1,190,000	5,020,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ACETONE	µg/l	14,000	NIT	NIT	< 50	< 50	< 50	< 50	< 50
BENZENE	µg/l	5	29.7	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOBENZENE	µg/l	NE	1,680	7,060	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOCHLOROMETHANE	µg/l	NE	1,270	5,330	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMODICHLOROMETHANE	µg/l	80	17.1	74.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOFORM	µg/l	80	2,770	12,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
BROMOMETHANE	µg/l	7.5	270	111	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CARBON DISULFIDE	µg/l	810	2,060	8,650	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CARBON TETRACHLORIDE	µg/l	5	7.59	33.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROBENZENE	µg/l	100	883	3,710	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROETHANE	µg/l	21,000	14,300	60,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROFORM	µg/l	80	14.5	63.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHLOROMETHANE	µg/l	190	368	1,550	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CIS-1,2-DICHLOROETHENE	µg/l	70	455	1,910	< 5.0	< 5.0	86	85	< 5.0
CIS-1,3-DICHLOROPROPENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
DIBROMOCHLOROMETHANE	µg/l	80	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
DIBROMOMETHANE	µg/l	10 ⁵	244	1,030	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
DICHLORODIFLUOROMETHANE	µg/l	3,600	10.1	42.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ETHYLBENZENE	µg/l	700	77.2	337	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
HEXACHLOROBUTADIENE	µg/l	1	8.34	36.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ISOPROPYLBENZENE	µg/l	450	2,420	10,200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
M,P-XYLENE	µg/l	NE	NE	NE	< 10	< 10	< 10	< 10	< 10
METHYL TERT-BUTYL ETHER	µg/l	140	7,860	34,300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
METHYLENE CHLORIDE	µg/l	5	8,050	33,800	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
NAPHTHALENE	µg/l	1.7	127	556	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
N-BUTYLBENZENE	µg/l	1,000	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
N-PROPYLBENZENE	µg/l	660	2,430	10,200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
O-XYLENE	µg/l	NE	1,110	4,680	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
P-ISOPROPYLTOLUENE	µg/l	180 ⁵	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
SEC-BUTYLBENZENE	µg/l	2,000 ⁵	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
STYRENE	µg/l	100	22,200	93,100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TERT-BUTYLBENZENE	µg/l	690 ⁵	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TETRACHLOROETHENE	µg/l	5	122	510	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TOLUENE	µg/l	1,000	39,200	164,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Partners

**Table 2: Summary of VOCs in Groundwater
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio**

Sample ID		VAP Standard	USEPA		MW-04	MW-05	MW-200	DUP61324 (MW-200)	MW-201
Collection Date					6/13/2024	6/13/2024	6/13/2024	6/13/2024	6/13/2024
Parameter	Units ¹	UPUS ²	Residential VISL ³	Commercial VISL ⁴	Result	Result	Result	Result	Result
Volatile Organic Compounds - VOCs									
TRANS-1,2-DICHLOROETHENE	µg/l	100	191	800	< 5.0	< 5.0	8.2	9.2	< 5.0
TRANS-1,3-DICHLOROPROPENE	µg/l	NE	NE	NE	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
TRICHLOROETHENE	µg/l	5	9.9	41.6	< 5.0	< 5.0	980	970	17
TRICHLOROFLUOROMETHANE	µg/l	5,200	NIT	NIT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
VINYL CHLORIDE	µg/l	2	2.08	34.6	< 2.0	< 2.0	4.9	5.0	< 2.0
XYLENES, TOTAL	µg/l	10,000	856	3,600	< 15	< 15	< 15	< 15	< 15

Notes

1. µg/l = Micrograms per liter - parts per billion (ppb).
2. Ohio EPA Generic Unrestricted Potable Use Standards (UPUS)
3. USEPA VISL Target Groundwater Concentration for Residential Use.
4. USEPA VISL Target Groundwater Concentration for Commercial Use.
5. Supplemental criteria from the Ohio VAP CIDARS.

Bold numbers indicate a concentration above laboratory reporting limits.

Bold and shaded numbers indicate a concentration above a comparison standard.

NE - No existing standard per the referenced agency

NIT: No inhalation toxicity.

Laboratory Qualifiers:

Table 3A
Summary of VOCs in Soil
12550 Euclid Avenue
East Cleveland, Cuyahoga County, Ohio

Sample ID (Depth ¹)	Units ²	Ohio EPA Generic Leach- Based Soil Values	VAP Standards ³	SB-01	SB-02	SB-03	SB-04	MW-01	MW-02	SB-09	SB-09	SB-10	SB-10	SB-11	SB-11	SB-12	SB-12	SB-13	SB-13	SB-14	SB-14	MW-04	MW-04	MW-05	MW-05	PMW-100 (6-10FT)	PMW-100 (6-10FT) D	PMW-101 (0-2FT)	SB-01	SB-01	SB-02	SB-02	SB-03	SB-03	SB-04		
				(2-4 FT)	(10-12 FT)	(6-8 FT)	(10-12 FT)	(10-12 FT)	(4-6 FT)	(0-2 FT)	(10-12 FT)	(0-2 FT)	(14-16 FT)	(0-2 FT)	(14-16 FT)	(0-2 FT)	(10-12 FT)	(0-2 FT)	(6-8 FT)	(0-2 FT)	(10-12 FT)	(0-2 FT)	(10-12 FT)	(0-2 FT)	(12-14 FT)	(0-2 FT)	(8-10 FT)	(10-12 FT)	(12-14 FT)	(12-14 FT)	(0-2FT)	(8-10FT)	(0-2FT)	(6-8FT)	(0-2FT)	(6-8FT)	(4-6FT)
Volatile Organic Compounds - VOCs																																					
Acetone	mg/kg	NE	110,000	<0.0279	<0.0287	<0.0297	<0.0269	<0.0295	<0.0286	<0.0290	<0.0284	<0.0297	<0.0301	<0.0299	<0.0288	0.0209J	0.0228J	<0.0274	<0.0288	0.0166J	0.0241J	<0.0279	<0.0302	<0.0291	<0.232	<0.0721	<0.0739	<0.0623	<0.0662	<0.0683	<0.0671	<0.0626	<0.0604	<0.0657	<0.0673		
Acrylonitrile	mg/kg	NE	6.1	<0.0139	<0.0144	<0.0149	<0.0134	<0.0147	<0.0143	<0.0145	<0.0142	<0.0149	<0.0150	<0.0149	<0.0144	<0.0146	<0.0146	<0.0137	<0.0144	<0.0139	<0.0141	<0.0140	<0.0151	<0.0146	<0.116	<0.0180	<0.0185	<0.0156	<0.0165	<0.0171	<0.0168	<0.0157	<0.0151	<0.0164	<0.0168		
Benzene	mg/kg	0.09	28	<0.00111	<0.00115	<0.00119	<0.00114	<0.00118	0.000547	<0.00116	<0.00114	<0.00119	<0.00120	<0.00119	<0.00115	<0.00117	<0.00117	<0.00109	0.154	0.0011J	0.00082J	<0.00112	0.000626J	<0.00117	<0.00927	<0.00144	<0.00148	0.00378	<0.00132	<0.00137	<0.00134	<0.00125	0.000986	<0.00131	<0.00135		
Bromodichloromethane	mg/kg	NE	7.3	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
Bromomethane	mg/kg	NE	17	<0.0139	<0.0144	<0.0149	<0.0134	<0.0147	<0.0143	<0.0145	<0.0142	<0.0149	<0.0150	<0.0149	<0.0144	<0.0146	<0.0146	<0.0137	<0.0144	<0.0139	<0.0141	<0.0140	<0.0151	<0.0146	<0.116	<0.0180	<0.0185	<0.0156	<0.0165	<0.0171	<0.0168	<0.0157	<0.0151	<0.0164	<0.0168		
n-Butylbenzene	mg/kg	NE	110	<0.0139	<0.0144	<0.0149	<0.0134	<0.0147	<0.0143	<0.0145	<0.0142	<0.0149	<0.0150	<0.0149	<0.0144	<0.0146	<0.0146	<0.0137	0.00877J	<0.0139	<0.0141	<0.0140	0.0211	<0.0146	<0.116	<0.0180	<0.0185	<0.0156	<0.0165	<0.0171	<0.0168	<0.0157	<0.0151	<0.0164	<0.0168		
sec-Butylbenzene	mg/kg	NE	140	<0.0139	<0.0144	<0.0149	<0.0134	<0.0147	<0.0143	<0.0145	<0.0142	<0.0149	<0.0150	<0.0149	<0.0144	<0.0146	<0.0146	<0.0137	0.0102J	<0.0139	<0.0141	<0.0140	0.0262	<0.0146	<0.116	<0.0180	<0.0185	<0.0156	<0.0165	<0.0171	<0.0168	<0.0157	<0.0151	<0.0164	<0.0168		
tert-Butylbenzene	mg/kg	NE	180	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	0.00184J	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	0.00499J	<0.00555	<0.00564	<0.00558	0.00575J	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
Carbon tetrachloride	mg/kg	NE	0.25	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	0.00298	<0.00657	<0.00673		
Chlorobenzene	mg/kg	NE	660	<0.00279	0.00288	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
Chlorodibromomethane	mg/kg	NE	130	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
Chloroethane	mg/kg	NE	2,100	<0.00557	<0.00575	0.00206	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
Chloroform	mg/kg	NE	7.9	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	0.000578	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
Chloromethane	mg/kg	NE	280	<0.0139	<0.0144	<0.0149	<0.0134	<0.0147	<0.0143	<0.0145	<0.0142	<0.0149	<0.0150	<0.0149	<0.0144	<0.0146	<0.0146	<0.0137	<0.0144	<0.0139	<0.0141	<0.0140	<0.0151	<0.0146	<0.116	<0.0180	<0.0185	<0.0156	<0.0165	<0.0171	<0.0168	<0.0157	<0.0151	<0.0164	<0.0168		
2-Chlorotoluene	mg/kg	NE	NE	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
4-Chlorotoluene	mg/kg	NE	NE	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
1,2-Dibromo-3-Chloropropane	mg/kg	NE	0.37	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
1,2-Dibromomethane (EDB)	mg/kg	NE	0.89	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
Dibromomethane	mg/kg	NE	59	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
1,2-Dichlorobenzene	mg/kg	NE	380	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	0.00245J	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
1,3-Dichlorobenzene	mg/kg	NE	NE	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
1,4-Dichlorobenzene	mg/kg	NE	65	<0.00557	<0.00575	<0.00595	<0.00537	<0.00589	<0.00572	<0.00581	<0.00569	<0.00595	<0.00601	<0.00597	<0.00576	<0.00584	<0.00586	<0.00547	<0.00576	<0.00555	<0.00564	<0.00558	<0.00565	<0.00583	<0.0464	<0.00721	<0.00739	<0.00623	<0.00662	<0.00683	<0.00671	<0.00626	<0.00604	<0.00657	<0.00673		
Dichlorodifluoromethane	mg/kg	NE	850	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
1,1-Dichloroethane	mg/kg	NE	89	<0.00279	<0.00287	<0.00297	<0.00269	<0.00295	<0.00286	<0.00290	<0.00284	<0.00297	<0.00301	<0.00299	<0.00288	<0.00292	<0.00293	<0.00274	<0.00288	<0.00277	<0.00282	<0.00279	<0.00302	<0.00291	<0.232	<0.0360	<0.0369	<0.0312	<0.0331	<0.0341	<0.0336	<0.0313	<0.0302	<0.0328	<0.0336		
1,2-Dichloroethane (EDC)	mg/kg	NE	11	<0.00																																	

Table 3A
Summary of VOCs in Soil
12550 Euclid Avenue
East Cleveland, Cuyahoga County, Ohio

Sample ID (Depth ¹)	Units ²	Ohio EPA Generic Leach- Based Soil Values	VAP Standards ³	SB-04 (6-8FT)	SB-05 (6-8FT)	SB-05 (8-10FT)	SB-05 (8-10FT) Duplicate	SB-06 (0-2FT)	SB-06 (8-10FT)	MW-01 (4-6FT)	MW-01 (8-10FT)	MW-02 (0-2FT)	MW-02 (2-4FT)	PMW-100 (8- 10 FT)	Duplicate PMW-100 (8- 10FT)	PMW-101 (0- 2FT)
		Soil Type II ⁴	Residential Land Use ⁵	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
Volatiles Organic Compounds - VOCs																
Acetone	mg/kg	NE	110,000	<0.0680	<0.0584	<0.0679	<0.0687	<0.0584	<0.0694	<0.0684	<0.0702	<0.0652	<0.0713	<0.0721	<0.0739	<0.0623
Acrylonitrile	mg/kg	NE	6.1	<0.0170	<0.0146	<0.0170	<0.0172	<0.0146	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
Benzene	mg/kg	0.09	28	<0.00136	<0.00117	<0.00136	<0.00137	0.00107	<0.00139	<0.00137	0.00114	0.00434	<0.00143	<0.00144	<0.00148	0.00378
Bromobenzene	mg/kg	NE	NE	<0.0170	<0.0146	<0.0170	<0.0172	<0.0146	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
Bromodichloromethane	mg/kg	NE	7.3	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
Bromoform	mg/kg	NE	460	<0.0340	<0.0292	<0.0340	<0.0344	<0.0292	<0.0347	<0.0342	<0.0351	<0.0326	<0.0356	<0.0360	<0.0369	<0.0312
Bromomethane	mg/kg	NE	17	<0.0170	<0.0146	<0.0170	<0.0172	<0.0146	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
n-Butylbenzene	mg/kg	NE	110	<0.0170	<0.0146	0.421	0.808	0.0109	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
sec-Butylbenzene	mg/kg	NE	140	<0.0170	0.00401	0.872	0.958	0.0093	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
tert-Butylbenzene	mg/kg	NE	180	<0.00680	<0.00584	0.0564	0.0583	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
Carbon tetrachloride	mg/kg	0.25	16	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
Chlorobenzene	mg/kg	NE	660	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
Chlorodibromomethane	mg/kg	NE	130	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
Chloroethane	mg/kg	NE	2,100	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
Chloroform	mg/kg	NE	7.9	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
Chloromethane	mg/kg	NE	280	<0.0170	<0.0146	<0.0170	<0.0172	<0.0146	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
2-Chlorotoluene	mg/kg	NE	NE	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
4-Chlorotoluene	mg/kg	NE	NE	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
1,2-Dibromo-3-Chloropropane	mg/kg	NE	0.37	<0.0340	<0.0292	<0.0340	<0.0344	<0.0292	<0.0347	<0.0342	<0.0351	<0.0326	<0.0356	<0.0360	<0.0369	<0.0312
1,2-Dibromoethane (EDB)	mg/kg	NE	0.89	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
Dibromomethane	mg/kg	NE	59	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
1,2-Dichlorobenzene	mg/kg	NE	380	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
1,3-Dichlorobenzene	mg/kg	NE	NE	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
1,4-Dichlorobenzene	mg/kg	NE	65	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
Dichlorodifluoromethane	mg/kg	NE	850	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
1,1-Dichloroethane	mg/kg	NE	89	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	0.00583	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
1,2-Dichloroethane (EDC)	mg/kg	NE	11	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
1,1-Dichloroethene	mg/kg	NE	360	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
cis-1,2-Dichloroethene	mg/kg	0.07	310	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	0.0256	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
trans-1,2-Dichloroethene	mg/kg	NE	1,900	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
1,2-Dichloropropane	mg/kg	NE	39	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
1,1-Dichloropropene	mg/kg	NE	NE	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
1,3-Dichloropropene	mg/kg	NE	1,500	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
cis-1,3-Dichloropropene	mg/kg	NE	NE	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
trans-1,3-Dichloropropene	mg/kg	0.23	NE	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
2,2-Dichloropropane	mg/kg	NE	NE	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360	<0.00369	<0.00312
Di-Isopropyl Ether	mg/kg	NE	NE	<0.00136	<0.00117	<0.00136	<0.00137	<0.00117	<0.00139	<0.00137	<0.00140	<0.00130	<0.00143	-	-	-
Ethylbenzene	mg/kg	7.9	140	<0.00340	<0.00292	<0.00340	<0.00344	0.00264	<0.00347	<0.00342	<0.00351	0.012	<0.00356	<0.00360	<0.00369	<0.00312
Hexachloro-1,3-butadiene	mg/kg	NE	17	<0.0340	<0.0292	<0.0340	<0.0344	<0.0292	<0.0347	<0.0342	<0.0351	<0.0326	<0.0356	<0.0360	<0.0369	<0.0312
n-Hexane	mg/kg	NE	140	<0.00680	<0.00584	<0.00679	<0.00687	<0.00584	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	<0.00623
Isopropylbenzene	mg/kg	NE	270	<0.00340	<0.00292	0.016	0.0477	0.00183	<0.00347	<0.00342	<0.00351	0.00789	<0.00356	<0.00360	<0.00369	<0.00312
p-Isopropyltoluene	mg/kg	NE	160	<0.00680	<0.00584	0.205	0.425	0.00427	<0.00694	<0.00684	<0.00702	<0.00652	<0.00713	<0.00721	<0.00739	0.0108
2-Butanone (MEK)	mg/kg	NE	28,000	<0.136	0.0949	<0.136	0.124	<0.117	<0.139	<0.137	<0.140	<0.130	<0.143	<0.144	<0.148	<0.125
Methylene Chloride	mg/kg	NE	740	<0.0340	<0.0292	<0.0340	<0.0344	<0.0292	<0.0347	<0.0342	<0.0351	<0.0326	<0.0356	<0.0360	<0.0369	<0.0312
4-Methyl-2-pentanone (MIBK)	mg/kg	NE	3,400	<0.0340	<0.0292	0.0929	<0.0344	<0.0292	<0.0347	<0.0342	<0.0351	<0.0326	<0.0356	<0.0360	<0.0369	<0.0312
Methyl tert-butyl ether (MTBE)	mg/kg	NE	1,100	<0.00136	<0.00117	<0.00136	<0.00137	<0.00117	<0.00139	<0.00137	<0.00140	<0.00130	<0.00143	<0.00144	<0.00148	<0.00125
Naphthalene	mg/kg	0.28	96	<0.0170	<0.0146	0.0465	0.102	0.0169	<0.0173	<0.0171	<0.0176	0.0384	<0.0178	<0.0180	<0.0185	0.049
n-Propylbenzene	mg/kg	NE	260	<0.00680	<0.00584	0.0526	0.133	0.0335	<0.00694	<0.00684	<0.00702	0.0121	<0.00713	<0.00721	<0.00739	<0.00623
Styrene	mg/kg	0.37	870	<0.0170	<0.0146	<0.0170	<0.0172	<0.0146	<0.0173	<0.0171	<0.0176	<0.0163	<0.0178	<0.0180	<0.0185	<0.0156
1,1,1,2-Tetrachloroethane	mg/kg	NE	49	<0.00340	<0.00292	<0.00340	<0.00344	<0.00292	<0.00347	<0.00342	<0.00351	<0.00326	<0.00356	<0.00360		

Table 3B
Summary of VOCs in Groundwater
12550 Euclid Avenue
East Cleveland, Cuyahoga County, Ohio

Sample ID		VISL ²		MW-01	MW-02	MW-04	MW-05
Collection Date				7/17/2019	7/17/2019	11/01/2019	11/01/2019
Parameter	Units ¹	VISL Residential Use	Commercial Scenario	Value	Value	Value	Value
Volatile Organic Compounds - VOCs							
Acetone	mg/L	40,200	95,000	<0.0100	<0.0100	<0.0100	<0.0100
Acrolein	mg/L	0.007	0.018	<0.00887	<0.00887	<0.00887	<0.00887
Acrylonitrile	mg/L	0.144	186	<0.00187	<0.00187	<0.00187	<0.00187
Benzene	mg/L	0.03	0.069	<0.000331	<0.000331	<0.000331	<0.000331
Bromobenzene	mg/L	1.68	2.6	<0.000352	<0.000352	<0.000352	<0.000352
Bromodichloromethane	mg/L	0.017	0.038	<0.000380	<0.000380	<0.000380	<0.000380
Bromoform	mg/L	2.77	5.1	<0.000469	<0.000469	<0.000469	<0.000469
Bromomethane	mg/L	0.027	0.07	<0.000866	<0.000866	<0.000866	<0.000866
n-Butylbenzene	mg/L	NIT	NIT	<0.000361	<0.000361	0.000409	0.000397
sec-Butylbenzene	mg/L	NIT	NIT	<0.000365	<0.000365	0.00737	0.00645
tert-Butylbenzene	mg/L	NIT	NIT	<0.000399	<0.000399	0.00187	0.00168
Carbon tetrachloride	mg/L	0.008	0.018	<0.000379	<0.000379	<0.000379	<0.000379
Chlorobenzene	mg/L	0.883	1.72	<0.000348	<0.000348	<0.000348	<0.000348
Chlorodibromomethane	mg/L	NIT	NIT	<0.000327	<0.000327	<0.000327	<0.000327
Chloroethane	mg/L	NIT	NIT	<0.000453	<0.000453	<0.000453	<0.000453
Chloroform	mg/L	0.015	0.04	<0.000324	<0.000324	<0.000324	<0.000324
Chloromethane	mg/L	0.368	1.09	<0.000276	<0.000276	<0.000276	<0.000276
2-Chlorotoluene	mg/L	NIT	NIT	<0.000375	<0.000375	<0.000375	<0.000375
4-Chlorotoluene	mg/L	NIT	NIT	<0.000351	<0.000351	<0.000351	<0.000351
1,2-Dibromo-3-Chloropropane	mg/L	0.001	0.01	<0.00133	<0.00133	<0.00133	<0.00133
1,2-Dibromoethane (EDB)	mg/L	0.004	0.018	<0.000381	<0.000381	<0.000381	<0.000381
Dibromomethane	mg/L	0.244	1.09	<0.000346	<0.000346	<0.000346	<0.000346
1,2-Dichlorobenzene	mg/L	6.54	29	<0.000349	<0.000349	<0.000349	<0.000349
1,3-Dichlorobenzene	mg/L	NIT	NIT	<0.000220	<0.000220	<0.000220	<0.000220
1,4-Dichlorobenzene	mg/L	0.064	0.029	<0.000274	<0.000274	<0.000274	<0.000274
Dichlorodifluoromethane	mg/L	0.01	0.063	<0.000551	<0.000551	<0.000551	<0.000551
1,1-Dichloroethane	mg/L	0.135	0.62	<0.000259	<0.000259	<0.000259	<0.000259
1,2-Dichloroethane (EDC)	mg/L	0.043	0.20	<0.000361	<0.000361	<0.000361	<0.000361
1,1-Dichloroethene	mg/L	0.32	1.40	<0.000398	<0.000398	<0.000398	<0.000398
cis-1,2-Dichloroethene (cis-DCE)	mg/L	NIT	NIT	0.00097	<0.000260	<0.000260	<0.000260
trans-1,2-Dichloroethene	mg/L	0.191	NIT	<0.000396	<0.000396	<0.000396	<0.000396
1,2-Dichloropropane	mg/L	0.071	0.31	<0.000306	<0.000306	<0.000306	<0.000306
1,1-Dichloropropene	mg/L	NIT	NIT	<0.000352	<0.000352	<0.000352	<0.000352
1,3-Dichloropropane	mg/L	NIT	NIT	<0.000366	<0.000366	<0.000366	<0.000366
cis-1,3-Dichloropropene	mg/L	0.1	0.45	<0.000418	<0.000418	<0.000418	<0.000418
trans-1,3-Dichloropropene	mg/L	0.1	NIT	<0.000419	<0.000419	<0.000419	<0.000419
2,2-Dichloropropane	mg/L	NIT	NIT	<0.000321	<0.000321	<0.000321	<0.000321
Di-Isopropyl Ether	mg/l	NIT	NIT	-	-	-	-
Ethylbenzene	mg/L	0.077	0.35	<0.000384	<0.000384	<0.000384	<0.000384
Hexachloro-1,3-butadiene	mg/L	0.008	0.039	<0.000256	<0.000256	<0.000256	<0.000256
n-Hexane	mg/L	0.018	0.079	<0.000736	<0.000736	<0.000736	<0.000736
Isopropylbenzene	mg/L	2.42	3.7	<0.000326	<0.000326	0.00474	0.000787
p-Isopropyltoluene	mg/L	NIT	NIT	<0.000350	<0.000350	<0.000350	<0.000350
2-Butanone (MEK)	mg/L	4,300	18,950	<0.00393	<0.00393	<0.00393	<0.00393
Methylene Chloride	mg/L	8.1	35	<0.00100	<0.00100	<0.00100	<0.00100
4-Methyl-2-pentanone (MIBK)	mg/L	1,190	5,288	<0.00214	<0.00214	<0.00214	<0.00214
Methyl tert-butyl ether (MTBE)	mg/L	7.86	36	<0.000367	<0.000367	<0.000367	<0.000367
Naphthalene	mg/L	0.127	0.59	<0.00100	<0.00100	<0.00100	<0.00100
n-Propylbenzene	mg/L	5.9	26	<0.000349	<0.000349	0.00127	0.000483
Styrene	mg/L	22.2	93	<0.000307	<0.000307	<0.000307	<0.000307
1,1,1,2-Tetrachloroethane	mg/L	0.092	0.42	<0.000385	<0.000385	<0.000385	<0.000385
1,1,2,2-Tetrachloroethane	mg/L	0.075	0.34	<0.000130	<0.000130	<0.000130	<0.000130
Tetrachloroethene (PCE)	mg/L	0.122	1.1 ³	<0.000372	<0.000372	<0.000372	<0.000372
Toluene	mg/L	39.2	173	<0.000412	<0.000412	<0.000412	<0.000412
1,2,3-Trichlorobenzene	mg/L	NIT	NIT	<0.000230	<0.000230	<0.000230	<0.000230
1,2,4-Trichlorobenzene	mg/L	0.103	NIT	<0.000355	<0.000355	<0.000355	<0.000355
1,1,1-Trichloroethane	mg/L	0.0773	60	0.000569	<0.000319	<0.000319	<0.000319
1,1,2-Trichloroethane	mg/L	0.013	0.058	<0.000383	<0.000383	<0.000383	<0.000383
Trichloroethene (TCE)	mg/L	0.010	0.044 ³	0.0158	<0.000398	0.01	<0.000398
Trichlorofluoromethane	mg/L	NIT	NIT	<0.00120	<0.00120	<0.00120	<0.00120
1,2,3-Trichloropropane	mg/L	0.052	0.235	<0.000807	<0.000807	<0.000807	<0.000807
1,2,4-Trimethylbenzene	mg/L	0.626	2.8	<0.000373	<0.000373	<0.000373	0.00179
1,3,5-Trimethylbenzene	mg/L	0.439	NSV	<0.000387	<0.000387	<0.000387	<0.000387
Vinyl chloride	mg/L	0.002	0.074 ³	<0.000259	<0.000259	<0.000259	<0.000259
Xylenes, Total	mg/L	0.856	3.79	<0.00106	<0.00106	<0.00106	<0.00106

Notes

1. µg/l = Micrograms per liter - parts per billion (ppb).
 2. USEPA VISL Target Groundwater Concentration for Residential Use.
 3. USEPA VISL Target Groundwater Concentration for Commercial Use.
 4. Supplemental criteria from the Ohio VAP CIDARS.
 5. Bold numbers indicate a concentration above laboratory reporting limits.
- Bold and shaded numbers indicate a concentration above a comparison standard.
 NE - No existing standard per the referenced agency

Table 3C
Summary of VOCs in Sub-Slab Vapor, Soil Gas, and Ambient Air
12550 Euclid Avenue
East Cleveland, Cuyahoga County, Ohio

Sample ID		Ohio VAP Generic Indoor Air Standard with Applied Attenuation Factor	SV-02	SV-03	SV-04	SV-06 (Background)
Collection Date			7/17/2019	11/1/2019	11/1/2019	11/1/2019
Parameter	Units ¹	Indoor Air Standards - Residential Land Use ¹	Value	Value	Value	Value
Acetone	µg/m ³	1,066,667	10.6	227	50.4	2.74
Allyl Chloride	µg/m ³	33	<0.626	<0.200	<0.200	<0.200
Benzene	µg/m ³	120	36	2.92	<0.200	<0.200
Benzyl Chloride	µg/m ³	19	<1.04	<0.200	<0.200	<0.200
Bromodichloromethane	µg/m ³	25	<1.34	<0.200	<0.200	<0.200
Bromoform	µg/m ³	867	<6.21	<0.600	<0.600	<0.600
Bromomethane	µg/m ³	173	<0.776	<0.200	<0.200	<0.200
Carbon Disulfide	µg/m ³	24,333	59.3	35	<0.200	<0.200
Carbon Tetrachloride	µg/m ³	160.0	<1.26	<0.200	<0.200	<0.200
Chlorobenzene	µg/m ³	1,733	<0.924	<0.200	<0.200	<0.200
Chloroethane	µg/m ³	333,333	<0.528	<0.200	<0.200	<0.200
Chloroform	µg/m ³	41	<0.973	<0.200	<0.200	<0.200
Chloromethane	µg/m ³	3,133	0.872	<0.200	<0.200	0.488
Chlorodibromomethane	µg/m ³	NE	<1.70	<0.200	<0.200	<0.200
1,2-Dibromoethane	µg/m ³	1.57	<1.54	<0.200	<0.200	<0.200
1,2-Dichlorobenzene	µg/m ³	7,000	<1.20	<0.200	<0.200	<0.200
1,3-Dichlorobenzene	µg/m ³	NE	<1.20	<0.200	<0.200	<0.200
1,4-Dichlorobenzene	µg/m ³	86.7	<1.20	<0.200	<0.200	<0.200
1,2-Dichloroethane	µg/m ³	36	<0.810	<0.200	<0.200	<0.200
1,1-Dichloroethane	µg/m ³	600	<0.802	<0.200	<0.200	<0.200
1,1-Dichloroethene	µg/m ³	7,000	2.94	<0.200	<0.200	<0.200
Cis-1,2-Dichloroethene	µg/m ³	NE	19.4	2.07	<0.200	<0.200
Trans-1,2-Dichloroethene	µg/m ³	NE	<0.793	1.98	<0.200	<0.200
1,2-Dichloropropane	µg/m ³	140	<0.924	<0.200	<0.200	<0.200
Cis-1,3-Dichloropropene	µg/m ³	NE	<0.908	<0.200	<0.200	<0.200
Trans-1,3-Dichloropropene	µg/m ³	NE	<0.908	<0.200	<0.200	<0.200
1,4-Dioxane	µg/m ³	186	<0.721	<0.200	<0.200	<0.200
Ethanol	µg/m ³	NE	<1.19	7.2	6.57	4.35
ETHYL ACETATE	µg/m ³	2,433	-	-	-	-
Ethylbenzene	µg/m ³	366	6.9	0.481	0.316	<0.200
Trichlorofluoromethane	µg/m ³	NE	67.6	0.382	8.68	0.237
Dichlorodifluoromethane	µg/m ³	NE	2.48	0.494	<0.200	0.507
Hexachloro-1,3-Butadiene	µg/m ³	43.3	<6.73	<0.630	<0.630	<0.630
N-Hexane	µg/m ³	24,333	22,200	4.24	27.1	<0.200
Isopropylbenzene	µg/m ³	14,000	1.97	<0.200	<0.200	<0.200
Methylene Chloride	µg/m ³	21,000	<0.694	0.689	<0.200	<0.200
Methyl Butyl Ketone	µg/m ³	NE	<5.11	<1.25	<1.25	<1.25
2-Butanone (MEK)	µg/m ³	173,333	<3.69	5.93	2.53	<1.25
4-Methyl-2-Pentanone (MIBK)	µg/m ³	103,333	<5.12	<1.25	<1.25	<1.25
Methyl Methacrylate	µg/m ³	24,333	<0.819	<0.200	<0.200	<0.200
Methyl Tert-Butyl Ether (MTBE)	µg/m ³	3,666	<0.721	<0.200	<0.200	<0.200
Naphthalene	µg/m ³	28.0	3.4	<0.630	<0.630	<0.630
Styrene	µg/m ³	33,333	<0.851	<0.200	<0.200	<0.200
1,1,1,2-Tetrachloroethane	µg/m ³	16	<1.37	<0.200	<0.200	<0.200
Tetrachloroethene	µg/m ³	1,400	160	7.95	6.58	<0.200
Toluene	µg/m ³	173,333	34.5	3.27	1.58	0.312
1,2,4-Trichlorobenzene	µg/m ³	70	<4.66	<0.630	<0.630	<0.630
1,1,1-Trichloroethane	µg/m ³	173,333	<1.09	1.87	<0.200	<0.200
1,1,2-Trichloroethane	µg/m ³	60	<1.09	<0.200	<0.200	<0.200
Trichloroethene	µg/m ³	70	4,270	325	156	<0.200
Vinyl Acetate	µg/m ³	7,000	<0.704	<0.200	<0.200	<0.200
Vinyl Chloride	µg/m ³	56	<0.511	<0.200	<0.200	<0.200
m&p-Xylene	µg/m ³	3,333	21.9	1.72	1.23	<0.400
O-Xylene	µg/m ³	3,333	8.94	0.618	0.415	<0.200
1,2,4-Trimethylbenzene	µg/m ³	2,100	16.5	2.08	1.89	<0.200
1,3,5-Trimethylbenzene	µg/m ³	2,100	7.65	<0.200	<0.200	<0.200

Notes

1. µg/m³ = micrograms per meter cubed.
2. Ohio VAP Generic Indoor Air Standards due to Vapor Intrusion (Commercial/Industrial Land Use)

NE: No regulatory limits established

Bold numbers indicate a concentration above laboratory RDLs.

Bold and shaded numbers indicate a concentration above a comparison standard.

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Table 4
Summary of TCLP Analysis in Soil
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio

Sample ID		US EPA	SB-02A (10-12 FT)	F-3A (8-10 FT)
Collection Date		TCLP ²	7/1/2024	7/1/2024
Analyte	Units ¹		Result*	Result*
Metals				
ARSENIC	mg/l	5	< 0.10	< 0.10
BARIUM	mg/l	100	0.14	0.21
CADMIUM	mg/l	1	< 0.10	< 0.10
CHROMIUM (as Chromium VI)	mg/l	5	< 0.10	< 0.10
LEAD	mg/l	5	< 0.10	< 0.10
SELENIUM	mg/l	1	< 0.10	< 0.10
SILVER	mg/l	5	< 0.10	< 0.10
MERCURY	mg/l	0.2	< 0.00050	< 0.00050
TCLP SVOCs				
1,4-Dichlorobenzene	mg/l	8	< 0.0100	< 0.0100
2,4,5-Trichlorophenol	mg/l	400	< 0.0100	< 0.0100
2,4,6-Trichlorophenol	mg/l	2	< 0.0100	< 0.0100
2,4-Dinitrotoluene	mg/l	0.13	< 0.0100	< 0.0100
Hexachlorobenzene	mg/l	0.13	< 0.0100	< 0.0100
Hexachlorobutadiene	mg/l	0.5	< 0.0100	< 0.0100
Hexachloroethane	mg/l	3	< 0.0100	< 0.0100
2-Methylphenol	mg/l	200	< 0.0100	< 0.0100
3 & 4 Methylphenol	mg/l	200	< 0.0100	< 0.0100
Nitrobenzene	mg/l	200	< 0.0100	< 0.0100
Pentachlorophenol	mg/l	100	< 0.0100	< 0.0100
Pyridine	mg/l	5	< 0.0100	< 0.0100
TCLP VOCs				
1,1-Dichloroethene	mg/l	0.7	< 0.10	< 0.10
1,2-Dichloroethane	mg/l	0.5	< 0.10	< 0.10
1,4-Dichlorobenzene	mg/l	7.5	< 0.10	< 0.10
2-Butanone (MEK)	mg/l	200	< 0.10	< 0.10
Benzene	mg/l	0.5	< 0.10	< 0.10
Carbon tetrachloride	mg/l	0.5	< 0.10	< 0.10
Chlorobenzene	mg/l	100	< 0.10	< 0.10
Tetrachloroethene	mg/l	0.7	< 0.10	0.1
Trichloroethene	mg/l	0.5	< 0.10	4.6
Vinyl chloride	mg/l	0.2	< 0.10	< 0.10
Chloroform	mg/l	6	< 0.10	< 0.10

Notes:

1. mg/kg = milligrams per kilogram (or ppm)
 2. US EPA: Defining Hazardous Waste: 40 CFR Section 261.24
- Bold** numbers = concentration above detection limits.
Bold and shaded = concentration above a comparison standard.

Table 4
Summary of TCLP Analysis in Soil
Euclid-Woodlawn Redevelopment Site, East Cleveland, Cuyahoga County, Ohio

Sample ID		US EPA	SB-02A (10-12 FT)	F-3A (8-10 FT)
Collection Date		TCLP ²	7/1/2024	7/1/2024
Analyte	Units ¹		Result*	Result*
Metals				
ARSENIC	mg/l	5	< 0.10	< 0.10
BARIUM	mg/l	100	0.14	0.21
CADMIUM	mg/l	1	< 0.10	< 0.10
CHROMIUM (as Chromium VI)	mg/l	5	< 0.10	< 0.10
LEAD	mg/l	5	< 0.10	< 0.10
SELENIUM	mg/l	1	< 0.10	< 0.10
SILVER	mg/l	5	< 0.10	< 0.10
MERCURY	mg/l	0.2	< 0.00050	< 0.00050
TCLP SVOCs				
1,4-Dichlorobenzene	mg/l	8	< 0.0100	< 0.0100
2,4,5-Trichlorophenol	mg/l	400	< 0.0100	< 0.0100
2,4,6-Trichlorophenol	mg/l	2	< 0.0100	< 0.0100
2,4-Dinitrotoluene	mg/l	0.13	< 0.0100	< 0.0100
Hexachlorobenzene	mg/l	0.13	< 0.0100	< 0.0100
Hexachlorobutadiene	mg/l	0.5	< 0.0100	< 0.0100
Hexachloroethane	mg/l	3	< 0.0100	< 0.0100
2-Methylphenol	mg/l	200	< 0.0100	< 0.0100
3 & 4 Methylphenol	mg/l	200	< 0.0100	< 0.0100
Nitrobenzene	mg/l	200	< 0.0100	< 0.0100
Pentachlorophenol	mg/l	100	< 0.0100	< 0.0100
Pyridine	mg/l	5	< 0.0100	< 0.0100
TCLP VOCs				
1,1-Dichloroethene	mg/l	0.7	< 0.10	< 0.10
1,2-Dichloroethane	mg/l	0.5	< 0.10	< 0.10
1,4-Dichlorobenzene	mg/l	7.5	< 0.10	< 0.10
2-Butanone (MEK)	mg/l	200	< 0.10	< 0.10
Benzene	mg/l	0.5	< 0.10	< 0.10
Carbon tetrachloride	mg/l	0.5	< 0.10	< 0.10
Chlorobenzene	mg/l	100	< 0.10	< 0.10
Tetrachloroethene	mg/l	0.7	< 0.10	0.1
Trichloroethene	mg/l	0.5	< 0.10	4.6
Vinyl chloride	mg/l	0.2	< 0.10	< 0.10
Chloroform	mg/l	6	< 0.10	< 0.10

Notes:

1. mg/kg = milligrams per kilogram (or ppm)
 2. US EPA: Defining Hazardous Waste: 40 CFR Section 261.24
- Bold** numbers = concentration above detection limits.
Bold and shaded = concentration above a comparison standard.