ARCADIS Design & Consultancy for natural and built assets

Revitalizing Auto Communities Environmental Response Trust (RACER)

JOSLYN – WESBROOK NORTH PARCEL SCREENING INVESTIGATION REPORT

Pontiac North Campus

August 3, 2021

JOSLYN WESBROOK NORTH PARCEL SCREENING INVESTIGATION REPORT

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1 INTRODUCTION, BACKGROUND AND OBJECTIVE

Arcadis of Michigan, LLC (Arcadis) prepared this report on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER). This report describes the planning, implementation, and results of Phase II subsurface screening investigation activities conducted by Arcadis at a vacant 0.455-acre parcel (Parcel ID 14-21-203-001) in the vicinity of the RACER Pontiac North Site in Pontiac, Michigan. The parcel (herein referred to as the Joslyn North Parcel or "Site") is bounded to the west by Joslyn Avenue, north by Lebaron Avenue, south by Wesbrook Street, and east by residential properties. The Site is owned by RACER Properties, LLC, a wholly owned subsidiary of RACER. The location of the Site which is also identified as the Joslyn-Wesbrook North Parcel is shown on **Figure 1**. The parcel is within the City of Pontiac and zoned for P-1 Parking, with current use identified as Class 202 Commercial (Vacant).

On behalf of RACER, Arcadis previously prepared a Technical Memorandum entitled "*Joslyn Avenue Parcels Historical Summary Memorandum and Request for Determination for Parcels Not Being Regulated Under RCRA, including Corrective Action, and Not Being Covered Under Administrative Order on Consent RCRA-05-2011-00019"* in October 2020 which was finalized and submitted to the United States Environmental Protection Agency (USEPA) on January 19, 2021. The memorandum summarized historical activities at the Site and an additional RACER-owned vacant parcel to the south (Joslyn-Wesbrook South Parcel), a requested a determination by USEPA with respect to regulation under RCRA Corrective Action. USEPA issued a March 3, 2021 letter to RACER confirming that the parcels did not appear subject to RCRA Corrective Action requirements and also acknowledging that investigation work on the parcels being conducted under the AOC and funding for the Pontiac North Site.

RACER requests a no further action for nonresidential use determination for the Site from USEPA based on the information summarized in the Arcadis Technical Memorandum, the information in this Report, and recording deed restrictions including, but not limited to restricting use to nonresidential, prohibiting installation of wells and use of groundwater, requiring management of contaminated soils, and requiring soil vapor management.

Details provided in the Arcadis Technical Memorandum indicated that among other former uses, a dry-cleaning company formerly occupied a portion of the Site from at least 1950-1963, which presented a potential environmental concern warranting further investigation. The objective of this investigation was to determine if activities related to the former dry-cleaning business or other undocumented activities at the Site may have resulted in soil and/or groundwater impacts at the Site.

The following paragraphs describe the scope of work, field activities, soil and groundwater analytical results, and conclusions of subsurface investigation activities conducted at the Site, as well as associated recommendations.

2 SCOPE OF WORK

Upon initial completion of historical review activities for the Site, on behalf of RACER Trust Arcadis prepared a Technical Memorandum entitled Joslyn Parcels Scope of Work (SOW) on October 26, 2020

which was submitted to USEPA. On March 19, 2021, after clarification of the target analytical parameters based on historic sources known to exist on the property, USEPA provided an email response indicating that it had no issues with RACER proceeding with completion of the work. Based on potential environmental concerns identified in the Historical Summary Technical Memorandum, which was draft at the time but later finalized, the SOW proposed the installation of combined soil boring and temporary monitoring wells at locations on both the Joslyn-Wesbrook North and South parcels. For the Joslyn North Parcel, this SOW included installation of five borings and temporary monitoring wells to best identify potential impacts at historic structures, assess groundwater flow direction across the parcel, and assess Site conditions near the property boundaries.

The SOW included both public and private utility clearance activities; collection of soil core samples continuously collected for description, screened with a photoionization detector (PID), and documented for saturated conditions; collection of one to two soil samples for laboratory analysis at each boring location – one at the highest PID detection (if detections and/or field observations indicate impact), and/or one at the interval above the first encountered groundwater table; and laboratory analysis of soil samples for volatile organic compounds (VOCs).

The SOW included installation of temporary monitoring wells at each boring location using hollow stem auger drilling techniques and 2-inch diameter Schedule-40 PVC well construction materials equipped with 5-foot, 10-slot PVC screens targeting the top of the water table. To the extent extended sand seams were found to exist below the water table at the Joslyn North Parcel, screens would be located in the lower portions of such seams given that the potential contaminants associated with former dry-cleaning operations would be chlorinated solvents. The SOW also included development of temporary monitoring wells using pump and surge methods; surveying of each monitoring well location for horizontal coordinates, ground elevation, and top-of-casing to assist in the determination of groundwater flow direction at the Site; and sampling and analysis of groundwater at each temporary monitoring well location for analysis of VOCs.

3 FIELD ACTIVITIES

Utility locating, soil boring advancement, temporary monitoring well installation, and temporary monitoring well development activities took place from April 26-27, 2021. Arcadis subcontracted Terra Probe Environmental, Inc. (Terra Probe) to perform private utility clearance and soil boring / temporary monitoring well installation activities. Temporary monitoring well locations were surveyed on May 10, 2021. Groundwater level measurements and sampling took place on May 10, 2021. Based on inconsistencies with initial gauging results, an additional round of groundwater level measurements was taken on June 4, 2021. Details of field activities are summarized in Sections 3.1-3.4 below.

3.1 Utility Locating

Prior to completing drilling activities for this event, utility clearance was performed using a minimum of three lines of evidence. Arcadis and Terra Probe called in Michigan public MISSDIG tickets (Numbers B011091327 and B011091292) approximately one week prior to mobilization. Upon mobilization on April 26, 2021, Terra Probe conducted private utility clearance activities at each of the boring locations utilizing

Ground Penetrating Radar (GPR) and electromagnetic (EM) techniques. In addition, Terra Probe utilized a hand auger to soft dig to 5 feet below ground surface (bgs) prior to drilling at each of the five boring locations on April 26-27, 2021.

3.2 Soil Boring, Logging and Sampling Activities

On April 26-27, 2021, Terra Probe installed a total of five soil borings (JN-SB-01, JN-SB-02, JN-SB-03, JN-SB-04, and JN-SB-05) at the Site at locations depicted on **Figures 2-4**. Soil borings were advanced to depths ranging from 16 to 20 feet bgs using a direct push technology (DPT) rig with hollow stem augers. Soil core samples were collected continuously for description, screening for VOCs, and documentation of saturated conditions. Soil from each of the five borings was also continuously monitored with a photoionization detector (PID). None of the soils from the five boring locations had detections exceeding the PID's 0.1 part per million (ppm) detection limit. Soil description details are included in the Soil Boring / Temporary Monitoring Well construction logs in **Attachment 1**.

During the boring installation process, given that there were no PID detections, one soil sample was collected from the first encountered unsaturated zone in the interval above the first encountered saturated zone. Because two distinct saturated zones were observed in soil borings JN-SB-01 and JN-SB-02 (JN-SB-01at 6.5 ft bgs and 12.1 ft bgs, JN-SB-02 at 11 ft bgs and 14 ft bgs.) during the installation process, an additional sample was taken above each of the saturated zones at these two locations. Soil samples were placed in sealed containers, packaged and submitted to Merit Laboratories, Inc. in Lansing, MI for analysis of VOCs utilizing USEPA Method 8260B. Soil cuttings were drummed and stored at a secure location at RACER Pontiac North Site pending off-site transportation and disposal.

3.3 Temporary Monitoring Well Installation and Development Activities

After the completion of soil borings, temporary monitoring wells were installed and developed at each of the five locations on April 26-27, 2021. Temporary monitoring wells at each location were constructed of 2-inch diameter Schedule-40 PVC well materials and a 5-foot, 10-slot PVC screen set to split the water table. Filter packs were installed approximately 2 feet above the top of the screen followed by a hydrated bentonite chip seal. Monitoring wells were not finished with flush mounted well vaults but left as temporary monitoring wells pending analytical results. Temporary monitoring wells were developed using pumping and surge methods. Purge water was drummed and stored with soil cuttings pending off-site transportation and disposal.

3.4 Temporary Monitoring Well Surveying Activities

After temporary monitoring well installation and development activities, Arcadis subcontracted Surveying Solutions, Inc. (SSI) to survey horizontal coordinates, ground elevations, and the top-of-casing measuring point elevations of each monitoring well. SSI completed surveying activities on May 10, 2021.

3.5 Groundwater Gauging and Sampling Activities

Two separate groundwater gauging events were conducted. The first was conducted on May 10, 2021 prior to groundwater sampling activities. Due to inconsistencies in measured water levels potentially associated with perched water, a second gauging event was conducted after a period of stabilization on June 4, 2021. **Table 1** presents a summary of water levels and groundwater elevations collected during the second gauging event. Groundwater elevations from unconfined water table monitoring wells (screened across the water table) were calculated using gauging results and surveyed top-of-well casing elevations, and used to create a shallow groundwater surface map for the groundwater sampling event. **Figure 2** presents groundwater contours at both the Site and the Joslyn South Parcel. Groundwater elevations indicated that apparent shallow groundwater flow across the Site is generally to the south-southwest, and then transitions downgradient further south to the south-southeast.

Groundwater samples were collected from the five temporary wells when field parameters stabilized per USEPA Low Flow Sampling guidance (USEPA 2017). Samples were containerized and submitted to Merit Laboratories, Inc. in Lansing, MI for analysis of VOCs utilizing USEPA Method 8260C. During sampling, purge water was monitored for dissolved oxygen (DO), temperature, specific conductivity, turbidity, oxidation-reduction potential (ORP), and pH. Groundwater Sampling Logs from the sampling event are included in **Attachment 2**.

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4 SOIL AND GROUNDWATER ANALYTICAL RESULTS

4.1 Soil Analytical Results

The Merit Laboratories soil sampling analytical report is included in **Attachment 3.** Soil sampling analytical results are tabulated in **Table 2.** Results are compared to Michigan Department of Environment, Great Lakes, and Energy (EGLE) Nonresidential Cleanup Criteria based on current zoning and usage of the Site and RACER's objective of obtaining a no further action for nonresidential use determination, but are also compared to Residential Cleanup Criteria for reference purposes. Results are compared to Residential and Nonresidential Soil Direct Contact Criteria, Residential and Nonresidential Soil Drinking Water Protection Criteria, Residential and Nonresidential Soil Volatilization to Indoor Air Pathway (VIAP) Criteria, and Soil Groundwater-Surface Water Interface (GSI) Protection Criteria.

In summary, there were no detections of VOCs in any of the soil samples collected: JN-SB-01 (5.5-6.5 ft bgs), JN-SB-01 (12.1-13.1 ft bgs), JN-SB-02 (11-12 ft bgs), JN-SB-02 (14-15 ft bgs), JN-SB-03 (5.7-6.7 ft bgs), JN-SB-04 (10.5-11.5 ft bgs) or JN-SB-05 (12.3-13.3 ft bgs). **Figure 3** is a soil analytical data map depicting the results of soil sampling at the Site; as there were no detections or exceedances of EGLE Cleanup Criteria, so no constituents are identified in the data map.

4.2 Groundwater Analytical Results

The Merit Laboratories groundwater sampling analytical report is also included in **Attachment 3.** Groundwater sampling analytical results are tabulated in **Table 3** and are also compared to EGLE Cleanup Criteria on a similar basis to that described in Section 4.1. Results are compared to Residential

and Nonresidential Drinking Water Criteria, Residential and Nonresidential Shallow Groundwater VIAP Criteria, and Groundwater-Surface Water Interface Criteria.

In summary, there were no detections of VOCs in groundwater samples collected from JN-SB-02, JN-SB-03, JN-SB-04 or JN-SB-05. At JN-SB-01, ethylbenzene was detected in groundwater at the detection limit of 1 ug/L, which does not exceed any of the EGLE Cleanup Criteria. No other VOCs were detected in the groundwater sample collected from JN-SB-01. **Figure 4** is a groundwater analytical data map depicting the results of groundwater sampling at the Site.

5 CONCLUSIONS

Soil boring observations and the results of soil and groundwater analytical testing conducted during this subsurface screening investigation at the Site do not indicate that historical activities resulted in subsurface soil or groundwater impacts.

6 RECOMMENDATIONS

Based on the historical details summarized in the Arcadis Technical Memorandum, the results of subsurface investigation activities described in this report, and recording of planned deed restrictions including, but not limited to restricting use to nonresidential, prohibiting installation of wells and use of groundwater, requiring management of contaminated soils, and requiring soil vapor management, no further subsurface investigation or other response activities are recommended for the Site. The following actions are recommended:

- Prepare and submit a draft Declaration of Restrictive Covenant to USEPA; and
- Properly abandon the five temporary groundwater monitoring wells at the Site. At each of the five temporary monitoring well locations, well casings will be attempted to be pulled, and holes filled with bentonite and then surfaced with topsoil and seed based on the surrounding surfacing material. At locations where well casings are not able to be pulled, the top two feet of the well casing will be removed with the remaining casing filled with bentonite. Given that each of the temporary monitoring wells are slightly deeper than 15 feet bgs, a bentonite/concrete mix will be pumped into each location using a grout pump and tremie in accordance with American Society of Testing Materials (ASTM) Standard D 5299-92. Upon abandonment, a well abandonment log will be prepared for each location and included in a brief technical memorandum to document that the wells were properly abandoned.

7 REFERENCES

Arcadis, Inc. (Arcadis) 2020. Joslyn Parcels Scope of Work, RACER Trust, Pontiac Michigan, October 26, 2020.

Arcadis 2021. Joslyn Avenue Parcels Historical Summary Memorandum and Request for Determination for Parcels Not Being Regulated Under RCRA, including Corrective Action, and Not Being Covered Under Administrative Order on Consent RCRA-05-2011-00019, RACER Trust, Pontiac Michigan, January 19, 2021.

EGLE. 2020b. Guidance Document for the Vapor Intrusion Pathway. Appendix D – Volatilization to Indoor Air Pathway (VIAP) Screening Levels. September 4, 2020.

EGLE. 2020c. Clean Up Criteria Requirements Table 1: Groundwater: Residential and Nonresidential, Part 201 Generic Cleanup Criteria and Screening Levels, December 21, 2020.

U.S. Environmental Protection Agency (USEPA; Region I). 1996. Low-Stress (or Low-Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells – Revision 4. July 30, 1996; Revised September 19, 2017.

FIGURES

Service Layer Credits: Esri, USDA Farm Service Agency

SPO PARKING

FORMER BUILDING 25

SPO

FORMER BUILDING 15

FORMER PLANT 12

BUILDING 14

GM POWERTRAIN

FORMER FIERO PARKING LOT

FORMER FIERO PLANT 17

GM WWTP

FORMER BUILDING 14S (PLANTS 5 AND 23)

JOSLYN-WESBROOK NORTH PARCEL

POWER HOUSE

USPS REGIONAL DISTRIBUTION CENTER (LEASED PROPERTY)

HARRIS LAKE

STORMWATER DETENTION FACILITY

OAKLAND PARK

PERRY PARK

W Chicago, E Chicago, W New York, E New York, Hollywood, W Colgate, E Colgate, W Walton Blvd, E Walton Blvd, Lehigh Ave, W Sheffield, E Sheffield, W Princeton, E Princeton, W Hopkins, E Hopkins, W Yale, E Yale, Price, W Ypsilanti, E Ypsilanti, E Ann Arbor, W Columbia, E Columbia, W Longfellow, E Longfellow, W Strathmore, E Strathmore, W Fairmount, E Fairmount, W Rutgers, E Rutgers, W Cornell, E Cornell, Baldwin Ave, W Beverly Ave, E Beverly Ave, W Tennyson, E Tennyson, W Mansfield, E Mansfield, W Kennett Rd, E Kennett Rd, Saint Louis Ave, Dresden, Parkdale, Parkdale Ave, N Merrimac St, S Merrimac, Owens St, Saint Clair St, Young, Wing, Portland, W Montcalm, E Montcalm, Lakeside Dr, Hillside Dr, Burt, City Line Rd, Le Grande, Garner, Hudson, Riker, McNeil St, Hood, W Rundell, Putnam, Pingree, Tacoma Ct, Hamilton, Jefferson, Virginia, Kimball, Grandie, Cadillac, Home, Poplar, Adelaide, Harriette, Forest, Rose Ct, W Howard, Bennett, Foster, Tregent, Cesar E Chavez Ave, N Saginaw St, Whitfield, Kemp, Lewis, Chamberlain, Charlotte, Sheridan, Gingell Ct, E Rundell, Clarence, Beach, N Paddock, S Glenwood, Wolfe, Elijah, Marquette, N Glenwood, Nelson, Hammond, Oliver, N Perry, Ivy, Alpine Ln, Bellmere Ln, Concord Ln, Deerfield Ln, Highwood, Northfield, Highwood Blvd, Laurel, Jaycee Park Rd, 4th St, 3rd Ave, 2nd Ave, 1st Ave, Glenwood Ave, Joslyn Ave, Beverly Ave, Peacock, Clara, Le Baron, Wesbrook, Lenox, Markle, Raskob, Lowell, Spence, E Madison

LEGEND

- USPS DISTRIBUTION CENTER PROPERTY BOUNDARY
- JOSLYN PROPERTY BOUNDARY
- PROPERTY SOLD BY RACER
- GENERAL MOTORS, LLC (GM)
- CURRENT OR FORMER RACER PROPERTY

SPO – SERVICE PARTS OPERATION

USPS – UNITED STATES POSTAL SERVICE

WWTP – WASTEWATER TREATMENT PLANT

NOTE: ALL BOUNDARIES ARE APPROXIMATE

0 350 700

SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

SITE LAYOUT MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: B. SANDERS TM: TR: PROJECT NUMBER: 30006882
COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\JoslynProperty\01_Joslyn_North_PropertyLayout_202107.mxd PLOTTED: 7/21/2021 10:09:50 AM BY: TYarbrough

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Lebaron Ave

JN-SB-01
978.32

JN-SB-05
979.11

979

JN-SB-02
978.91

JN-SB-04
977.90

JN-SB-03
978.55 *

978

Wesbrook St

Joslyn Ave

JS-SB-01
980.60 *

JS-SB-02
977.00

JS-SB-08
979.47 *

JS-SB-07
977.27

JS-SB-03
977.26

977

JS-SB-09
976.62

976

975

974

JS-SB-04
980.62 *

JS-SB-10
975.81

JS-SB-05
980.75 *

JS-SB-11
974.13

JS-SB-06
973.19

Lenox Ave

LEGEND

- MONITORING WELL
- 977.26 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- * ELEVATION NOT USED FOR CONTOURING
- PROPERTY BOUNDARY

NOTES:

1. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.

2. WATER LEVELS COLLECTED ON JUNE 4, 2021.

0 40 80

SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

JOSLYN GROUNDWATER CONTOUR MAP JUNE 4, 2021

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: B. Saunders TM: L. Crisp TR: PROJECT NUMBER: 30075936.00005 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\JoslynProperty\JoslynAve_GW_2021_0604.mxd PLOTTED: 7/21/2021 5:40:14 PM BY: TYarbrough

Service Layer Credits: Esri, USDA Farm Service Agency

JN-SB-01

APPROXIMATE LOCATIONS OF FORMER STRUCTURES (PRESENT IN 1967)

JN-SB-05

APPROXIMATE LOCATIONS OF FORMER STRUCTURES (PRESENT IN 1952 - 1967)

JN-SB-02

JN-SB-04

JN-SB-03

Joslyn Ave

Wesbrook

LEGEND

- SOIL BORING/TEMPORARY MONITORING WELL
- NO DETECTIONS OF VOC'S
- HISTORIC SITE STRUCTURES
- PROPERTY BOUNDARY

0 20 40

SCALE IN FEET

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

JOSLYN-WESBROOK NORTH PARCEL SOIL ANALYTICAL RESULTS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: B. Saunders TM: L. Crisp TR: PROJECT NUMBER: 30075936.00004 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\JoslynProperty\Analytical Soil LenoxNorthParcel.mxd PLOTTED: 7/21/2021 10:15:41 AM BY: TYarbrough

Service Layer Credits: Esri, USDA Farm Service Agency

JN-SB-01	
Date Collected	5/10/2021
VOCs	
Ethylbenzene	1

JN-SB-01

APPROXIMATE LOCATIONS OF FORMER STRUCTURES (PRESENT IN 1967)

JN-SB-05

APPROXIMATE LOCATIONS OF FORMER STRUCTURES (PRESENT IN 1952 - 1967)

JN-SB-02

JN-SB-04

JN-SB-03

Joslyn Ave

Wesbrook

LEGEND

- SOIL BORING/TEMPORARY MONITORING WELL
- NO DETECTIONS OF VOC'S
- HISTORIC SITE STRUCTURES
- PROPERTY BOUNDARY

NOTES:

1. ALL CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER LITER (µg/L)

2. VIAP – VOLATILIZATION TO INDOOR AIR PATHWAY

3. CRITERIA LISTED ARE FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE) CLEAN UP CRITERIA REQUIREMENTS TABLE 1: GROUNDWATER: RESIDENTIAL AND NONRESIDENTIAL, PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS, DECEMBER 21, 2020.

4. RESIDENTIAL AND NONRESIDENTIAL VOLATILIZATION TO INDOOR AIR PATHWAY SCREENING LEVELS ARE FROM THE DEQ GUIDANCE DOCUMENT FOR THE VAPOR INTRUSION PATHWAY, APPENDIX C - TABLES 1 AND 2, SEPTEMBER 4, 2020.

0 20 40

SCALE IN FEET

Chemical Name	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Residential Shallow Groundwater VIAP	Nonresidential Shallow Groundwater VIAP
Ethylbenzene	18	74	74	**2.8**	*28*

RACER TRUST
PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

JOSLYN-WESBROOK NORTH PARCEL GROUNDWATER ANALYTICAL RESULTS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: B. Saunders TM: L. Crisp TR: PROJECT NUMBER: 30075936.00005 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
D:\GIS\Project Files\MotorsLiquidationCompany\PontiacNorthCampus\Documents\JoslynPropertyAnalytical Groundwater LenoxNorthParcel.mxd PLOTTED: 7/21/2021 10:14:30 AM BY: TYarbrough

TABLES

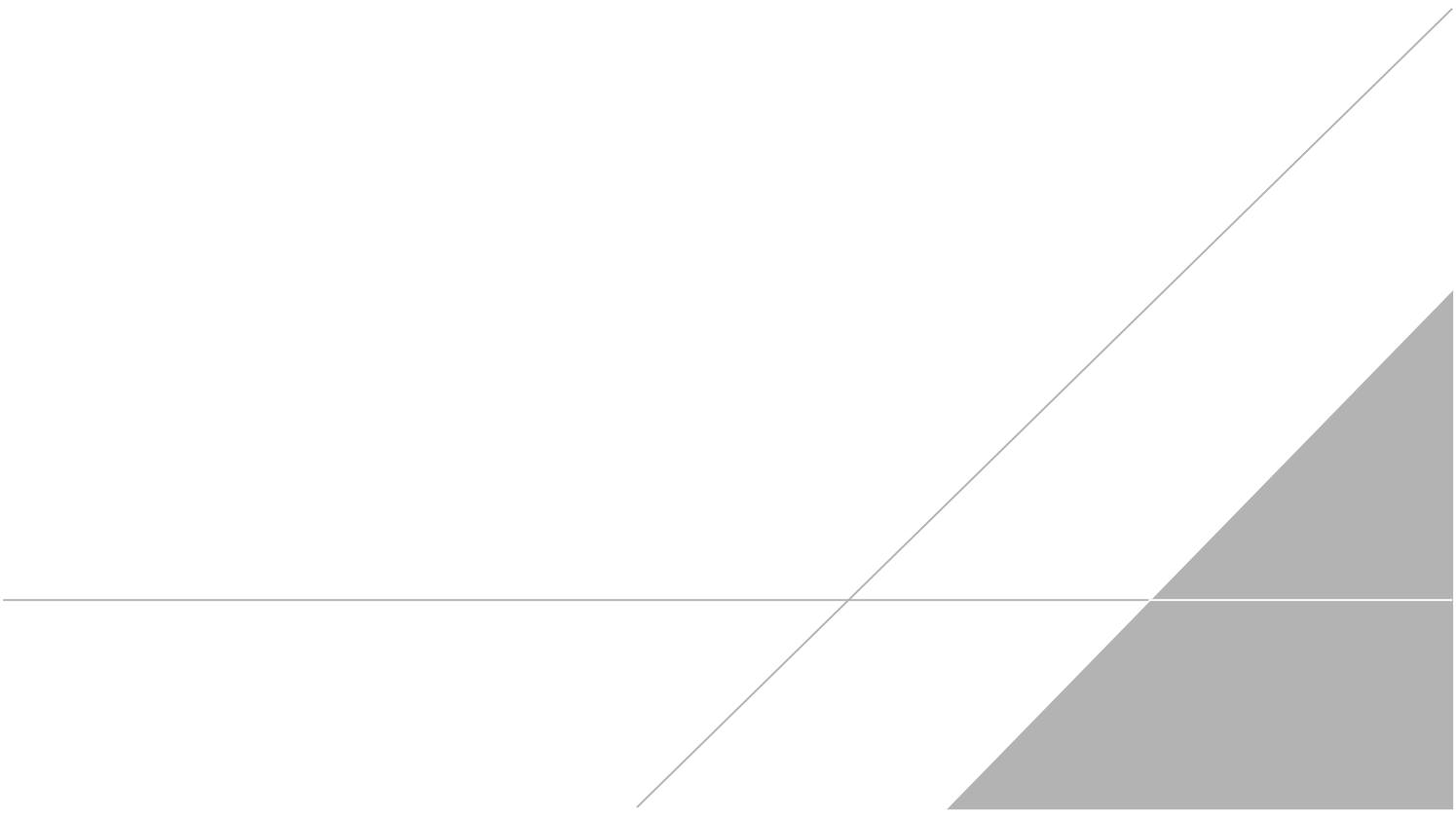

Table 1
Groundwater Elevation Summary
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

Well ID	Ground Elevation	Well Elevation [1]	Total Depth (ft)	Date	Depth to Water (ft)[2]	Groundwater Elevation from Temporary Well Casing	Groundwater Elevation
Joslyn-Westbrook North Parcel Temporary Monitoring Wells							
JN-SB-01	986.42	987.27	15.32	6/4/2021	8.95	978.32	976.62
JN-SB-02	986.97	988.08	15.35	6/4/2021	9.17	978.91	976.69
JN-SB-03	987.42	988.47	10.31	6/4/2021	9.92	978.55	976.45
JN-SB-04	985.56	986.80	15.35	6/4/2021	8.90	977.90	975.42
JN-SB-05	985.86	987.13	15.36	6/4/2021	8.02	979.11	976.57

Abbreviations:

--	Not available
ft	Feet

Footnotes:

[1] Top of Temporary Well Casing/Stickup Elevation is in feet National Vertical Geodetic Datum (1988).

[2] Depth to water measurements collected from top of temporary well casing/stickup.

Table 2
Soil Analytical Results
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

ARCADIS Design & Consultancy for natural and built assets

Chemical Name	Units	Groundwater Surface Water Interface Protection	Residential Drinking Water Protection	Nonresidential Drinking Water Protection	Residential Soil Direct Contact	Nonresidential Direct Contact	Residential Soil VIAP	Nonresidential Soil VIAP	Location ID	JN-SB-01	JN-SB-01	JN-SB-02	JN-SB-02
									Date Collected	4/26/2021	4/26/2021	4/26/2021	4/26/2021
									Start Depth (ft. bgs)	5.5	12.1	11	14
									End Depth (ft. bgs)	6.5	13.1	12	15
MISC													
Total solids	%	--	--	--	**--**	--	--	--		85	91	88	86
VOCs													
1,1,1,2-Tetrachloroethane	ug/kg	--	1,500	6,400	**480,000**	*2,200,000*	3.2	91		< 100 U	< 100 U	< 100 U	< 100 U
1,1,1-Trichloroethane	ug/kg	1,800	4,000	4,000	**500,000,000**	*1,000,000,000*	450	7,500		< 70 U	< 60 U	< 60 U	< 60 U
1,1,2,2-Tetrachloroethane	ug/kg	1,600	170	700	**53,000**	*240,000*	2.7	77		< 70 U	< 60 U	< 60 U	< 60 U
1,1,2-Trichloroethane	ug/kg	6,600	100	100	**180,000**	*840,000*	0.37	6.6		< 70 U	< 60 U	< 60 U	< 60 U
1,1-Dichloroethane	ug/kg	15,000	18,000	50,000	**27,000,000**	*87,000,000*	2.6	74		< 70 U	< 60 U	< 60 U	< 60 U
1,1-Dichloroethene	ug/kg	2,600	140	140	**200,000**	*660,000*	12	220		< 70 U	< 60 U	< 60 U	< 60 U
1,2,3-Trichlorobenzene	ug/kg	--	--	--	**--**	--	830	15,000		< 450 U	< 400 U	< 400 U	< 430 U
1,2,3-Trichloropropane	ug/kg	--	840	2,400	**1,300,000**	*4,200,000*	3	46		< 100 U	< 100 U	< 100 U	< 100 U
1,2,3-Trimethylbenzene	ug/kg	--	--	--	**--**	--	270	4,800		< 70 U	< 60 U	< 60 U	< 60 U
1,2,4-Trichlorobenzene	ug/kg	5,900	4,200	4,200	**990,000**	*5,800,000*	53	930		< 450 U	< 400 U	< 400 U	< 430 U
1,2,4-Trimethylbenzene	ug/kg	570	2,100	2,100	**32,000,000**	*100,000,000*	150	2,600		< 70 U	< 60 U	< 60 U	< 60 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	--	10	10	**4,400**	*20,000*	--	--		< 300 U	< 300 U	< 300 U	< 300 U
1,2-Dibromoethane (Ethylene dibromide)	ug/kg	110	20	20	**92**	*430*	0.074	2.1		< 30 UM	< 20 UM	< 20 UM	< 30 UM
1,2-Dichlorobenzene	ug/kg	280	14,000	14,000	**19,000,000**	*63,000,000*	1,500	26,000		< 100 U	< 100 U	< 100 U	< 100 U
1,2-Dichloroethane	ug/kg	7,200	100	100	**91,000**	*420,000*	0.82	23		< 70 U	< 60 U	< 60 U	< 60 U
2-Methylnaphthalene	ug/kg	4,200	57,000	170,000	**8,100,000**	*26,000,000*	1,700	30,000		< 100 U	< 100 U	< 100 U	< 100 U
2-Phenylbutane (sec-Butylbenzene)	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	3,800	66,000		< 70 U	< 60 U	< 60 U	< 60 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	ug/kg	--	--	--	**56,000,000**	--	3,300	40,000		< 3,000 U	< 3,000 U	< 3,000 U	< 3,000 U
Acetone	ug/kg	34,000	15,000	42,000	**23,000,000**	*73,000,000*	260,000	3,100,000		< 1,000 U	< 1,000 U	< 1,000 U	< 1,000 U
Acrylonitrile	ug/kg	100	100	220	**16,000**	*74,000*	1.2	34		< 100 U	< 100 U	< 100 U	< 100 U
Benzene	ug/kg	4,000	100	100	**180,000**	*840,000*	1.7	47		< 70 U	< 60 U	< 60 U	< 60 U
Bromobenzene	ug/kg	--	550	1,500	**540,000**	*1,700,000*	160	2,800		< 100 U	< 100 U	< 100 U	< 100 U
Bromodichloromethane	ug/kg	--	1,600	1,600	**110,000**	*490,000*	0.61	16		< 100 U	< 100 U	< 100 U	< 100 U
Bromoform	ug/kg	--	1,600	1,600	**820,000**	*3,800,000*	45	1,300		< 100 U	< 100 U	< 100 U	< 100 U
Bromomethane (Methyl bromide)	ug/kg	700	200	580	**320,000**	*1,000,000*	0.90	16		< 300 U	< 200 U	< 300 U	< 300 U
Carbon disulfide	ug/kg	--	16,000	46,000	**7,200,000**	*43,000,000*	52	920		< 300 U	< 300 U	< 300 U	< 300 U
Carbon tetrachloride	ug/kg	900	100	100	**96,000**	*440,000*	0.31	8.7		< 70 U	< 60 U	< 60 U	< 60 U
Chlorobenzene	ug/kg	500	2,000	2,000	**4,300,000**	*14,000,000*	82	1,400		< 70 U	< 60 U	< 60 U	< 60 U
Chlorobromomethane	ug/kg	--	--	--	**--**	--	--	--		< 100 U	< 100 U	< 100 U	< 100 U
Chloroethane	ug/kg	22,000	8,600	34,000	**2,600,000**	*12,000,000*	330	5,800		< 300 U	< 300 U	< 300 U	< 300 U
Chloroform (Trichloromethane)	ug/kg	7,000	1,600	1,600	**1,200,000**	*5,500,000*	0.26	7.4		< 70 U	< 60 U	< 60 U	< 60 U
Chloromethane (Methyl chloride)	ug/kg	--	5,200	22,000	**1,600,000**	*7,400,000*	6.9	120		< 300 U	< 300 U	< 300 U	< 300 U
cis-1,2-Dichloroethene	ug/kg	12,000	1,400	1,400	**2,500,000**	*8,000,000*	2.1	37		< 70 U	< 60 U	< 60 U	< 60 U
cis-1,3-Dichloropropene	ug/kg	--	--	--	**--**	--	--	--		< 70 U	< 60 U	< 60 U	< 60 U
Cymene (p-Isopropyltoluene)	ug/kg	--	--	--	**--**	--	--	--		< 100 U	< 100 U	< 100 U	< 100 U
Dibromochloromethane	ug/kg	--	1,600	1,600	**110,000**	*500,000*	0.40	27		< 100 U	< 100 U	< 100 U	< 100 U
Dibromomethane	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	3.5	62		< 300 U	< 300 U	< 300 U	< 300 U
Dichlorodifluoromethane (CFC-12)	ug/kg	--	95,000	270,000	**52,000,000**	*170,000,000*	12	220		< 300 U	< 300 U	< 300 U	< 300 U
Ethyl ether	ug/kg	--	200	200	**110,000,000**	*360,000,000*	350	6,200		< 300 U	< 200 U	< 200 U	< 300 U
Ethylbenzene	ug/kg	360	1,500	1,500	**--**	*71,000,000*	12	340		< 70 U	< 60 U	< 60 U	< 60 U
Hexachloroethane	ug/kg	1,800	430	1,200	**230,000**	*730,000*	3.2	92		< 400 U	< 400 U	< 400 U	< 400 U
Iodomethane	ug/kg	--	--	--	**--**	--	--	--		< 100 U	< 100 U	< 100 U	< 100 U
Isopropyl benzene	ug/kg	3,200	91,000	260,000	**25,000,000**	*80,000,000*	3.8	110		< 300 U	< 300 U	< 300 U	< 300 U
m&p-Xylene	ug/kg	--	--	--	**--**	--	--	--		< 100 U	< 100 U	< 100 U	< 100 U
Methyl tert butyl ether (MTBE)	ug/kg	140,000	800	800	**1,500,000**	*7,100,000*	74	2,100		< 300 U	< 200 U	< 200 U	< 300 U
Methylene chloride	ug/kg	30,000	100	100	**1,300,000**	*5,800,000*	130	2,300		< 100 U	< 100 U	< 100 U	< 100 U
Naphthalene	ug/kg	730	35,000	100,000	**16,000,000**	*52,000,000*	67	1,900		< 300 U	< 300 U	< 300 U	< 300 U
N-Butylbenzene	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	550	9,800		< 70 U	< 60 U	< 60 U	< 60 U
N-Propylbenzene	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	1,800	21,000		< 70 U	< 60 U	< 60 U	< 60 U
o-Xylene	ug/kg	--	--	--	**--**	--	--	--		< 70 U	< 60 U	< 60 U	< 60 U
Styrene	ug/kg	2,100	2,700	2,700	**400,000**	*1,900,000*	150	4,300		< 70 U	< 60 U	< 60 U	< 60 U
tert-Butylbenzene	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	0.64	11		< 70 U	< 60 U	< 60 U	< 60 U
Tetrachloroethene	ug/kg	1,200	100	100	**200,000**	*930,000*	6.2	74		< 70 U	< 60 U	< 60 U	< 60 U
Tetrahydrofuran	ug/kg	220,000	1,900	5,400	**2,900,000**	*9,500,000*	13,000	220,000		< 1,000 U	< 1,000 U	< 1,000 U	< 1,000 U
Toluene	ug/kg	5,400	16,000	16,000	**50,000,000**	*160,000,000*	3,700	64,000		< 70 U	< 60 U	< 60 U	< 60 U
trans-1,2-Dichloroethene	ug/kg	30,000	2,000	2,000	**3,800,000**	*12,000,000*	12	210		< 70 U	< 60 U	< 60 U	< 60 U
trans-1,3-Dichloropropene	ug/kg	--	--	--	**--**	--	--	--		< 70 U	< 60 U	< 60 U	< 60 U
trans-1,4-Dichloro-2-butene	ug/kg	--	--	--	**--**	--	--	--		< 70 U	< 60 U	< 60 U	< 60 U
Trichloroethene	ug/kg	4,000	100	100	**110,000**	*660,000*	0.33	4.0		< 70 U	< 60 U	< 60 U	< 60 U
Trichlorofluoromethane (CFC-11)	ug/kg	--	52,000	150,000	**79,000,000**	*260,000,000*	19	340		< 100 U	< 100 U	< 100 U	< 100 U
Vinyl chloride	ug/kg	260	40	40	**--**	*34,000*	0.082	8.2		< 70 U	< 60 U	< 60 U	< 60 U
Xylene (total)	ug/kg	820	5,600	5,600	**410,000,000**	*1,000,000,000*	280	5,000		< 100 U	< 100 U	< 100 U	< 100 U

Table 2
Soil Analytical Results
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

Chemical Name	Units	Groundwater Surface Water Interface Protection	Residential Drinking Water Protection	Nonresidential Drinking Water Protection	Residential Soil Direct Contact	Nonresidential Direct Contact	Residential Soil VIAP	Nonresidential Soil VIAP	Location ID	JN-SB-03	JN-SB-04	JN-SB-05
									Date Collected	4/27/2021	4/27/2021	4/27/2021
									Start Depth (ft. bgs)	5.7	10.5	12.3
									End Depth (ft. bgs)	6.7	11.5	13.3
MISC												
Total solids	%	--	--	--	--	--	--	--		85	90	88
VOCs												
1,1,1,2-Tetrachloroethane	ug/kg	--	1,500	6,400	**480,000**	*2,200,000*	3.2	91		< 100 U	< 100 U	< 100 U
1,1,1-Trichloroethane	ug/kg	1,800	4,000	4,000	**500,000,000**	*1,000,000,000*	450	7,500		< 70 U	< 60 U	< 60 U
1,1,2,2-Tetrachloroethane	ug/kg	1,600	170	700	**53,000**	*240,000*	2.7	77		< 70 U	< 60 U	< 60 U
1,1,2-Trichloroethane	ug/kg	6,600	100	100	**180,000**	*840,000*	0.37	6.6		< 70 U	< 60 U	< 60 U
1,1-Dichloroethane	ug/kg	15,000	18,000	50,000	**27,000,000**	*87,000,000*	2.6	74		< 70 U	< 60 U	< 60 U
1,1-Dichloroethene	ug/kg	2,600	140	140	**200,000**	*660,000*	12	220		< 70 U	< 60 U	< 60 U
1,2,3-Trichlorobenzene	ug/kg	--	--	--	--	--	830	15,000		< 430 U	< 410 U	< 410 U
1,2,3-Trichloropropane	ug/kg	--	840	2,400	**1,300,000**	*4,200,000*	3	46		< 100 U	< 100 U	< 100 U
1,2,3-Trimethylbenzene	ug/kg	--	--	--	--	--	270	4,800		< 70 U	< 60 U	< 60 U
1,2,4-Trichlorobenzene	ug/kg	5,900	4,200	4,200	**990,000**	*5,800,000*	53	930		< 430 U	< 410 U	< 410 U
1,2,4-Trimethylbenzene	ug/kg	570	2,100	2,100	**32,000,000**	*100,000,000*	150	2,600		< 70 U	< 60 U	< 60 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	--	10	10	**4,400**	*20,000*	--	--		< 300 U	< 300 U	< 300 U
1,2-Dibromoethane (Ethylene dibromide)	ug/kg	110	20	20	**92**	*430*	0.074	2.1		< 30 UM	< 20 UM	< 30 UM
1,2-Dichlorobenzene	ug/kg	280	14,000	14,000	**19,000,000**	*63,000,000*	1,500	26,000		< 100 U	< 100 U	< 100 U
1,2-Dichloroethane	ug/kg	7,200	100	100	**91,000**	*420,000*	0.82	23		< 70 U	< 60 U	< 60 U
2-Methylnaphthalene	ug/kg	4,200	57,000	170,000	**8,100,000**	*26,000,000*	1,700	30,000		< 100 U	< 100 U	< 100 U
2-Phenylbutane (sec-Butylbenzene)	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	3,800	66,000		< 70 U	< 60 U	< 60 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	ug/kg	--	--	--	**56,000,000**	--	3,300	40,000		< 3,000 U	< 3,000 U	< 3,000 U
Acetone	ug/kg	34,000	15,000	42,000	**23,000,000**	*73,000,000*	260,000	3,100,000		< 1,000 U	< 1,000 U	< 1,000 U
Acrylonitrile	ug/kg	100	100	220	**16,000**	*74,000*	1.2	34		< 100 U	< 100 U	< 100 U
Benzene	ug/kg	4,000	100	100	**180,000**	*840,000*	1.7	47		< 70 U	< 60 U	< 60 U
Bromobenzene	ug/kg	--	550	1,500	**540,000**	*1,700,000*	160	2,800		< 100 U	< 100 U	< 100 U
Bromodichloromethane	ug/kg	--	1,600	1,600	**110,000**	*490,000*	0.61	16		< 100 U	< 100 U	< 100 U
Bromoform	ug/kg	--	1,600	1,600	**820,000**	*3,800,000*	45	1,300		< 100 U	< 100 U	< 100 U
Bromomethane (Methyl bromide)	ug/kg	700	200	580	**320,000**	*1,000,000*	0.90	16		< 300 U	< 200 U	< 300 U
Carbon disulfide	ug/kg	--	16,000	46,000	**7,200,000**	*43,000,000*	52	920		< 300 U	< 300 U	< 300 U
Carbon tetrachloride	ug/kg	900	100	100	**96,000**	*440,000*	0.31	8.7		< 70 U	< 60 U	< 60 U
Chlorobenzene	ug/kg	500	2,000	2,000	**4,300,000**	*14,000,000*	82	1,400		< 70 U	< 60 U	< 60 U
Chlorobromomethane	ug/kg	--	--	--	--	--	--	--		< 100 U	< 100 U	< 100 U
Chloroethane	ug/kg	22,000	8,600	34,000	**2,600,000**	*12,000,000*	330	5,800		< 300 U	< 300 U	< 300 U
Chloroform (Trichloromethane)	ug/kg	7,000	1,600	1,600	**1,200,000**	*5,500,000*	0.26	7.4		< 70 U	< 60 U	< 60 U
Chloromethane (Methyl chloride)	ug/kg	--	5,200	22,000	**1,600,000**	*7,400,000*	6.9	120		< 300 U	< 300 U	< 300 U
cis-1,2-Dichloroethene	ug/kg	12,000	1,400	1,400	**2,500,000**	*8,000,000*	2.1	37		< 70 U	< 60 U	< 60 U
cis-1,3-Dichloropropene	ug/kg	--	--	--	--	--	--	--		< 70 U	< 60 U	< 60 U
Cymene (p-Isopropyltoluene)	ug/kg	--	--	--	--	--	--	--		< 100 U	< 100 U	< 100 U
Dibromochloromethane	ug/kg	--	1,600	1,600	**110,000**	*500,000*	0.40	27		< 100 U	< 100 U	< 100 U
Dibromomethane	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	3.5	62		< 300 U	< 300 U	< 300 U
Dichlorodifluoromethane (CFC-12)	ug/kg	--	95,000	270,000	**52,000,000**	*170,000,000*	12	220		< 300 U	< 300 U	< 300 U
Ethyl ether	ug/kg	--	200	200	**110,000,000**	*360,000,000*	350	6,200		< 300 U	< 200 U	< 300 U
Ethylbenzene	ug/kg	360	1,500	1,500	--	*71,000,000*	12	340		< 70 U	< 60 U	< 60 U
Hexachloroethane	ug/kg	1,800	430	1,200	**230,000**	*730,000*	3.2	92		< 400 U	< 400 U	< 400 U
Iodomethane	ug/kg	--	--	--	--	--	--	--		< 100 U	< 100 U	< 100 U
Isopropyl benzene	ug/kg	3,200	91,000	260,000	**25,000,000**	*80,000,000*	3.8	110		< 300 U	< 300 U	< 300 U
m&p-Xylene	ug/kg	--	--	--	--	--	--	--		< 100 U	< 100 U	< 100 U
Methyl tert butyl ether (MTBE)	ug/kg	140,000	800	800	**1,500,000**	*7,100,000*	74	2,100		< 300 U	< 200 U	< 300 U
Methylene chloride	ug/kg	30,000	100	100	**1,300,000**	*5,800,000*	130	2,300		< 100 U	< 100 U	< 100 U
Naphthalene	ug/kg	730	35,000	100,000	**16,000,000**	*52,000,000*	67	1,900		< 300 U	< 300 U	< 300 U
N-Butylbenzene	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	550	9,800		< 70 U	< 60 U	< 60 U
N-Propylbenzene	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	1,800	21,000		< 70 U	< 60 U	< 60 U
o-Xylene	ug/kg	--	--	--	--	--	--	--		< 70 U	< 60 U	< 60 U
Styrene	ug/kg	2,100	2,700	2,700	**400,000**	*1,900,000*	150	4,300		< 70 U	< 60 U	< 60 U
tert-Butylbenzene	ug/kg	--	1,600	4,600	**2,500,000**	*8,000,000*	0.64	11		< 70 U	< 60 U	< 60 U
Tetrachloroethene	ug/kg	1,200	100	100	**200,000**	*930,000*	6.2	74		< 70 U	< 60 U	< 60 U
Tetrahydrofuran	ug/kg	220,000	1,900	5,400	**2,900,000**	*9,500,000*	13,000	220,000		< 1,000 U	< 1,000 U	< 1,000 U
Toluene	ug/kg	5,400	16,000	16,000	**50,000,000**	*160,000,000*	3,700	64,000		< 70 U	< 60 U	< 60 U
trans-1,2-Dichloroethene	ug/kg	30,000	2,000	2,000	**3,800,000**	*12,000,000*	12	210		< 70 U	< 60 U	< 60 U
trans-1,3-Dichloropropene	ug/kg	--	--	--	--	--	--	--		< 70 U	< 60 U	< 60 U
trans-1,4-Dichloro-2-butene	ug/kg	--	--	--	--	--	--	--		< 70 U	< 60 U	< 60 U
Trichloroethene	ug/kg	4,000	100	100	**110,000**	*660,000*	0.33	4.0		< 70 U	< 60 U	< 60 U
Trichlorofluoromethane (CFC-11)	ug/kg	--	52,000	150,000	**79,000,000**	*260,000,000*	19	340		< 100 U	< 100 U	< 100 U
Vinyl chloride	ug/kg	260	40	40	--	*34,000*	0.082	8.2		< 70 U	< 60 U	< 60 U
Xylene (total)	ug/kg	820	5,600	5,600	**410,000,000**	*1,000,000,000*	280	5,000		< 100 U	< 100 U	< 100 U

Table 2
Soil Analytical Results
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

Notes:

1) Criteria listed are from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Clean Up Criteria Requirements Table 1: Soil: Residential and Nonresidential, Part 201 Generic Cleanup Criteria and Screening Levels, December 21, 2020.

2) Residential and Nonresidential Volatilization to Indoor Air Pathway Screening Levels are from the DEQ Guidance Document for the Vapor Intrusion Pathway, Appendix D - Tables 1 and 2, September 4, 2020.

5) Grey shaded values denotes exceedance and/or equal to Michigan Groundwater Surface Water Interface criteria
3) Yellow highlighted values denotes exceedance and/or equal to Michigan Residential Drinking Water criteria
4) Orange highlighted values denotes exceedance and/or equal to Nonresidential Drinking Water criteria
6) Values in bold denotes exceedance and/or equal to Residential Direct Contact criteria
7) Values in italics denotes exceedance and/or equal to Nonresidential Direct Contact criteria
8) Underlined values denotes exceedance and/or equal to Residential Soil Volatilization criteria.
9) Values in red type denotes exceedance and/or equal to Nonresidential Soil Volatilization to Indoor Air Pathway criteria

Abbreviations:

ug/kg	Micrograms per kilogram
ft.	feet
bgs	below ground surface
M	Result reported to MDL not RDL
U	Compound was analyzed for but not detected. The associated value is the compound quantitation limit.
Y	Elevated reporting limit due to high target concentration
VIAP	Volatilization to Indoor Air Pathway

Table 3
Groundwater Analytical Results
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Residential Shallow Groundwater VIAP	Nonresidential Shallow Groundwater VIAP	Location ID	JN-SB-01	JN-SB-02	JN-SB-03	JN-SB-04	JN-SB-05
							Date Collected	5/10/2021	5/10/2021	5/10/2021	5/10/2021	5/10/2021
VOCs												
1,1,1,2-Tetrachloroethane	ug/L	--	320	77	3.1	14		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,1-Trichloroethane	ug/L	89	200	200	180	5,900		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2,2-Tetrachloroethane	ug/L	78	35	8.5	2.4	6.7		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	ug/L	330	5.0	5.0	0.47	0.95		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	ug/L	740	2,500	880	4.7	40		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	ug/L	130	7.0	7.0	18	250		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trichlorobenzene	ug/L	--	--	--	58	130		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,3-Trichloropropane	ug/L	--	120	42	1.9	3.3		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,3-Trimethylbenzene	ug/L	--	--	--	43	150		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	ug/L	99	70	70	3.8	8.5		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2,4-Trimethylbenzene	ug/L	17	63	63	25	120		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	--	0.2	0.2	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	5.7	0.05	0.05	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichlorobenzene	ug/L	13	600	600	370	950		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	ug/L	360	5.0	5.0	1.4	5.1		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloropropane	ug/L	230	5.0	5.0	2.6	8.9		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,3,5-Trimethylbenzene	ug/L	45	72	72	18	110		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,3-Dichlorobenzene	ug/L	28	19	6.6	2.6	7.9		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	ug/L	17	75	75	5.9	28		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	2,200	38,000	13,000	2,600	12,000		< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
2-Hexanone	ug/L	--	2,900	1,000	660	1,100		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
2-Methylnaphthalene	ug/L	19	750	260	66	110		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
2-Phenylbutane (sec-Butylbenzene)	ug/L	--	230	80	270	400		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	ug/L	--	5,200	1,800	200	1,400		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Acetone	ug/L	1,700	2,100	730	50,000	200,000		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Acrylonitrile	ug/L	2.0	11	2.6	4.6	12		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Benzene	ug/L	200	5.0	5.0	1.0	8.4		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromobenzene	ug/L	--	50	18	62	170		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	ug/L	--	80	80	1.2	4.9		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromoform	ug/L	--	80	80	89	260		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromomethane (Methyl bromide)	ug/L	5.0	29	10	2.1	13		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon disulfide	ug/L	--	2,300	800	92	840		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon tetrachloride	ug/L	38	5.0	5.0	0.41	9.5		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	ug/L	25	100	100	33	110		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobromomethane	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	ug/L	1,100	1,700	430	620	5,200		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform (Trichloromethane)	ug/L	350	80	80	0.49	3.1		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloromethane (Methyl chloride)	ug/L	--	1,100	260	15	110		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
cis-1,2-Dichloroethene	ug/L	620	70	70	3.4	14		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Cymene (p-Isopropyltoluene)	ug/L	--	--	--	--	--		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromochloromethane	ug/L	--	80	80	0.78	6.7		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dibromomethane	ug/L	--	230	80	8.8	18		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Dichlorodifluoromethane (CFC-12)	ug/L	--	4,800	1,700	13	410		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Ethyl ether	ug/L	--	10	10	1,200	3,100		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Ethylbenzene	ug/L	18	74	74	2.8	28		1	< 1 U	< 1 U	< 1 U	< 1 U
Hexachloroethane	ug/L	6.7	21	7.3	1.5	8.8		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U

Table 3
Groundwater Analytical Results
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

Chemical Name	Units	Groundwater Surface Water Interface	Residential Drinking Water	Nonresidential Drinking Water	Residential Shallow Groundwater VIAP	Nonresidential Shallow Groundwater VIAP	Location ID	JN-SB-01	JN-SB-02	JN-SB-03	JN-SB-04	JN-SB-05
							Date Collected	5/10/2021	5/10/2021	5/10/2021	5/10/2021	5/10/2021
VOCs												
Iodomethane	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Isopropyl benzene	ug/L	28	2,300	800	0.60	6.7		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
m&p-Xylene	ug/L	--	--	--	--	--		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
Methyl tert butyl ether (MTBE)	ug/L	7,100	40	40	250	810		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Methylene chloride	ug/L	1,500	5.0	5.0	79	1,100		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Naphthalene	ug/L	11	1,500	520	4.2	12		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
N-Butylbenzene	ug/L	--	230	80	44	360		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
N-Propylbenzene	ug/L	--	230	80	43	970		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
o-Xylene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Styrene	ug/L	80	100	100	33	170		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
tert-Butylbenzene	ug/L	--	230	80	0.077	0.71		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrachloroethene	ug/L	60	5.0	5.0	1.5	35		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Tetrahydrofuran	ug/L	11,000	270	95	45,000	72,000		< 90 U	< 90 U	< 90 U	< 90 U	< 90 U
Toluene	ug/L	270	790	790	300	6,600		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	ug/L	1,500	100	100	16	110		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,3-Dichloropropene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,4-Dichloro-2-butene	ug/L	--	--	--	--	--		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	ug/L	200	5.0	5.0	0.073	1.6		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichlorofluoromethane (CFC-11)	ug/L	--	7,300	2,600	22	560		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Vinyl chloride	ug/L	13	2.0	2.0	0.12	10		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	ug/L	49	280	280	75	410		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U

Table 3
Groundwater Analytical Results
Joslyn-Wesbrook North Parcel Investigation
RACER Trust Pontiac North Campus

Notes:

1) Criteria listed are from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Clean Up Criteria Requirements Table 1: Groundwater: Residential and Nonresidential, Part 201 Generic Cleanup Criteria and Screening Levels, December 21, 2020.

2) Residential and Nonresidential Volatilization to Indoor Air Pathway Screening Levels are from the DEQ Guidance Document for the Vapor Intrusion Pathway, Appendix C - Tables 1 and 2, September 4, 2020.

3) Grey shaded values denotes exceedance and/or equal to Michigan Groundwater Surface Water Interface criteria
3) Yellow highlighted values denotes exceedance and/or equal to Michigan Residential Drinking Water criteria
4) Orange highlighted values denotes exceedance and/or equal to Nonresidential Drinking Water criteria
5) Underlined values denotes exceedance and/or equal to Residential Soil Volatilization criteria.
6) Values in red type denotes exceedance and/or equal to Nonresidential Soil Volatilization to Indoor Air Pathway criteria

Abbreviations:

ug/L	Micrograms per liter
U	Compound was analyzed for but not detected. The associated value is the compound quantitation limit.
VIAP	Volatilization to Indoor Air Pathway

ATTACHMENT 1

Soil Boring and Well Construction Logs

Date Start: 4/26/2021
Date Finish: 4/26/2021
Drilling Company: Terra Probe Environmental
Driller's Name: J Schaffer
Drilling Method: Hand Auger/Direct Push
Sampling Method: Continuous
Rig Type: Direct Push
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): 8.13

Northing: 13415651.0139
Easting: 425345.188
Casing Elevation: 987.27
Borehole Depth (ft. bgs.): 20.0
Surface Elevation: 986.42
Descriptions By: S. Turner

Well/Boring ID: JN-SB-01
Client: RACER
Location: RACER PNC
Weather Conditions: 36 F, Cloudy

DEPTH (feet bgl.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-5.0'	5.0	0.0 0.0 0.0 0.0			(0.0-2.0') SAND, fine to medium, subangular to subrounded; little granule to very coarse sand, subangular to subrounded; well sorted; dry to moist; Brown (10YR 4/3).		Sand Pack (0.0 to 2.0' bgs)
							(2.0-6.5') CLAY, high plasticity; trace silt; stiff; dry to moist; brown (1r0YR 4/3).		
5 / -5	2	5.0-8.0'	2.5	0.0 0.0 0.0			(6.5-7.3') SAND, medium to coarse, subangular to subrounded; well sorted; wet; brown (10YR 4/3).		Bentonite (2.0 to 9.0' bgs) 2' PVC Well Casing (0.0 to 11.0' bgs)
							(7.3-20.0') CLAY, non-plastic; little silt; little fine sand; very stiff; dry to moist; Brown (10YR 5/3).		
10 / -10	3	8.0-12.0'	3.0	0.0 0.0 0.0 0.0					
	4	12.0-16.0'	1.5	0.0 0.0 0.0 0.0			NOTE: SAND, coarse to small pebbles, round to subangular; well sorted; wet; Brown (10YR 5/3) from 13.1 to 13.2 and 13.9 and 14.0' bgs.		Sand Pack (9.0 to 20.0' bgs) 2' PVC 10 Slot Screen (11.0 to 16.0' bgs)
15 / -15									
	5	16.0-20.0	1.8	0.0 0.0 0.0 0.0					
20 / -20							End of boring at 20.0' bgs.		
25 / -25									

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface

Water Level Start - No groundwater encountered during drilling
Water Level Finish - Water level taken after a period of stabilization prior to development

Date Start: 4/26/2021
Date Finish: 4/26/2021
Drilling Company: Terra Probe Environmental
Driller's Name: J Schaffer
Drilling Method: Hand Auger/Direct Push
Sampling Method: Continuous
Rig Type: Direct Push
Water Level Start (ft. bgs.): 12.0
Water Level Finish (ft. btoc.): 8.08

Northing: 13415651.0421
Easting: 425298.3823
Casing Elevation: 988.08

Borehole Depth (ft. bgs.): 16.0
Surface Elevation: 986.97

Descriptions By: S. Turner

Well/Boring ID: JN-SB-02
Client: RACER

Location: RACER PNC

Weather Conditions: 40 F, Cloudy, Windy

DEPTH (feet bgl.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-5.0'	5.0	0.0 0.0 0.0 0.0			(0.0-5.5') SAND, fine to medium, subangular to subrounded, little granules, very coarse sand, subangular to subrounded, well sorted; moist; brown (10YR 4/3).		Sand Pack (0.0 to 2.0' bgs)
5 / -5	2	5.0-8.0'	2.25	0.0 0.0 0.0			(5.5-6.8') CLAY, low plasticity, and SAND, very coarse to very fine; little granules, subangular to surbrounded; poorly sorted; most; brown (10YR 4/3). (6.8-12.0') CLAY, medium plasticity, no dilatancy; trace granule to coarse sand, subangular to subrounded; poorly sorted; moist; brown (10YR 4/3).		Bentonite (2.0 to 9.0' bgs) 2' PVC Well Casing (0.0 to 11.0' bgs)
10 / -10	3	8.0-12.0'	4.0	0.0 0.0 0.0 0.0	X		NOTE: Color change to drak gray (10YR 4/1) at 9.5' bgs.	▼	
15 / -15	4	12.0-16.0'	4.0	0.0 0.0 0.0 0.0	X		(12.0-13.5') SAND, medium to coarse, subangular to subrounded; little granules, subangulare to subruonded; poorly sorted; wet; brown (10YR 5/3). (13.5-16.0') CLAY, medium plasticity; little coarse sand to granules, subangular to subrouded; poorly sorted; moist; brown (10YR 5/3). NOTE: Sand seam; wet from 15.0 to 15.5' bgs.		Sand Pack (9.0 to 16.0' bgs) 2' PVC 10 Slot Screen (11.0 to 16.0' bgs)
20 / -20							End of boring at 16.0' bgs.		
25 / -25									

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Remarks: bgs = below ground surface

Water Level Finish - Water level taken after a period of stabilization prior to development

Date Start: 4/27/2021
Date Finish: 4/27/2021
Drilling Company: Terra Probe Environmental
Driller's Name: J Schaffer
Drilling Method: Hand Auger/Direct Push
Sampling Method: Continuous
Rig Type: Direct Push
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): 7.07

Northing: 13415657.632
Easting: 425232.195
Casing Elevation: 988.47
Borehole Depth (ft. bgs.): 16.0
Surface Elevation: 987.42
Descriptions By: S. Turner

Well/Boring ID: JN-SB-03
Client: RACER
Location: RACER PNC
Weather Conditions: 50 F, Clear

DEPTH (feet bgl.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0									
	1	0.0-5.0'	5.0	0.0 0.0 0.0 0.0			(0.0-4.2') SAND, fine to medium, subangular to subrounded, little granules to very coarse sand, subangular to subrounded, poorly sorted; moist; brown (10YR 4/3).		Sand Pack (0.0 to 0.7' bgs) Bentonite (0.7 to 2.5' bgs) 2' PVC Well Casing (0.0 to 4.0' bgs)
5 / -5							(4.2-6.7') CLAY, low to medium plasticity, little fine sand to granules; subangular to surbrounded; poorly sorted; moist; brown (10YR 4/3).		
	2	5.0-8.0'	2.5	0.0 0.0 0.0	X		(6.7-7.5') SAND, medium to coarse, subangular to subrounded; little granules, subangular to subrounded; poorly sorted; wet; brown (10YR 5/3).		Sand Pack (2.5 to 16.0' bgs) 2' PVC 10 Slot Screen (4.0 to 9.0' bgs)
10 / -10	3	8.0-12.0'	3.5	0.0 0.0 0.0 0.0			(7.5-16.0') CLAY, medium to high plasticity; trace granules, subangular to subrounded; medium stiff; moist; brown (10YR 4/3) to gray (10YR 5/1).		
15 / -15	4	12.0-16.0'	3.3	0.0 0.0 0.0 0.0					
							End of boring at 16.0' bgs.		
20 / -20									
25 / -25									

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Remarks: bgs = below ground surface

Water Level Start - No groundwater encountered during drilling
Water Level Finish - Water level taken after a period of stabilization prior to development

Date Start: 4/27/2021
Date Finish: 4/27/2021
Drilling Company: Terra Probe Environmental
Driller's Name: J Schaffer
Drilling Method: Hand Auger/Direct Push
Sampling Method: Continuous
Rig Type: Direct Push
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): 8.53

Northing: 13415721.5374
Easting: 425250.817
Casing Elevation: 986.8
Borehole Depth (ft. bgs.): 16.0
Surface Elevation: 985.56
Descriptions By: S. Turner

Well/Boring ID: JN-SB-04
Client: RACER
Location: RACER PNC
Weather Conditions: 55 F, Cloudy

DEPTH (feet bgl.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-5.0'	5.0	0.0, 0.0, 0.0, 0.0			(0.0-4.1') SAND, fine to medium, subangular to subrounded, little granules to very coarse sand, subangular to subrounded, poorly sorted; dry to moist; brown (10YR 4/3).		Sand Pack (0.0 to 2.0' bgs)
5 / -5	2	5.0-8.0'	2.7	0.0, 0.0, 0.0			(4.1-6.3') CLAY, medium plasticity, trace granules; subangular to surbrounded; soft to medium stiff; moist; brown (10YR 4/3).		Bentonite (2.0 to 6.5' bgs)
							(6.3-7.5') CLAY, high plasticity, and SAND, medium to coarse, subangular to subrounded; poorly sorted; soft; moist to wet; brown (10YR 5/3).		2' PVC Well Casing (0.0 to 8.5' bgs)
10 / -10	3	8.0-12.0'	4.0	0.0, 0.0, 0.0, 0.0	X		(7.5-16.0') CLAY, non-plastic, no dilatancy; trace silt; trace granules to small pebbles, subangular to subroiunded; very stiff; dry; brown (10YR 5/3) to gray (10YR 5/1).		Sand Pack (6.5 to 16.0' bgs)
15 / -15	4	12.0-16.0'	2.25	0.0, 0.0, 0.0, 0.0			NOTE: SAND, fine to coarse, subangualr to subrounded and SILT, no to slow dilatancy, trace granules, subangular to subroundecd; poorly sorted; wet; gray (10YR 5/1) from 12.5 to 12.7' and 12.8 to 12.9' bgs.		2' PVC 10 Slot Screen (8.5 to 13.5' bgs)
20 / -20							End of boring at 16.0' bgs.		
25 / -25									

ARCADIS Design & Consultancy for natural and built assets

Remarks: bgs = below ground surface

Water Level Start - No groundwater encountered during drilling
Water Level Finish - Water level taken after a period of stabilization prior to development

Date Start: 4/27/2021
Date Finish: 4/27/2021
Drilling Company: Terra Probe Environmental
Driller's Name: J Schaffer
Drilling Method: Hand Auger/Direct Push
Sampling Method: Continuous
Rig Type: Direct Push
Water Level Start (ft. bgs.): NA
Water Level Finish (ft. btoc.): 13.03

Northing: 13415720.8882
Easting: 425320.4003
Casing Elevation: 987.13
Borehole Depth (ft. bgs.): 16.0
Surface Elevation: 985.86
Descriptions By: S. Turner

Well/Boring ID: JN-SB-05
Client: RACER
Location: RACER PNC
Weather Conditions: 70 F, Cloudy

DEPTH (feet bgl.) / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0 / 0	1	0.0-8.0'	8	0.0			(0.0-3.8') SAND, fine to medium, subangular to subrounded, little granules to very coarse sand, subangular to subrounded, poorly sorted; dry to moist; brown (10YR 4/3).		Sand Pack (0.0 to 2.0' bgs)
5 / -5	2			0.0			(3.8-16.0') CLAY, high plasticity; no dilatancy; trace trace silt; trace granules to small pebbles, subangular to subrounded; soft; moist; brown (10YR 4/3).		2' PVC Well Casing (0.0 to 9.5' bgs)
10 / -10	3	8.0-12.0'	3.0	0.0			NOTE: Change to non-plastic at 7.0' bgs.		Bentonite (2.0 to 7.5' bgs)
15 / -15	4	12.0-16.0'	4.0	0.0			NOTE: SAND, fine to coarse, subangular to subrounded; little silt, rapid dilatancy; trace clay; low to medium plasticity; trace granules, subangular to subrounded; soft; wet; brown (1r0YR 5/3) from 13.3 to 13.5' and 13.7 to 13.9' bgs.		Sand Pack (7.5 to 16.0' bgs)
20 / -20							End of boring at 16.0' bgs.		2' PVC 10 Slot Screen (9.5 to 14.5' bgs)

Remarks: bgs = below ground surface

Water Level Start - No groundwater encountered during drilling
Water Level Finish - Water level taken after a period of stabilization prior to development

ARCADIS Design & Consultancy for natural and built assets

ATTACHMENT 2

Groundwater Sampling Logs

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30075936	**Well ID**	JN-SB-01			**Date**	05/10/2021
Project Name/Location	Racer pnc		**Weather(°F)**	43F °F, Sunny, winds at mph.			
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	8.45	**Total Depth (ft-bmp)**	15.33	**Water Column(ft)**	6.88	**Gallons in Well**	1.12
MP Elevation	987.27	**Pump Intake (ft-bmp)**	14	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Sample Time	08:45	**Volumes Purged**	0.71	**Sample ID**	JN-SB-01_GW-051021	**Sampled by**	Seth Turner
Purge Start	8:15	**Gallons Purged**	0.79	**Replicate/ Code No.**		**Sample Type**	Grab
Purge End	08:50						

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
08:15	0	0	100	8.45	--	7.01	0.77	202	6.9	10.1	7.3	--	--
08:20	5	5	100	8.45	--	7.1	0.79	19.5	7.1	10	-76.3	--	--
08:25	5	10	100	8.45	--	7.1	0.74	0.02	8.5	10.1	-81.1	--	--
08:30	5	15	100	8.45	--	7.1	0.74	0.02	8.5	10.1	-81.1	--	--
08:35	5	20	100	8.45	--	7.1	0.74	0.02	8.5	10.1	-81.1	--	--
08:40	5	25	100	8.45	--	7.1	0.74	0.02	8.5	10.1	-81.1	--	--
08:45	5	30	100	8.45	--	7.1	0.74	0.02	8.5	10.1	-81.1	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
PAHs SW-846 8100	1L Amber	1	None

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Well Information

Well Location: Pontiac

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: 2035

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30075936	**Well ID**	JN-SB-02			**Date**	05/10/2021
Project Name/Location	Racer pnc			**Weather(°F)**	43F °F, Sunny, winds at mph.		
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	9.22	**Total Depth (ft-bmp)**	15.32	**Water Column(ft)**	6.1	**Gallons in Well**	0.99
MP Elevation	988.08	**Pump Intake (ft-bmp)**	14	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Sample Time	09:40	**Volumes Purged**	0.80	**Sample ID**	JN-SB-02_GW-051021	**Sampled by**	Seth Turner
Purge Start	09:10	**Gallons Purged**	0.79	**Replicate/ Code No.**		**Sample Type**	Grab
Purge End	09:45						

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
09:10	0	0	100	9.22	--	7.34	0.82	234	13.2	10	-186.8	--	--
09:15	5	5	100	9.22	--	7.31	0.82	45.3	3.12	10	189.7	--	--
09:20	5	10	100	9.22	--	7.31	0.82	12	3.1	10	193.2	--	--
09:25	5	15	100	9.22	--	7.31	0.82	6.93	3.1	10	193.2	--	--
09:30	5	20	100	9.22	--	7.31	0.82	0.02	3.1	10	193.2	--	--
09:35	5	25	100	9.22	--	7.31	0.82	0.02	3.1	10	193.2	--	--
09:40	5	30	100	9.22	--	7.31	0.82	0.02	3.1	10	193.2	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
PAHs SW-846 8100	1L Amber	1	None

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Well Information

Well Location: Pontiac

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: 2035

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30075936	**Well ID**	JN-SB-03			**Date**	05/10/2021
Project Name/Location	Racer pnc		**Weather(°F)**	43F °F, Sunny, winds at mph.			
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	7.32	**Total Depth (ft-bmp)**	15.28	**Water Column(ft)**	7.96	**Gallons in Well**	1.29
MP Elevation	988.47	**Pump Intake (ft-bmp)**	9	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Sample Time	10:30	**Volumes Purged**	0.20	**Sample ID**	JN-SB-03_GW-051021	**Sampled by**	Seth Turner
Purge Start	10:00	**Gallons Purged**	0.26	**Replicate/ Code No.**		**Sample Type**	Grab
Purge End	10:35						

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:00	0	0	100	7.32	--	7.39	0.79	680	6.25	10.2	283.6	--	--
10:05	5	5	100	8.92	--	7.29	0.79	89	6.93	10.4	291.6	--	--
10:10	5	10	100	9.56	--	7.39	0.8	39.8	7.45	10.5	296.1	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
PAHs SW-846 8100	1L Amber	1	None

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Well Information

Well Location: Pontiac

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: 2035

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30075936	**Well ID**	JN-SB-04			**Date**	05/10/2021
Project Name/Location	Racer pnc			**Weather(°F)**	43F °F, Sunny, winds at mph.		
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	9.12	**Total Depth (ft-bmp)**	15.33	**Water Column(ft)**	6.21	**Gallons in Well**	1.01
MP Elevation	986.8	**Pump Intake (ft-bmp)**	14	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Sample Time	11:05	**Volumes Purged**	0.78	**Sample ID**	JN-SB-04_GW-051021	**Sampled by**	Seth Turner
Purge Start	10:30	**Gallons Purged**	0.79	**Replicate/ Code No.**		**Sample Type**	Grab
Purge End	11:10						

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
10:30	0	0	100	9.12	--	7.26	0.89	101	0.22	10.1	187.6	--	--
10:35	5	5	100	9.12	--	7.25	0.89	25.6	0.22	10.1	187.6	--	--
10:40	5	10	100	9.12	--	7.25	0.89	0.02	0.22	10.1	187.6	--	--
10:45	5	15	100	9.12	--	7.25	0.89	0.02	0.22	10.1	187.6	--	--
10:50	5	20	100	9.12	--	7.25	0.89	0.02	0.22	10.1	187.6	--	--
10:55	5	25	100	9.12	--	7.25	0.89	0.02	0.22	10.1	187.6	--	--
11:00	5	30	100	9.12	--	7.25	0.89	0.02	0.22	10.1	187.6	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
PAHs SW-846 8100	1L Amber	1	None

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Well Information

Well Location: Pontiac

Condition of Well: Good condition

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Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: 2035

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = milliv

Groundwater Sampling Form

ARCADIS Design & Consultancy for natural and built assets

Project Number	30075936	**Well ID**	JN-SB-05			**Date**	05/10/2021
Project Name/Location	Racer pnc			**Weather(°F)**	48F °F, Sunny, winds at mph.		
Measuring Pt. Description	Top of Inner Casing	**Screen Setting (ft-bmp)**	--	**Casing Diameter (in)**	2	**Well Casing Material**	PVC
Static Water Level (ft-bmp)	8.41	**Total Depth (ft-bmp)**	15.32	**Water Column(ft)**	6.91	**Gallons in Well**	1.12
MP Elevation	987.13	**Pump Intake (ft-bmp)**	14	**Purge Method**	Low-Flow	**Purge Equipment**	Peristaltic
Sample Time	12:00	**Volumes Purged**	0.71	**Sample ID**	JN-SB-05_GW-051021	**Sampled by**	Seth Turner
Purge Start	11:25	**Gallons Purged**	0.79	**Replicate/ Code No.**		**Sample Type**	Grab
Purge End	12:10						

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Redox (mV)	Appearance	
												Color	Odor
11:25	0	0	100	8.41	--	7.13	0.97	121	5.72	10.5	335.1	--	--
11:30	5	5	100	8.41	--	7.11	0.97	38.9	5.49	10.5	337.9	--	--
11:35	5	10	100	8.41	--	7.11	0.97	13.6	5.58	10.3	339.6	--	--
11:40	5	15	100	8.41	--	7.1	0.96	4.31	5.86	10.2	341.2	--	--
11:45	5	20	100	8.41	--	7.09	0.96	0.02	5.71	10.3	342.3	--	--
11:50	5	25	100	8.41	--	7.09	0.96	0.02	5.71	10.3	342.3	--	--
11:55	5	30	100	8.41	--	7.09	0.96	0.02	5.71	10.3	342.3	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL
PAHs SW-846 8100	1L Amber	1	None

Comments:

Well Casing Volume Conversion

Well diameter (inches) = gallons per foot

1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

Well Information

Well Location: Pontiac

Condition of Well: Good condition

Well Completion: Stick-up

Well Locked at Arrival: yes

Well Locked at Departure: yes

Key Number To Well: 2035

ft-bmp = feet below measuring point
in = inches
ft = feet
mL/min = milliliters per minute
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = milliv

ATTACHMENT 3

Laboratory Analytical Reports

Report ID: S23782.01(01)
Generated on 05/12/2021

Report to

Attention: Brad Saunders
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1904 C:517-974-4441 FAX:
Email: brad.saunders@arcadis.com

Addtional Contacts: Alexis Crisp

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S23782.01-S23782.07, S23782.26
Project: 30075936 / Racer PNC
Collected Date(s): 04/26/2021 - 04/30/2021
Submitted Date/Time: 05/04/2021 09:20
Sampled by: Seth Turner
P.O. #: 30075936

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Report Narrative

Northern Parcel samples reported.

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2011
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S23782.01	JN-SB-01_SO-042621(5.5-6.5)	Soil	04/26/21 12:10
S23782.02	JN-SB-01_SO-042621(12.1-13.1)	Soil	04/26/21 12:15
S23782.03	JN-SB-02_SO-042621(11-12)	Soil	04/26/21 14:05
S23782.04	JN-SB-02_SO-042621(14-15)	Soil	04/26/21 14:10
S23782.05	JN-SB-03_SO-042721(5.7-6.7)	Soil	04/27/21 08:50
S23782.06	JN-SB-04_SO-042721(10.5-11.5)	Soil	04/27/21 10:20
S23782.07	JN-SB-05_SO-042721(12.3-13.3)	Soil	04/27/21 13:05
S23782.26	Trip Blank	Methanol	04/30/21 00:01

Lab Sample ID: S23782.01
Sample Tag: JN-SB-01_SO-042621(5.5-6.5)
Collected Date/Time: 04/26/2021 12:10
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	9.995/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 16:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	67.7	60-29-7	
Acetone	Not detected	1,000		ug/kg	67.7	67-64-1	
Methyl iodide	Not detected	100		ug/kg	67.7	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	67.7	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	67.7	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	67.7	107-13-1	
2-Butanone (MEK)	Not detected	1,000		ug/kg	67.7	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	67.7	75-71-8	
Chloromethane	Not detected	300		ug/kg	67.7	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	67.7	75-01-4	
Bromomethane	Not detected	300		ug/kg	67.7	74-83-9	
Chloroethane	Not detected	300		ug/kg	67.7	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	67.7	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	67.7	75-35-4	
Methylene chloride	Not detected	100		ug/kg	67.7	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	67.7	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	67.7	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	67.7	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	67.7	109-99-9	
Chloroform	Not detected	70		ug/kg	67.7	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	67.7	74-97-5	
1,1,1-Trichloroethane	Not detected	70		ug/kg	67.7	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	67.7	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	67.7	591-78-6	
Carbon tetrachloride	Not detected	70		ug/kg	67.7	56-23-5	
Benzene	Not detected	70		ug/kg	67.7	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	67.7	107-06-2	
Trichloroethene	Not detected	70		ug/kg	67.7	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	67.7	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	67.7	75-27-4	
Dibromomethane	Not detected	300		ug/kg	67.7	74-95-3	

Lab Sample ID: S23782.01 (continued)
Sample Tag: JN-SB-01_SO-042621(5.5-6.5)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 16:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	70		ug/kg	67.7	10061-01-5	
Toluene	Not detected	70		ug/kg	67.7	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	67.7	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	67.7	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	67.7	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	70		ug/kg	67.7	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	67.7	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	67.7	106-93-4	M
Chlorobenzene	Not detected	70		ug/kg	67.7	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	67.7	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	67.7	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	67.7		
o-Xylene	Not detected	70		ug/kg	67.7	95-47-6	
Styrene	Not detected	70		ug/kg	67.7	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	67.7	98-82-8	
Bromoform	Not detected	100		ug/kg	67.7	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	67.7	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	67.7	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	67.7	103-65-1	
Bromobenzene	Not detected	100		ug/kg	67.7	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	67.7	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	67.7	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	67.7	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	67.7	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	67.7	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	67.7	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	67.7	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	67.7	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	67.7	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	67.7	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	67.7	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	67.7	96-12-8	
1,2,4-Trichlorobenzene	Not detected	450		ug/kg	67.7	120-82-1	
1,2,3-Trichlorobenzene	Not detected	450		ug/kg	67.7	87-61-6	
Naphthalene	Not detected	300		ug/kg	67.7	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	67.7	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.02
Sample Tag: JN-SB-01_SO-042621(12.1-13.1)
Collected Date/Time: 04/26/2021 12:15
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	9.934/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	91	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 16:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	60.3	60-29-7	
Acetone	Not detected	1,000		ug/kg	60.3	67-64-1	
Methyl iodide	Not detected	100		ug/kg	60.3	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	60.3	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	60.3	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	60.3	107-13-1	
2-Butanone (MEK)	Not detected	900		ug/kg	60.3	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	60.3	75-71-8	
Chloromethane	Not detected	300		ug/kg	60.3	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	60.3	75-01-4	
Bromomethane	Not detected	200		ug/kg	60.3	74-83-9	
Chloroethane	Not detected	300		ug/kg	60.3	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	60.3	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	60.3	75-35-4	
Methylene chloride	Not detected	100		ug/kg	60.3	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	60.3	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	60.3	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	60.3	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	60.3	109-99-9	
Chloroform	Not detected	60		ug/kg	60.3	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	60.3	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	60.3	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	60.3	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	60.3	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	60.3	56-23-5	
Benzene	Not detected	60		ug/kg	60.3	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	60.3	107-06-2	
Trichloroethene	Not detected	60		ug/kg	60.3	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	60.3	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	60.3	75-27-4	
Dibromomethane	Not detected	300		ug/kg	60.3	74-95-3	

Lab Sample ID: S23782.02 (continued)

Sample Tag: JN-SB-01_SO-042621(12.1-13.1)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 16:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	60		ug/kg	60.3	10061-01-5	
Toluene	Not detected	60		ug/kg	60.3	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	60.3	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	60.3	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	60.3	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	60.3	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	60.3	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	60.3	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	60.3	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	60.3	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	60.3	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	60.3		
o-Xylene	Not detected	60		ug/kg	60.3	95-47-6	
Styrene	Not detected	60		ug/kg	60.3	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	60.3	98-82-8	
Bromoform	Not detected	100		ug/kg	60.3	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	60.3	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	60.3	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	60.3	103-65-1	
Bromobenzene	Not detected	100		ug/kg	60.3	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	60.3	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	60.3	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	60.3	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	60.3	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	60.3	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	60.3	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	60.3	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	60.3	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	60.3	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	60.3	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	60.3	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	60.3	96-12-8	
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	60.3	120-82-1	
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	60.3	87-61-6	
Naphthalene	Not detected	300		ug/kg	60.3	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	60.3	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.03
Sample Tag: JN-SB-02_SO-042621(11-12)
Collected Date/Time: 04/26/2021 14:05
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10.494/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 17:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	61	60-29-7	
Acetone	Not detected	1,000		ug/kg	61	67-64-1	
Methyl iodide	Not detected	100		ug/kg	61	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	61	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	61	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	61	107-13-1	
2-Butanone (MEK)	Not detected	920		ug/kg	61	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	61	75-71-8	
Chloromethane	Not detected	300		ug/kg	61	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	61	75-01-4	
Bromomethane	Not detected	200		ug/kg	61	74-83-9	
Chloroethane	Not detected	300		ug/kg	61	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	61	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	61	75-35-4	
Methylene chloride	Not detected	100		ug/kg	61	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	61	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	61	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	61	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	61	109-99-9	
Chloroform	Not detected	60		ug/kg	61	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	61	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	61	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	61	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	61	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	61	56-23-5	
Benzene	Not detected	60		ug/kg	61	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	61	107-06-2	
Trichloroethene	Not detected	60		ug/kg	61	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	61	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	61	75-27-4	
Dibromomethane	Not detected	300		ug/kg	61	74-95-3	

Lab Sample ID: S23782.03 (continued)
Sample Tag: JN-SB-02_SO-042621(11-12)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 17:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	60		ug/kg	61	10061-01-5	
Toluene	Not detected	60		ug/kg	61	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	61	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	61	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	61	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	61	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	61	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	61	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	61	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	61	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	61	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	61		
o-Xylene	Not detected	60		ug/kg	61	95-47-6	
Styrene	Not detected	60		ug/kg	61	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	61	98-82-8	
Bromoform	Not detected	100		ug/kg	61	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	61	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	61	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	61	103-65-1	
Bromobenzene	Not detected	100		ug/kg	61	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	61	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	61	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	61	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	61	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	61	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	61	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	61	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	61	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	61	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	61	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	61	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	61	96-12-8	
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	61	120-82-1	
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	61	87-61-6	
Naphthalene	Not detected	300		ug/kg	61	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	61	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.04
Sample Tag: JN-SB-02_SO-042621(14-15)
Collected Date/Time: 04/26/2021 14:10
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10.289/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 17:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	64.6	60-29-7	
Acetone	Not detected	1,000		ug/kg	64.6	67-64-1	
Methyl iodide	Not detected	100		ug/kg	64.6	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	64.6	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	64.6	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	64.6	107-13-1	
2-Butanone (MEK)	Not detected	970		ug/kg	64.6	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	64.6	75-71-8	
Chloromethane	Not detected	300		ug/kg	64.6	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	64.6	75-01-4	
Bromomethane	Not detected	300		ug/kg	64.6	74-83-9	
Chloroethane	Not detected	300		ug/kg	64.6	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	64.6	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	64.6	75-35-4	
Methylene chloride	Not detected	100		ug/kg	64.6	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	64.6	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	64.6	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	64.6	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	64.6	109-99-9	
Chloroform	Not detected	60		ug/kg	64.6	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	64.6	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	64.6	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	64.6	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	64.6	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	64.6	56-23-5	
Benzene	Not detected	60		ug/kg	64.6	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	64.6	107-06-2	
Trichloroethene	Not detected	60		ug/kg	64.6	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	64.6	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	64.6	75-27-4	
Dibromomethane	Not detected	300		ug/kg	64.6	74-95-3	

Lab Sample ID: S23782.04 (continued)
Sample Tag: JN-SB-02_SO-042621(14-15)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 17:38, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	60		ug/kg	64.6	10061-01-5	
Toluene	Not detected	60		ug/kg	64.6	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	64.6	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	64.6	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	64.6	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	64.6	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	64.6	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	64.6	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	64.6	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	64.6	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	64.6	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	64.6		
o-Xylene	Not detected	60		ug/kg	64.6	95-47-6	
Styrene	Not detected	60		ug/kg	64.6	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	64.6	98-82-8	
Bromoform	Not detected	100		ug/kg	64.6	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	64.6	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	64.6	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	64.6	103-65-1	
Bromobenzene	Not detected	100		ug/kg	64.6	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	64.6	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	64.6	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	64.6	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	64.6	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	64.6	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	64.6	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	64.6	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	64.6	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	64.6	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	64.6	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	64.6	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	64.6	96-12-8	
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	64.6	120-82-1	
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	64.6	87-61-6	
Naphthalene	Not detected	300		ug/kg	64.6	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	64.6	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.05
Sample Tag: JN-SB-03_SO-042721(5.7-6.7)
Collected Date/Time: 04/27/2021 08:50
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10.349/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 18:00, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	65.7	60-29-7	
Acetone	Not detected	1,000		ug/kg	65.7	67-64-1	
Methyl iodide	Not detected	100		ug/kg	65.7	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	65.7	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	65.7	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	65.7	107-13-1	
2-Butanone (MEK)	Not detected	990		ug/kg	65.7	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	65.7	75-71-8	
Chloromethane	Not detected	300		ug/kg	65.7	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	65.7	75-01-4	
Bromomethane	Not detected	300		ug/kg	65.7	74-83-9	
Chloroethane	Not detected	300		ug/kg	65.7	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	65.7	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	65.7	75-35-4	
Methylene chloride	Not detected	100		ug/kg	65.7	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	65.7	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	65.7	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	65.7	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	65.7	109-99-9	
Chloroform	Not detected	70		ug/kg	65.7	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	65.7	74-97-5	
1,1,1-Trichloroethane	Not detected	70		ug/kg	65.7	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	65.7	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	65.7	591-78-6	
Carbon tetrachloride	Not detected	70		ug/kg	65.7	56-23-5	
Benzene	Not detected	70		ug/kg	65.7	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	65.7	107-06-2	
Trichloroethene	Not detected	70		ug/kg	65.7	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	65.7	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	65.7	75-27-4	
Dibromomethane	Not detected	300		ug/kg	65.7	74-95-3	

Lab Sample ID: S23782.05 (continued)
Sample Tag: JN-SB-03_SO-042721(5.7-6.7)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 18:00, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	70		ug/kg	65.7	10061-01-5	
Toluene	Not detected	70		ug/kg	65.7	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	65.7	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	65.7	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	65.7	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	70		ug/kg	65.7	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	65.7	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	65.7	106-93-4	M
Chlorobenzene	Not detected	70		ug/kg	65.7	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	65.7	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	65.7	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	65.7		
o-Xylene	Not detected	70		ug/kg	65.7	95-47-6	
Styrene	Not detected	70		ug/kg	65.7	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	65.7	98-82-8	
Bromoform	Not detected	100		ug/kg	65.7	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	65.7	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	65.7	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	65.7	103-65-1	
Bromobenzene	Not detected	100		ug/kg	65.7	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	65.7	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	65.7	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	65.7	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	65.7	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	65.7	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	65.7	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	65.7	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	65.7	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	65.7	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	65.7	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	65.7	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	65.7	96-12-8	
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	65.7	120-82-1	
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	65.7	87-61-6	
Naphthalene	Not detected	300		ug/kg	65.7	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	65.7	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.06
Sample Tag: JN-SB-04_SO-042721(10.5-11.5)
Collected Date/Time: 04/27/2021 10:20
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	9.947/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	90	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 18:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	61.4	60-29-7	
Acetone	Not detected	1,000		ug/kg	61.4	67-64-1	
Methyl iodide	Not detected	100		ug/kg	61.4	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	61.4	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	61.4	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	61.4	107-13-1	
2-Butanone (MEK)	Not detected	920		ug/kg	61.4	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	61.4	75-71-8	
Chloromethane	Not detected	300		ug/kg	61.4	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	61.4	75-01-4	
Bromomethane	Not detected	200		ug/kg	61.4	74-83-9	
Chloroethane	Not detected	300		ug/kg	61.4	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	61.4	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	61.4	75-35-4	
Methylene chloride	Not detected	100		ug/kg	61.4	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	61.4	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	61.4	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	61.4	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	61.4	109-99-9	
Chloroform	Not detected	60		ug/kg	61.4	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	61.4	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	61.4	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	61.4	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	61.4	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	61.4	56-23-5	
Benzene	Not detected	60		ug/kg	61.4	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	61.4	107-06-2	
Trichloroethene	Not detected	60		ug/kg	61.4	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	61.4	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	61.4	75-27-4	
Dibromomethane	Not detected	300		ug/kg	61.4	74-95-3	

Lab Sample ID: S23782.06 (continued)
Sample Tag: JN-SB-04_SO-042721(10.5-11.5)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 18:23, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	60		ug/kg	61.4	10061-01-5	
Toluene	Not detected	60		ug/kg	61.4	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	61.4	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	61.4	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	61.4	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	61.4	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	61.4	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	61.4	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	61.4	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	61.4	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	61.4	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	61.4		
o-Xylene	Not detected	60		ug/kg	61.4	95-47-6	
Styrene	Not detected	60		ug/kg	61.4	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	61.4	98-82-8	
Bromoform	Not detected	100		ug/kg	61.4	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	61.4	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	61.4	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	61.4	103-65-1	
Bromobenzene	Not detected	100		ug/kg	61.4	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	61.4	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	61.4	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	61.4	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	61.4	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	61.4	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	61.4	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	61.4	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	61.4	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	61.4	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	61.4	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	61.4	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	61.4	96-12-8	
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	61.4	120-82-1	
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	61.4	87-61-6	
Naphthalene	Not detected	300		ug/kg	61.4	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	61.4	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.07
Sample Tag: JN-SB-05_SO-042721(12.3-13.3)
Collected Date/Time: 04/27/2021 13:05
Matrix: Soil
COC Reference: 137336

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	6.0	IR
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10.195/10	SW5035A	05/05/21 10:19	HAS	

Inorganics

Method: SM2540B, Run Date: 05/04/21 17:40, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 18:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	300		ug/kg	62.5	60-29-7	
Acetone	Not detected	1,000		ug/kg	62.5	67-64-1	
Methyl iodide	Not detected	100		ug/kg	62.5	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	62.5	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	62.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	62.5	107-13-1	
2-Butanone (MEK)	Not detected	940		ug/kg	62.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	62.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	62.5	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	62.5	75-01-4	
Bromomethane	Not detected	300		ug/kg	62.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	62.5	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	62.5	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	62.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	62.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	62.5	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	62.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	62.5	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	62.5	109-99-9	
Chloroform	Not detected	60		ug/kg	62.5	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	62.5	74-97-5	
1,1,1-Trichloroethane	Not detected	60		ug/kg	62.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	62.5	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	62.5	591-78-6	
Carbon tetrachloride	Not detected	60		ug/kg	62.5	56-23-5	
Benzene	Not detected	60		ug/kg	62.5	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	62.5	107-06-2	
Trichloroethene	Not detected	60		ug/kg	62.5	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	62.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	62.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	62.5	74-95-3	

Lab Sample ID: S23782.07 (continued)

Sample Tag: JN-SB-05_SO-042721(12.3-13.3)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/07/21 18:46, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
cis-1,3-Dichloropropene	Not detected	60		ug/kg	62.5	10061-01-5	
Toluene	Not detected	60		ug/kg	62.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	62.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	62.5	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	62.5	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	60		ug/kg	62.5	110-57-6	
Dibromochloromethane	Not detected	100		ug/kg	62.5	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	62.5	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	62.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	62.5	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	62.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	62.5		
o-Xylene	Not detected	60		ug/kg	62.5	95-47-6	
Styrene	Not detected	60		ug/kg	62.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	62.5	98-82-8	
Bromoform	Not detected	100		ug/kg	62.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	62.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	62.5	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	62.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	62.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	62.5	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	62.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	62.5	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	62.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	62.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	62.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	62.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	62.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	62.5	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	62.5	104-51-8	
Hexachloroethane	Not detected	400		ug/kg	62.5	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	62.5	96-12-8	
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	62.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	62.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	62.5	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	62.5	91-57-6	

M-Result reported to MDL not RDL

Lab Sample ID: S23782.26
Sample Tag: Trip Blank
Collected Date/Time: 04/30/2021 00:01
Matrix: Methanol
COC Reference: 137338

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	6.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10/10	SW5035A	05/05/21 10:19	HAS	

Organics - Volatiles

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/10/21 14:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl ether	Not detected	200		ug/kg	50	60-29-7	
Acetone	Not detected	1,000		ug/kg	50	67-64-1	
Methyl iodide	Not detected	100		ug/kg	50	74-88-4	
Carbon disulfide	Not detected	300		ug/kg	50	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1	
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8	
Chloromethane	Not detected	300		ug/kg	50	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4	
Bromomethane	Not detected	200		ug/kg	50	74-83-9	
Chloroethane	Not detected	300		ug/kg	50	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2	
Tetrahydrofuran*	Not detected	1,000		ug/kg	50	109-99-9	
Chloroform	Not detected	50		ug/kg	50	67-66-3	
Bromochloromethane	Not detected	100		ug/kg	50	74-97-5	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1	
2-Hexanone	Not detected	3,000		ug/kg	50	591-78-6	
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5	
Benzene	Not detected	50		ug/kg	50	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5	
Toluene	Not detected	50		ug/kg	50	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	50		ug/kg	50	110-57-6	

Lab Sample ID: S23782.26 (continued)
Sample Tag: Trip Blank

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 05/10/21 14:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	50		
o-Xylene	Not detected	50		ug/kg	50	95-47-6	
Styrene	Not detected	50		ug/kg	50	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8	
Bromoform	Not detected	100		ug/kg	50	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8	
Hexachloroethane	Not detected	300		ug/kg	50	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	300		ug/kg	50	96-12-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6	
Naphthalene	Not detected	300		ug/kg	50	91-20-3	
2-Methylnaphthalene	Not detected	100		ug/kg	50	91-57-6	

M-Result reported to MDL not RDL

Merit Laboratories Login Checklist

Lab Set ID: S23782
Client: ARCADIS_NOVI (ARCADIS U.S., Inc.)
Project: 30075936 / Racer PNC
Submitted: 05/04/2021 09:20 Login User: MMC

Attention: Brad Saunders
Address: Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1904 FAX:
Email: brad.saunders@arcadis.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 6.0
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[X] Yes	[ ] No	[ ] N/A	COC adequately filled out	
07.	[ ] Yes	[X] No	[ ] N/A	COC signed and relinquished to the lab	Page 1 was not signed
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[ ] No	[X] N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories, Inc.
2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 2

137336

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Brad Saunders, ~~Colleen Barton~~ Lexi Crisp
COMPANY: Arcadis
ADDRESS: 28550 Cabot Drive
CITY: Novi STATE: MI ZIP CODE: 48377
PHONE NO.: 248 994 2240 FAX NO.: 248 9942241 P.O. NO.: 30075936
E-MAIL ADDRESS: Brad.Saunders@arcadis.com, ~~Colleen.Barton@arcadis.com~~ Lexi.Crisp@arcadis.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 30075936 / Racer PNC
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Seth Turner / Seth Turner

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
Project Locations: ☐ Detroit ☐ New York ☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs / 8260	PAHs / 8270
23782.01	4/26/21	1210	JN-SB-01_SO-042621(5.5-6.5)	S	2	1						1	X	+ 5
.02	4/26/21	1215	JN-SB-01_SO-042621(12.1-13.1)	S	2	1						1		+ 5
.03	4/26/21	1405	JN-SB-02_SO-042621(11-12)	S	2	1						1		+ 5
.04	4/26/21	1410	JN-SB-02_SO-042621(14-15)	S	2	1						1		+ 5
.05	4/27/21	0850	JN-SB-03_SO-042721(5.7-6.7)	S	2	1						1		+ 5
.06	4/27/21	1020	JN-SB-04_SO-042721(10.5-11.5)	S	2	1						1		+ 5
.07	4/27/21	1305	JN-SB-05_SO-042721(12.3-13.3)	S	2	1						1		+ 5
.08	4/29/21	1405	JS-SB-01_SO-042921(7.5-8.5)	S	2	1						1	X	
.09	4/27/21	1430	JS-SB-02_SO-042721(11-12)	S	2	1						1		
.10	4/28/21	0920	JS-SB-03_SO-042821(2-3)	S	2	1						1		
.11	4/28/21	0930	JS-SB-03_SO-042821(11.2-12.2)	S	2	1						1		
.12	4/28/21	1130	JS-SB-04_SO-042821(4.6-5.6)	S	2	1						1		

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Seth Turner / Arcadis ☒ Sampler	DATE: 4/30/21	TIME: 1530	
RECEIVED BY: SIGNATURE/ORGANIZATION: Novi cold storage / Arcadis	DATE: 4/30/21	TIME: 1630	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION: M Chilcote	DATE: 5/4/21	TIME: 0920	
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:	NOTES: TEMP. ON ARRIVAL: 6.0		
SEAL NO.: SEAL INTACT YES ☐ NO ☐ INITIALS:			

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # 2 OF 2

137338

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Brad Saunders, Lexi Crisp
COMPANY: Arcadis
ADDRESS: 28550 Cabot Drive
CITY: Novi STATE: MI ZIP CODE: 48377
PHONE NO.: FAX NO.: P.O. NO.: 30075936
E-MAIL ADDRESS: Brad.Saunders@arcadis.com, Lexi.Crisp@arcadis.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Racer PNC/30075936
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Seth Turner/Sth turner

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs/8260	PAH's/8270	Special Instructions
23782.13	4/28/21	1400	JS-SB-05_SO-042821(5-6)	S	2	1						1	X	X	
.14	4/28/21	1405	JS-SB-05_SO-042821(7-8)	S	2	1						1			
.15	4/28/21	1450	JS-SB-06_SO-042821(12.1-13.1)	S	2	1						1			
.16/.17/.18	4/29/21	0910	JS-SB-07_SO-042921(12.4-13.4)	S	6	3						3			MS/MSD
.19	4/29/21	—	DUP-01_SO-042921	S	2	1						1			
.20	4/29/21	1030	JS-SB-08_SO-043021(4.2-5.2)	S	2	1						1			
.21	4/29/21	—	DUP-02_SO-042921	S	2	1						1			
.22	4/30/21	0905	JS-SB-09_SO-043021(9-10)	S	2	1						1			
.23	4/30/21	0900	JS-SB-09_SO-043021(10-11)	S	2	1						1			
.24	4/30/21	1030	JS-SB-10_SO-043021(14-15)	S	2	1						1			
.25	4/30/21	1140	JS-SB-11_SO-043021(12.4-13.4)	S	2	1						1			
.26			Trip Blank												

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Sth turner/Arcadis ☒ Sampler	DATE 4/30/21	TIME 1530
RECEIVED BY: SIGNATURE/ORGANIZATION	Novi cold Storage/Arcadis	DATE 4/30/21	TIME 1530
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Sth turner/Arcadis	DATE 5/4/21	TIME 0920
RECEIVED BY: SIGNATURE/ORGANIZATION	M Chilcote	DATE 5/4/21	TIME 0920

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Novi cold Storage/Arcadis	DATE 5/4/21	TIME 0730
RECEIVED BY: SIGNATURE/ORGANIZATION	Sth turner/Arcadis	DATE 5/4/21	TIME 0730

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 6.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Analytical Laboratory Report

Report ID: S24102.01(01)
Generated on 05/19/2021

Report to

Attention: Alexis Crisp
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: n/a FAX:
Email: Alexis.Crisp@arcadis.com

Addtional Contacts: Brad Saunders

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S24102.01-S24102.06
Project: Racer PNC / 30075936 Task 5
Collected Date(s): 05/10/2021
Submitted Date/Time: 05/12/2021 13:55
Sampled by: Seth Turner
P.O. #: 30075936 TASK 5

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)
PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."
Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Report Narrative

There is no additional narrative for this analytical report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S24102.01	JN-SB-01_GW-051021	Groundwater	05/10/21 08:45
S24102.02	JN-SB-02_GW-051021	Groundwater	05/10/21 09:40
S24102.03	JN-SB-03_GW-051021	Groundwater	05/10/21 10:30
S24102.04	JN-SB-04_GW-051021	Groundwater	05/10/21 11:05
S24102.05	JN-SB-05_GW-051021	Groundwater	05/10/21 12:00
S24102.06	Trip Blank	Water	05/10/21 00:01

Lab Sample ID: S24102.01
Sample Tag: JN-SB-01_GW-051021
Collected Date/Time: 05/10/2021 08:45
Matrix: Groundwater
COC Reference: 137668

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/17/21 12:00	BML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 03:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Bromoform	Not detected	1		ug/L	1	75-25-2	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S24102.01 (continued)
Sample Tag: JN-SB-01_GW-051021

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 03:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	1	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
o-Xylene	Not detected	1		ug/L	1	95-47-6	
p,m-Xylene*	Not detected	2		ug/L	1		

Lab Sample ID: S24102.02
Sample Tag: JN-SB-02_GW-051021
Collected Date/Time: 05/10/2021 09:40
Matrix: Groundwater
COC Reference: 137668

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/17/21 12:00	BML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 03:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Bromoform	Not detected	1		ug/L	1	75-25-2	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S24102.02 (continued)
Sample Tag: JN-SB-02_GW-051021

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 03:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
o-Xylene	Not detected	1		ug/L	1	95-47-6	
p,m-Xylene*	Not detected	2		ug/L	1		

Lab Sample ID: S24102.03
Sample Tag: JN-SB-03_GW-051021
Collected Date/Time: 05/10/2021 10:30
Matrix: Groundwater
COC Reference: 137668

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/17/21 12:00	BML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 04:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Bromoform	Not detected	1		ug/L	1	75-25-2	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S24102.03 (continued)
Sample Tag: JN-SB-03_GW-051021

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 04:17, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
o-Xylene	Not detected	1		ug/L	1	95-47-6	
p,m-Xylene*	Not detected	2		ug/L	1		

Lab Sample ID: S24102.04
Sample Tag: JN-SB-04_GW-051021
Collected Date/Time: 05/10/2021 11:05
Matrix: Groundwater
COC Reference: 137668

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/17/21 12:00	BML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 04:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Bromoform	Not detected	1		ug/L	1	75-25-2	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S24102.04 (continued)
Sample Tag: JN-SB-04_GW-051021

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 04:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
o-Xylene	Not detected	1		ug/L	1	95-47-6	
p,m-Xylene*	Not detected	2		ug/L	1		

Lab Sample ID: S24102.05
Sample Tag: JN-SB-05_GW-051021
Collected Date/Time: 05/10/2021 12:00
Matrix: Groundwater
COC Reference: 137668

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.1	IR
1	1L Amber	None	Yes	5.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/17/21 12:00	BML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 05:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Bromoform	Not detected	1		ug/L	1	75-25-2	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	

Lab Sample ID: S24102.05 (continued)
Sample Tag: JN-SB-05_GW-051021

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 05:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
o-Xylene	Not detected	1		ug/L	1	95-47-6	
p,m-Xylene*	Not detected	2		ug/L	1		

Lab Sample ID: S24102.06
Sample Tag: Trip Blank
Collected Date/Time: 05/10/2021 00:01
Matrix: Water
COC Reference: 137668

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	05/17/21 12:00	BML	

Organics - Volatiles

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 01:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
Bromochloromethane	Not detected	1		ug/L	1	74-97-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Bromoform	Not detected	1		ug/L	1	75-25-2	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Chloroform	Not detected	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Diethyl ether	Not detected	10		ug/L	1	60-29-7	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	1		ug/L	1	110-57-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	

Lab Sample ID: S24102.06 (continued)
Sample Tag: Trip Blank

Volatile Organics - DEQ List, Method: SW5030C/8260C, Run Date: 05/15/21 01:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
Hexachloroethane	Not detected	5		ug/L	1	67-72-1	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
2-Methylnaphthalene	Not detected	5		ug/L	1	91-57-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Methyl iodide	Not detected	1		ug/L	1	74-88-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Tetrahydrofuran*	Not detected	90		ug/L	1	109-99-9	
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
o-Xylene	Not detected	1		ug/L	1	95-47-6	
p,m-Xylene*	Not detected	2		ug/L	1		

Merit Laboratories Login Checklist

Lab Set ID: S24102
Client: ARCADIS_NOVI (ARCADIS U.S., Inc.)
Project: Racer PNC / 30075936 Task 5
Submitted: 05/12/2021 13:55 Login User: SRS

Attention: Alexis Crisp
Address: Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: n/a FAX:
Email: Alexis.Crisp@arcadis.com

Selection				Description	Note
Sample Receiving					
01.	[X] Yes	[ ] No	[ ] N/A	Samples are received at 4C +/- 2C Thermometer #	IR 5.1
02.	[X] Yes	[ ] No	[ ] N/A	Received on ice/ cooling process begun	
03.	[ ] Yes	[X] No	[ ] N/A	Samples shipped	
04.	[ ] Yes	[X] No	[ ] N/A	Samples left in 24 hr. drop box	
05.	[ ] Yes	[ ] No	[X] N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody					
06.	[ ] Yes	[X] No	[ ] N/A	COC adequately filled out	Trip blank not listed
07.	[X] Yes	[ ] No	[ ] N/A	COC signed and relinquished to the lab	
08.	[X] Yes	[ ] No	[ ] N/A	Sample tag on bottles match COC	
09.	[ ] Yes	[X] No	[ ] N/A	Subcontracting needed? Subcontacted to:	
Preservation					
10.	[X] Yes	[ ] No	[ ] N/A	Do sample have correct chemical preservation	
11.	[ ] Yes	[ ] No	[X] N/A	Completed pH checks on preserved samples? (no VOAs)	
12.	[ ] Yes	[X] No	[ ] N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions					
13.	[X] Yes	[ ] No	[ ] N/A	All bottles intact	
14.	[X] Yes	[ ] No	[ ] N/A	Appropriate analytical bottles are used	
15.	[X] Yes	[ ] No	[ ] N/A	Merit bottles used	
16.	[X] Yes	[ ] No	[ ] N/A	Sufficient sample volume received	
17.	[ ] Yes	[X] No	[ ] N/A	Samples require laboratory filtration	
18.	[X] Yes	[ ] No	[ ] N/A	Samples submitted within holding time	
19.	[ ] Yes	[X] No	[ ] N/A	Do water VOC or TOX bottles contain headspace	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 1

137668

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Lexi Crisp, Brad Saunders
COMPANY: Arcadis
ADDRESS: 28550 Cabot Drive
CITY: Novi STATE: MI ZIP CODE: 48377
PHONE NO.: FAX NO.: P.O. NO.: 30075936 Task 5
E-MAIL ADDRESS: Lexi.Crisp@arcadis.com Brad.Saunders@arcadis.com QUOTE NO.:

INVOICE TO

CONTACT NAME: ☒ SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: Racer PNC / 30075936 Task 5
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Seth Turner / Seth Turner

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☒ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☐ New York
☐ Other
Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	VOCs	PAHs ST
24402.01	5/10/21	845	JN-SB-01_GW-051021	GW	4	1	3						X	X
.02		940	JN-SB-02_GW-051021	GW	4	1	3							
.03		1030	JN-SB-03_GW-051021	GW	4	1	3							
.04		1105	JN-SB-04_GW-051021	GW	4	1	3							
.05	↓	1200	JN-SB-05_GW-051021	GW	4	1	3							
.06														

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Seth Turner / Arcadis ☒ Sampler	DATE: 5/12/21	TIME: 1355	
RECEIVED BY: SIGNATURE/ORGANIZATION: [signature]	DATE: 5/12/21	TIME: 1355	
RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	

RELINQUISHED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
RECEIVED BY: SIGNATURE/ORGANIZATION:	DATE:	TIME:	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL: 5.1
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Novi, Michigan 48377

Tel 248 994 2240

Fax 248 994 2241

www.arcadis.com