

Revitalizing Auto Communities Environmental
Response Trust (RACER)

FIERO PROPERTY WELL INSTALLATION AND GROUNDWATER MONITORING REPORT

Pontiac North Campus Site

May 14, 2021

A large, solid orange geometric shape, resembling a right-angled triangle or a trapezoid, is positioned in the bottom right corner of the page. It is oriented with its hypotenuse facing the top right. A thin white diagonal line runs from the bottom left corner of the shape towards the top right corner. A thin white horizontal line crosses the shape near its base.

FIERO PROPERTY WELL INSTALLATION AND GROUNDWATER MONITORING REPORT



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1 INTRODUCTION AND OBJECTIVE

This *Fiero Property Well Installation and Groundwater Report* describes the installation of monitoring wells completed in July-August 2020 and summarizes the results of three groundwater sampling events completed to date. The new monitoring wells were installed on the west side of the former Fiero Assembly and Powerhouse properties located on the Revitalizing Auto Communities Environmental Response Trust (RACER) Pontiac North Campus Site (Site) located in Pontiac, Michigan (**Figure 1**). This report replaces the previous draft dated January 23, 2021 that was submitted to both the United States Environmental Protection Agency (USEPA) and Michigan Department of Environment, Great Lakes, and Energy (EGLE), and incorporates additional information in response to USEPA and EGLE comments on previous draft reports.

The objective of well installation and sampling was to define potential off-site groundwater impacts downgradient of monitoring well MWF16-23 located on the west Site boundary near the property line between the former Fiero Assembly and Powerhouse (Fiero) properties. This report includes recommended actions to further evaluate the groundwater impacts related to possible off-site VI risks from groundwater impacts.

2 BACKGROUND

2.1 Site-Specific VI Criteria Development

As summarized in the *2019 Annual Groundwater Monitoring Report* (Arcadis 2020a), the results of the October 2019 groundwater sampling event indicated that MWF16-23 contained trichloroethene (TCE) at a concentration exceeding the Michigan EGLE Residential Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (RIASL) (MDEQ 2017). No other volatile organic compounds (VOCs) at MWF16-23 exceeded RIASLs, and no other boundary wells at the Fiero properties or Site exceeded RIASLs. Based on the RIASL exceedance at MWF16-23, a request was made to EGLE to develop site-specific volatilization to indoor air criteria (SSVIAC) for VOCs in groundwater for the Fiero properties under the scenario of not in contact with groundwater. EGLE issued SSVIAC to RACER for the Fiero properties on April 21, 2020. Those SSVIAC were used to compare to the groundwater data to determine the need for any additional action. Parcel and structure details were also gathered for several properties immediately downgradient of MWF16-23 to determine which VI scenarios were applicable both on- and off-site.

MWF16-23 contained TCE concentrations (15 and 20 ppb [2018, 2019, respectively]) that exceed the Residential slab-on-grade SSVIAC (15 ppb) and the Residential basement SSVIAC (8.1 ppb). Based on these exceedances, further evaluation was necessary to evaluate the two residential properties located downgradient that include finished basements. As outlined in the Interstate Technology Regulatory Council (ITRC) VI Guidance (ITRC 2007a and 2007b), which as of December 2019 is incorporated by reference into Appendix B.3 of EGLE's Guidance Document for the Vapor Intrusion Pathway (MDEQ 2013), if a structure is located within 100 feet of a groundwater concentration of regulatory concern, further evaluation should be completed assess the potential exposure pathway.

Based on this guidance, the *Fiero Property VI Well Installation Scope of Work* (SOW) was prepared, submitted and approved by USEPA and EGLE on May 7, 2020 (Arcadis 2020b). The SOW proposed the installation and monitoring of four groundwater monitoring wells downgradient of MWF16-23. Monitoring well placement was designed to define potential off-site groundwater impacts approaching the 100-foot buffer zone around the two downgradient residential properties. The buffer zone and location of the off-site residences is included on Figure 2 of *Fiero Property VI Well Installation SOW* (Arcadis 2020b) as well as the groundwater analytical figure discussed in section 4.2. Two of the proposed monitoring wells were along the western Site boundary, and two of the monitoring wells were proposed in downgradient locations within in the public rights-of-way (ROWs) at East Kennett Road and St. Clair Street.

2.2 Former Fiero Property History

Historical references indicate the former Fiero Assembly and Fiero Powerhouse properties were developed in the 1920s-1930s. The former Fiero Assembly property was originally constructed as an automobile finishing and assembly plant manufacturing auto bodies for Oakland Motor Cars operated under the Fisher Body Corporation Division of the former General Motors Corporation (GMC). Historical references indicate the presence of steel storage and fabrication operations; trim ship operations; lacquer mixing, spraying and drying operations; printing and upholstering operations, and woodworking and assembly operations. These operations continued through the late 1970s, when the facility was retooled to manufacture and assemble Fiero vehicles, which occurred for an approximate 10-year period from 1980 through 1990. From the time GMC ceased manufacturing Fiero models and decommissioned assembly operations in the early 1990s until the late 2000s, the former Fiero Assembly building was used for prototyping, storage and other non-manufacturing processes. While details pertaining to exact dates and potential sources of chlorinated VOCs were not documented in available documentation and are unable to be confirmed, it is possible based on available literature that chlorinated solvents could have been used in operations from as early as the 1930s through the mid-1980s. After MLC's (GMC's) bankruptcy, RACER's receipt and sale of the property, the majority of the Former Fiero Assembly Plant building was demolished in 2011 and 2012. The Site is currently occupied by GFL, Inc. who operates a waste transfer facility. RACER decommissioned and demolished the Fiero Powerhouse facility from 2019 to 2020.

The Current Conditions review conducted by GMC in 2000, subsequent RFI investigation activities conducted by GMC in the early 2000s, and the results of groundwater monitoring activities have shown locations throughout the former Fiero Assembly and Powerhouse where chlorinated VOCs (cVOCs) are present in soil and/or groundwater. However, prior GMC and RACER versions of the RFI did not recommend further action for these Site soils based on cleanup criteria promulgated at that time, evaluation of exposure pathways and risk, and institutional controls in place or expected to be in place following redevelopment. While appropriate institutional controls have been implemented on-site, recent changes to Michigan cleanup guidance levels for the vapor intrusion to indoor air exposure pathway have resulted in a need to re-evaluate potential off-site VI risks from cVOC impacts at the Site.

To better identify possible cVOC sources to groundwater at the former Fiero property, a historical review of soil analytical data was completed. Soil data was collected in 2001 through 2006 and results were evaluated to identify areas with cVOC-impacted soil that could potentially be source areas to groundwater. Several interior locations at the former Fiero property have elevated cVOC soil

concentrations (**Figure 4**). The historical soil analytical data including all VOCs results are included in **Attachment 5**.

3 FIELD ACTIVITIES

Soil boring advancement and monitoring well installation took place in two separate field events. Utility locating activities and well installation/development for the two on-site wells occurred from July 20 through 22, 2020. Following the receipt of a ROW permit from the City of Pontiac described below, utility locating activities and well installation/development for the off-site wells occurred from August 24 through 25, 2020. Well locations were surveyed on August 31, 2020. Groundwater level measurements and sampling took place from August 31 through September 2, 2020, December 7-9, 2020, and March 9-12, 2021. Details of the field activities are summarized below.

3.1 Permitting/Notifications

In preparation for off-site well installation activities, Arcadis prepared a Right-Of-Way (ROW) Permit Application and submitted it to the City of Pontiac on May 26, 2020. The City of Pontiac issued ROW Permit #20-0255 on July 31, 2020 which authorized installation of the two groundwater monitoring wells in the East Kennett Road ROW and St. Clair Street ROW. A copy of the ROW Permit and application are included in **Attachment 1**.

3.2 Utility Locating

Prior to completing drilling activities for each of the two events, utility clearance was performed using a minimum of three lines of evidence, which consisted of contacting MISSDIG (Ticket Numbers B002301611 and B002301650) to clear public utilities, clearing using a hand auger to a depth of 5 feet below ground surface (bgs), and utilizing a private utility locator. Private utility clearance was performed by Terra Probe Environmental, Inc. utilizing Ground Penetrating Radar (GPR) and electromagnetic (EM) techniques to identify potential utilities.

3.3 Monitoring Well Installation, Development & Surveying

A total of four monitoring wells were installed to provide additional characterization of groundwater impacts: one monitoring well was installed downgradient of MWF16-23 (MWOS-09), two monitoring wells were installed between MWF16-23 and MW-05-18 (MW-06-20 and MW-07-20), and one monitoring well was installed to the south of the area between MWF16-23 and MWF16-25 (MWOS-08) (**Figure 2**). Arcadis subcontracted Terra Probe Environmental, Inc. to install and develop the four new monitoring wells. Soil borings were advanced to a maximum depth of 33 feet bgs using direct-push drilling methodology. Soil core samples were collected continuously for description, screening for VOCs, and documentation of saturated conditions. Soil from each of the four borings was continuously monitored with a photoionization detector (PID); no soil had detections exceeding the 0.1 part per million (ppm) detection limit. Monitoring wells were installed using a direct push technology (DPT) rig and hollow stem augers and constructed with 2-inch diameter Schedule-40 PVC well materials and a 5-foot, 10-slot PVC screen set to split the water table. The filter pack was installed approximately 2 feet above the top of the screen followed by a hydrated bentonite chip seal. Monitoring wells were finished with flush mounted well

vaults and developed using pumping and surge methods. Soil cuttings and purge water were drummed and stored at a secure location at the RACER Pontiac North Campus pending off-site transportation and disposal. Soil boring and well construction logs are included in **Attachment 2**. After well installation and development, Surveying Solutions, Inc. (SSI) surveyed the horizontal location, ground elevation and the top-of-casing measuring point elevation of each monitoring well.

3.4 Groundwater Gauging and Sampling

Three separate groundwater gauging and sampling events were conducted in 2020 and 2021. The first from August 31 – September 2, the second from December 7 – 9, and the third from March 8 – 11. All wells gauged and sampled from these events are outlined in **Table 1**. Wells that were gauged and sampled over the three events were modified from the original scope, per USEPA approval, to include upgradient wells and expanded sampling network. Field staff were unable to gauge MWF16-18 during the March event as planned due to blockage from a gravel pile from the parcel owner. The gravel pile was moved later in the week for sampling access. Groundwater elevations were calculated using surveyed top-of-well casing elevations. A summary of water levels and groundwater elevations is presented in **Table 2**.

Groundwater samples were collected when parameters stabilized per USEPA Low Flow Sampling guidance (USEPA 2017) and submitted to Merit Laboratories, Inc. in Lansing, MI for analysis of VOCs utilizing USEPA Method 8260C and USEPA Method 8260B SIM for 1,4-dioxane. During sampling, purge water was monitored for dissolved oxygen (DO), temperature, specific conductivity, turbidity, oxygen reduction potential (ORP), and pH. Groundwater Sampling Logs from both sampling events are included in **Attachment 3**. A summary of wells sampled over the three events can be found in **Table 1**. During the March event, MWOS-09 went dry shortly after commencing low-flow purging and did not recover enough water to be sampled. It has been gauged periodically since the March event and has remained dry. As of the March groundwater sampling event, it had been a relatively dry several months, and in general groundwater elevations in the monitoring wells sampled observed in March 2021 are lower than those observed during August and December 2020 events.

3.5 Utility Review

Based on USEPA and EGLE correspondence after review of the August-September 2020 groundwater sampling results, a combined field and desktop review was conducted in October 2020 to compile details about utilities in the vicinity of the investigation area. The purpose of the review was to assess the potential risk for groundwater and/or vapor contaminants to migrate through utility corridors to identified receptors. Activities included submittal of a design ticket to MISSDIG and review of available maps and details obtained from responses, incorporation of information documented from a review of previous investigation activity records, and complete a field event to document the actual locations of utilities visibly apparent from the surface. Information received from the MISS-DIG request included that for gas, sanitary sewer, electric, and telecommunications utilities. No responses were received for water or storm sewer. However, information on these utilities is available from previous investigation records, and identified surface features were incorporated into the review.

4 GAUGING AND GROUNDWATER SAMPLING RESULTS

4.1 Groundwater Elevation

Groundwater elevations from unconfined water table monitoring wells (screened across the water table) were used to create a shallow groundwater surface map for all groundwater sampling events (**Figure 3a, 3b and 3c**). Groundwater elevations indicated that apparent shallow groundwater flow across the Site is generally to the southwest, which aligns with previous site-wide groundwater elevation data collected on an annual basis.

4.2 Groundwater Analytical Results

Based on the results of the groundwater sampling, there is an area of elevated TCE and PCE in groundwater located in the central part of the former Fiero Assembly property. Groundwater elevation indicates that groundwater flow direction in the area of impact is toward the southwest, consistent with the predominant groundwater flow direction at the larger Site. Groundwater impacts extend from the central area toward the southwest property boundary. The TCE and PCE groundwater extent above Residential SSVIAC criteria is included on **Figure 5**. Nonresidential SSVIAC groundwater exceedances have not been identified at the Site.

August-September 2020

- TCE was detected at Fiero property boundary well MWF16-23 at concentrations that exceed Residential SSVIAC for both slab-on-grade and basement VI scenarios.
- The three on-site wells located at the 100-foot VI buffer zone (MW-06-20, MW-07-20, and MW-05-18) did not contain cVOCs that exceeded Residential SSVIAC.
- Off-site downgradient wells (MWOS-09 and MSOW-09) did not detect TCE or PCE. Only cis-1,2-DCE was detected at these locations at concentrations below the Residential SSVIAC.

December 2020

- The three on-site wells near the 100-foot VI buffer zone (MW-06-20, MW-07-20, and MW-05-18) did not contain cVOCs which exceeded Residential or Nonresidential SSVIAC.
- MWF16-05 was added to the December 2020 sampling event to further investigate upgradient cVOC concentrations. The analytical results for MWF16-05 show concentrations of tetrachloroethene (PCE) and TCE that are below Nonresidential SSVIAC but exceed Residential SSVIAC.
- Fiero property boundary well MWF16-23 continued to exceed Residential SSVIAC for TCE.

March 2021

- The concentration of TCE at Fiero property boundary well MWF16-23 remained consistent (21 µg/L) and above the residential SSVIAC.
- Two of the three on-site wells near the 100-foot VI buffer (MW-07-20 and MW-05-18) did not contain cVOCs which exceeded Residential SSVIAC. However, the TCE concentration at MW-06-20 exceeded Residential SSVIAC for a basement scenario.

In summary, groundwater sampling completed since 2017, including the recent sampling events to further evaluate the off-site VI pathway, suggest increasing concentrations in the central portion of the former Fiero Assembly property and increasing concentrations extending toward and up to the southwest property boundary. The March 2021 event includes an exceedance of residential SSVIAC within the 100-foot buffer zone associated with the two off-site residential properties.

4.3 Vapor Intrusion Exposure Pathway Evaluation

The purpose of this section is to provide additional details that may impact or affect the VI pathway and the extent to which certain factors in addition the EGLE-issued SSVIAC criteria, such as the presence of utilities, may impact the potential for the pathway to become complete. Potentially relevant VI exposure pathways and criteria of potential relevance for RACER include offsite Non-residential and Residential SSVIAC for groundwater.

Developed as a result of utility review activities discussed in Section 3.5, **Figure 6** depicts the approximate locations of known utilities in East Kennett Road, St Clair Street, and within the southwestern Fiero property boundary in the vicinity of the investigation area. Utilities identified and further evaluated for potential influence in the paragraphs below include storm sewer, sanitary sewer, gas, and water lines. For potentially deeper utilities, the City of Pontiac provided maps depicting that sanitary sewer lines in the area exist at approximately 963 ft above mean sea level (AMSL), which is approximately 12 feet bgs. The MISSDIG desktop review did not provide depths of other utilities except for the sanitary sewer, which is expected to be the deepest utility. Due to the utilities in this area being 12 feet or more above the water table, any migrating groundwater impacts would not be in contact with the utilities. Based on the on-site utility review and review of upgradient soil and groundwater data, there does not appear to be on-site utilities that intercept potential source areas and/or provide a preferential pathway into existing off-site structures.

Current residential and non-residential structures exist off-site near the Fiero property boundary. Until the March 2021 groundwater monitoring event, there were no identified exceedances of residential or non-residential SSVIAC within a 100-foot radius of these structures. However, results of the March 2021 groundwater monitoring event did indicate that the concentration of TCE at MW-06-20 exceeded Residential SSVIAC for a basement scenario approximately 100-feet from a residential structure. Based on an evaluation of available data and trends, recommendations are proposed below to further evaluate the potential for off-site vapor intrusion.

5 RECOMMENDATIONS

Based on evaluation of the available information, the following actions are recommended:

- As proposed in the approved SOW, and to evaluate seasonal and short-term VOC trends in groundwater, continued quarterly groundwater monitoring events through at least the end of 2021 is recommended. Events are recommended in June, September and December 2021. Each event will consist of collecting groundwater level measurements and groundwater samples from the following wells: MW-06-20, MW-07-20, MWOS-08, MWOS-09, MWF16-05, MWF16-06, MWF16-11, MWF16-

12, MWF16-16, MWF16-17, MWF16-18, MWF16-23, MWF16-25, and MW-05-18. In addition, for the June 2021 event, groundwater level measurements and groundwater samples will be collected from MWF7-02, MWF7-03, and MWF15-01. The following changes are proposed to the SOW:

- No further monitoring of MWF16-07. This well was sampled in the December 2020 event however, the monitoring well is screened in clay approximately fifteen feet above other nearby wells and is representative of very localized perched conditions. Results at this location to date show no detections of VOCs.
 - Collect groundwater level measurements and samples from MWF16-12, MWF16-17, and MWF16-18 in order to provide additional data from the area where the highest concentrations of PCE have been detected. Also measure groundwater levels, but no samples collected, at MWF16-15, MWF16-22, and MWF16-26.
 - Collect groundwater level measurements and samples from MWF1-R, MWF-2, MWF7-02, MWF7-03, MWF8-01, MWF12-01R, MWF15-01, and MWF16-10 during the June 2021 event to provide additional detail for groundwater flow contours and delineation of VOC impacts in groundwater.
 - Remove analysis for 1,4-dioxane by Method 8260B SIM from the analyte list for this evaluation as detections of 1,4-dioxane have been minimal and no exceedances of SSVIAC have been observed for 1,4-dioxane.
- Use existing and historical data, Site history, and boring log information to compile a conceptual site model (CSM) for cVOCs at the former Fiero property to aid in determining potential future recommendations.
 - Based on initial observations of trending and the concentration of TCE detected at MW-06-20, install a new water table groundwater monitoring well (MW-08-21) and a nearby nested pair of soil vapor monitoring points (SVMPs) located at the Site boundary southwest of MW-06-20 just within the 100-foot VI buffer zone (**Figure 7**) associated with the two residential properties located off-site. The new monitoring well will be constructed similarly to the four monitoring wells installed in July-August 2020 as described in the May 7, 2020 *Fiero Property VI Well Installation Scope of Work* (SOW). Based on Site conditions observed at MW-06-20, the groundwater monitoring well will evaluate the extent to which groundwater impacts have migrated southwest from MW-06-20 in the direction of the off-site residential properties. The SVMPs will target the vadose zone with the first interval located approximately 2 feet above the seasonal water table maximum and the second located approximately 1 foot below the upper silty clay unit. Refer to the soil boring log for MW-06-20 in Attachment 2.

Soil will be continuously screened using a PID during installation and logs will be developed for both of the new soil vapor monitoring ports and the new monitoring well. At each of the three locations, soil samples will be collected at the two depths where each of the two soil vapor ports will be located. Soil will be submitted for laboratory analysis of moisture content and VOCs utilizing USEPA Method 8260C. Soil gas will be sampled from both points within 7 days following installation, and then quarterly through 2021. Soil gas samples will be analyzed for VOCs via USEPA Method TO-15.

Quarterly monitoring events are tentatively scheduled to occur in June, September, and December 2021. Groundwater samples will also be analyzed for VOCs utilizing USEPA Method 8260C, which does not include 1,4-dioxane. Brief summaries of groundwater and soil gas sampling will be provided in technical memorandum updates to USEPA and EGLE within approximately 8 weeks after completing each of the quarterly monitoring events. Details of the CSM and any associated recommendations will be

incorporated into the technical memorandum update prepared after conduction of the June 2021 groundwater monitoring event.

6 REFERENCES

Arcadis, Inc. (Arcadis) 2020a. 2019 Annual Groundwater Monitoring Report, RACER Trust, Pontiac Michigan, February 18, 2020.

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FIGURES






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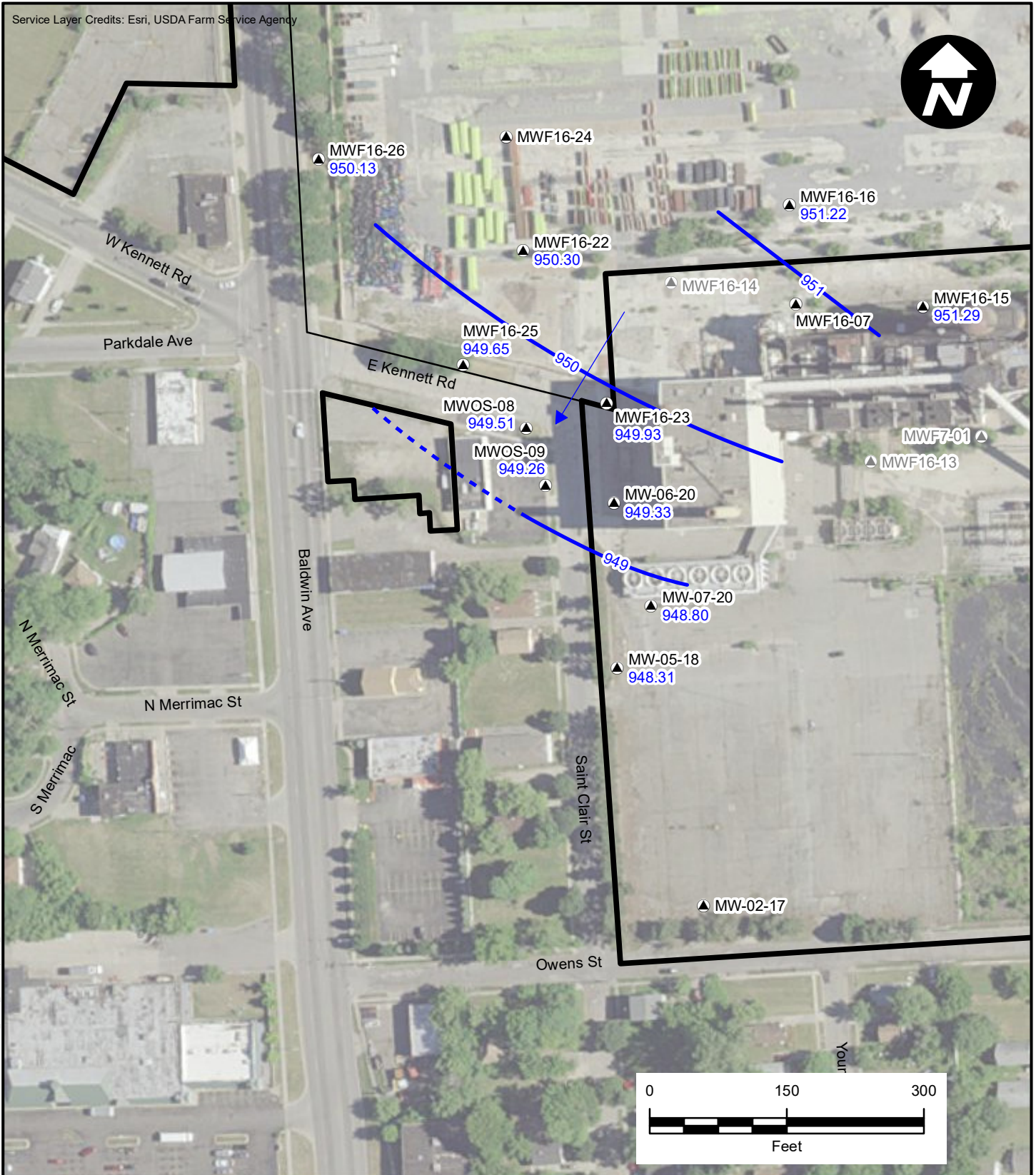


LEGEND

-  EXISTING MONITORING WELL
-  CURRENT RACER PROPERTY
-  PROPERTY SOLD BY RACER

RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

**FORMER FIERO MONITORING
 WELL LOCATIONS**



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LEGEND

- EXISTING MONITORING WELL
 - MONITORING WELLS NOT FOUND DURING 2019/2020 FIERO WELL INVENTORY
 - 950.0** GROUNDWATER ELEVATION
 - GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
 - APPROXIMATE GROUNDWATER FLOW DIRECTION
 - CURRENT RACER PROPERTY
 - PROPERTY SOLD BY RACER
- NOTES:
1. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 2. WATER LEVELS COLLECTED ON AUGUST 31, 2020

RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

GROUNDWATER CONTOUR MAP AUGUST 31, 2020

	Design & Consultancy for natural and built assets	FIGURE <h1 style="margin: 0;">3a</h1>
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PZF17-04

Saint Louis Ave

W Kennett Rd
Parkdale Ave

N Merrimac St

Baldwin Ave

E Kennett Rd

Saint Clair St

Owens St

Young

Portland

MWF16-17

MWF16-11
953.64

MWF16-05
952.92

MWF16-12

952

951

950

949

948

MWF16-18

MWF16-20

MWF16-06

MWF16-19

MWF16-26
949.63

MWF16-24

MWF16-22
949.77

MWF16-25
949.16

MWOS-08
949.00

MWOS-09
948.75

MWF16-23
949.36

MW-06-20
948.87

MW-07-20
948.34

MW-05-18
947.89

MW-02-17

MWF16-07
965.62*

MWF16-15
950.04

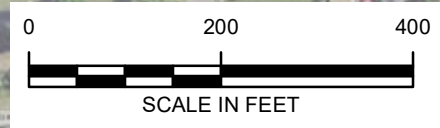
MWF7-03

MWF7-02

MWF15-01

MWF12-01R

MWF12-02



LEGEND

- EXISTING MONITORING WELL
 - GROUNDWATER ELEVATION
 - GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
 - APPROXIMATE GROUNDWATER FLOW DIRECTION
 - ELEVATION NOT USED FOR CONTOURING
 - CURRENT RACER PROPERTY
 - PROPERTY SOLD BY RACER
- NOTES:
1. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 2. WATER LEVELS COLLECTED ON DECEMBER 7, 2020

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PONTIAC, MICHIGAN

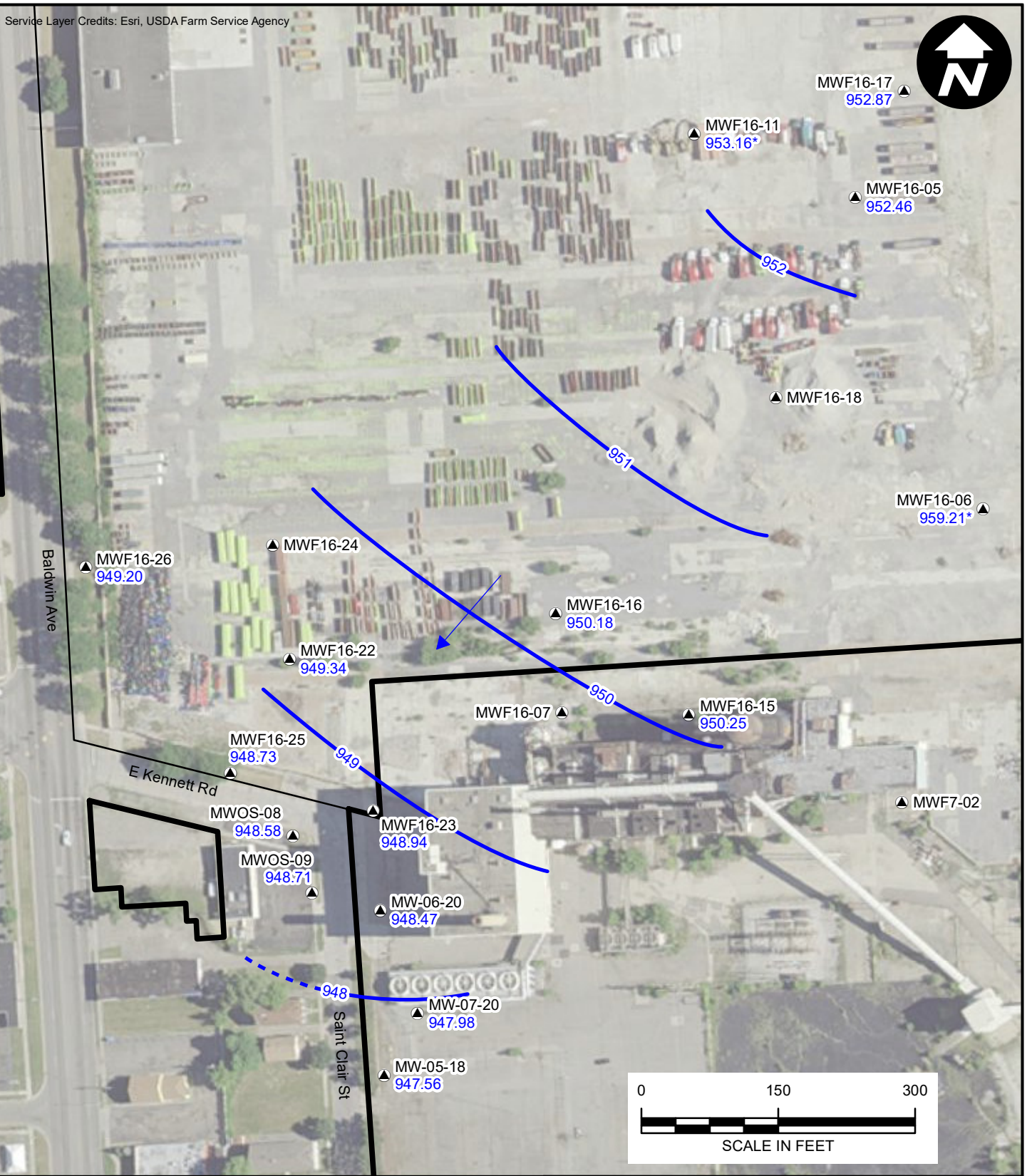
**GROUNDWATER CONTOUR MAP
DECEMBER 7, 2020**



FIGURE

3b

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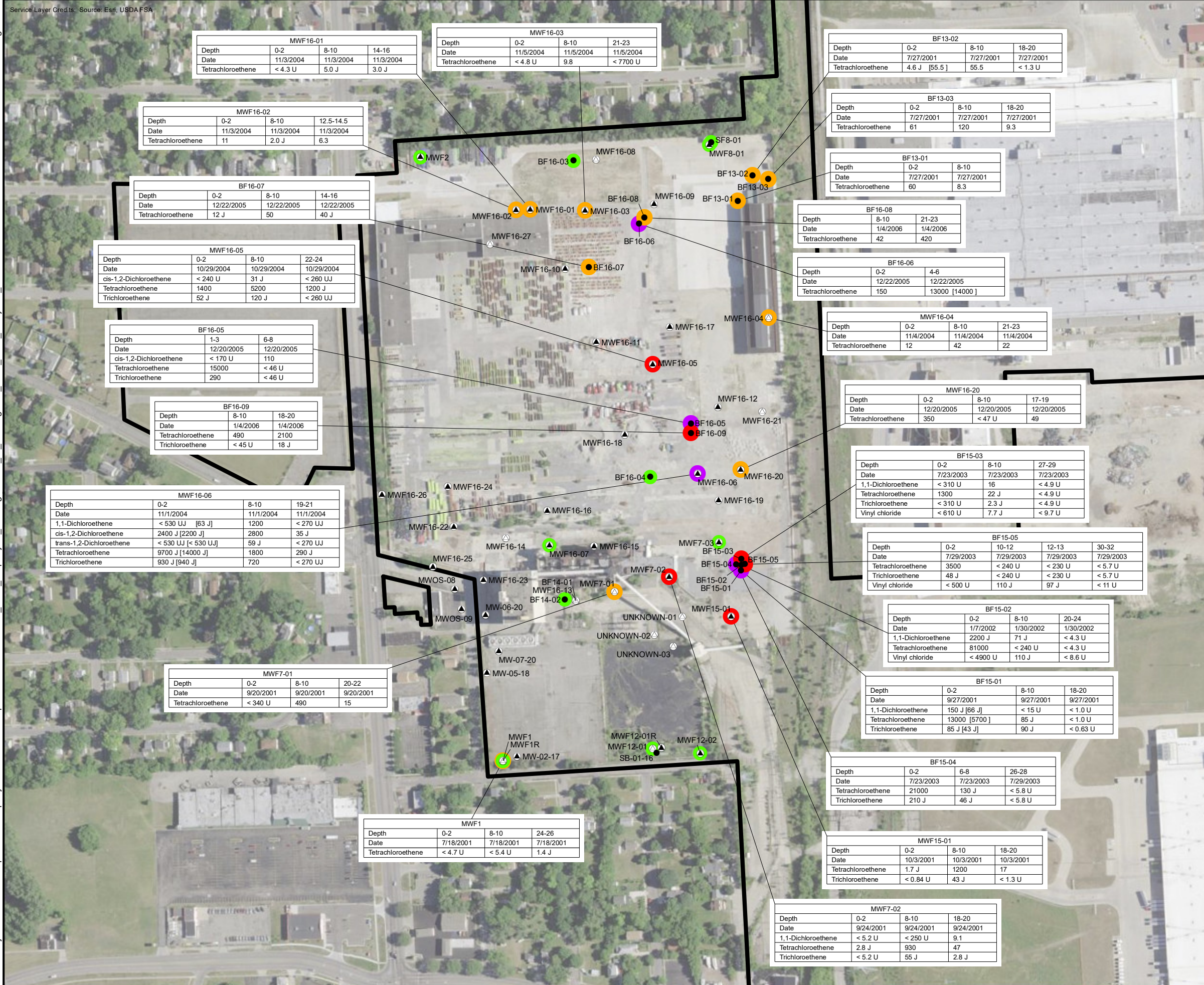
LEGEND

- EXISTING MONITORING WELL
 - 950.0 GROUNDWATER ELEVATION
 - GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
 - APPROXIMATE GROUNDWATER FLOW DIRECTION
 - ELEVATION NOT USED FOR CONTOURING
 - CURRENT RACER PROPERTY
 - PROPERTY SOLD BY RACER
- NOTES:
1. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 2. WATER LEVELS COLLECTED ON MARCH 9, 2021

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PONTIAC NORTH CAMPUS
PONTIAC, MICHIGAN

**GROUNDWATER CONTOUR MAP
MARCH 9, 2021**

	Design & Consultancy for natural and built assets	FIGURE 3c
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LEGEND

- MONITORING WELL (EXISTING)
- MONITORING WELL (FORMER)
- SOIL BORING
- NO DETECTION OF CVOCs
- <1,000 µg/kg TOTAL CVOCs
- 1,000 - 10,000 µg/kg TOTAL CVOCs
- >10,000 µg/kg TOTAL CVOCs
- CURRENT OR FORMER RACER PROPERTY

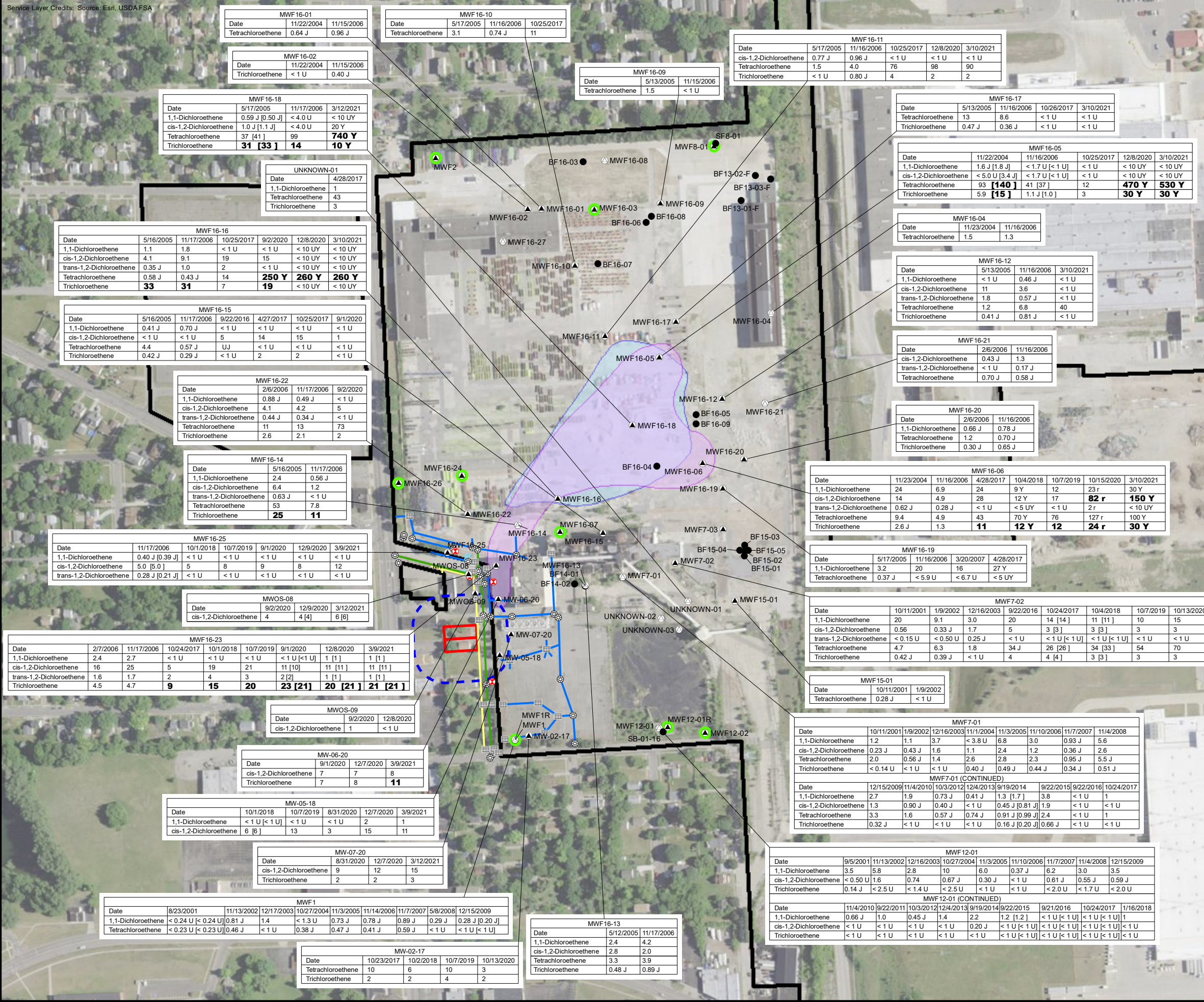
NOTES:

1. ALL CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER KILOGRAM (µg/kg).
2. DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
3. ONLY DETECTIONS OF CHLORINATED VOCs ARE SHOWN IN ANALYTICAL DATA.
4. "J" - ESTIMATED CONCENTRATION.
5. "U" CONSTITUENT NOT DETECTED; ASSOCIATED REPORTING LIMIT DETECTED.



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**FORMER FIERO
SOIL ANALYTICAL SUMMARY**

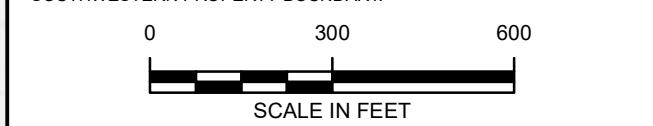


LEGEND

- MONITORING WELL (EXISTING)
- MONITORING WELL (FORMER)
- SOIL BORING
- VOCS LISTED WERE SAMPLED BUT NOT DETECTED IN THIS WELL
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- GAS LINE
- SANITARY
- STORM SEWER
- WATER LINE
- 100 FT VAPOR INTRUSION BUFFER ZONE
- RESIDENTIAL STRUCTURES WITH FINISHED BASEMENTS
- TRICHLOROETHENE CONCENTRATION IN GROUNDWATER (> OR = TO 8.1 µg/L)
- TETRACHLOROETHENE CONCENTRATION IN GROUNDWATER (> OR = TO 130 µg/L)
- CURRENT OR FORMER RACER PROPERTY

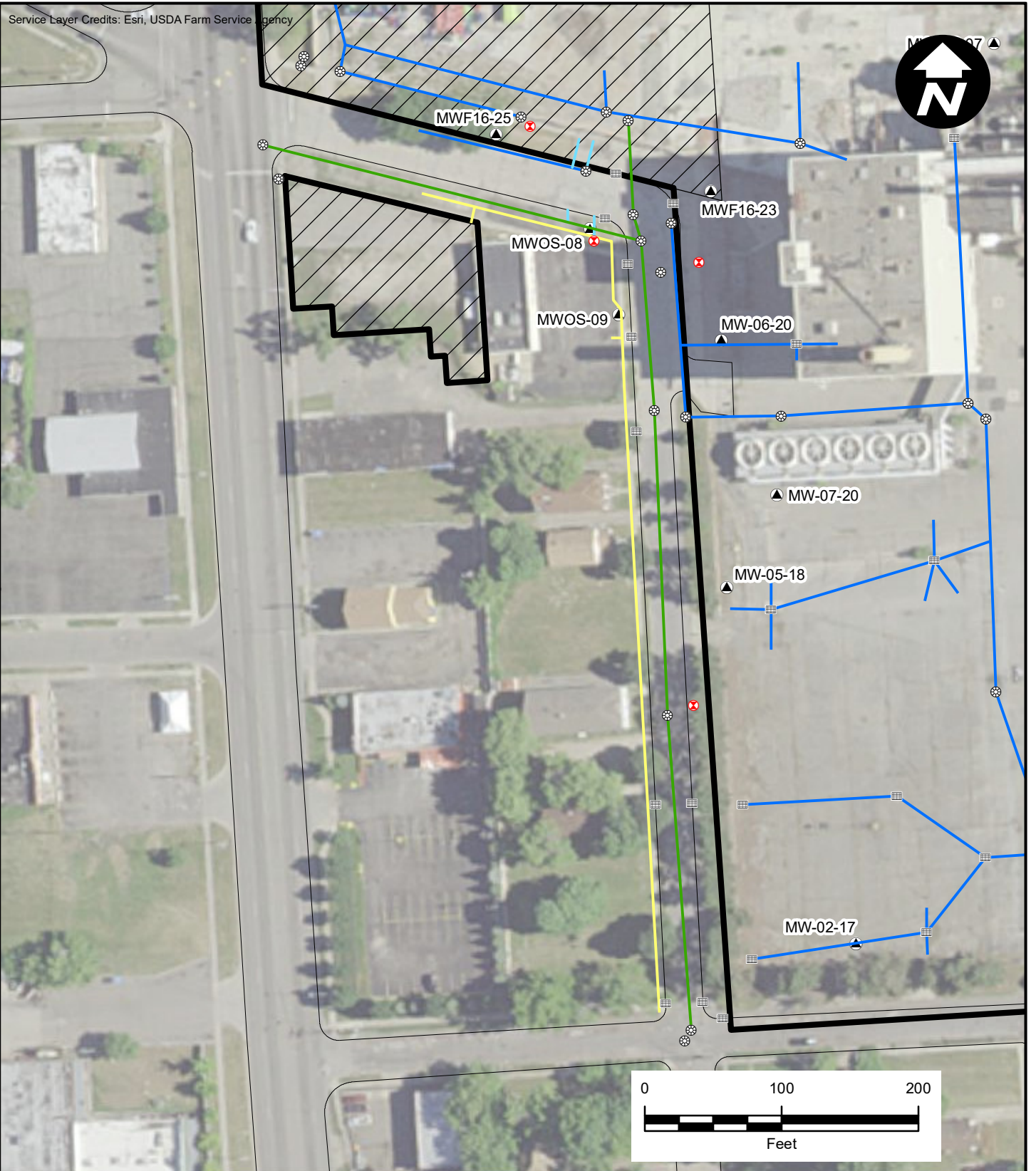
Volatile Organics	Residential Fiero SSVIAC Slab On Grade	Residential Fiero SSVIAC BASE	Non Residential Fiero SSVIAC <50k Slab On Grade	Non Residential Fiero SSVIAC <50k BASE	Non Residential Fiero SSVIAC >50k Slab On Grade	Non Residential Fiero SSVIAC >50k BASE
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200
Trichloroethene	15	8.1	210	93	310	140

- NOTES:
- ALL CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER LITER (µg/L).
 - DUPLICATE ANALYSES ARE PRESENTED IN BRACKETS.
 - ONLY DETECTIONS OF CHLORINATED VOCS LISTED ABOVE IN ANALYTICAL DATA ARE SHOWN. AT LEAST ONE DATA POINT SHOWN FOR EACH YEAR, SOME SEMI-ANNUAL DATA OMITTED FOR VISUAL EASE.
 - SSVIAC - SITE SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA.
 - "Y" - ELEVATED REPORTING LIMIT DUE TO HIGH TARGET CONCENTRATION.
 - "J" - ESTIMATED CONCENTRATION
 - "U" - CONSTITUENT NOT DETECTED; ASSOCIATED REPORTING LIMIT DETECTED.
 - "r" THIS ANALYTE IS BEING REPORTED AS THE BEST RESULTS FROM MULTIPLE RUNS.
 - CRITERIA FROM THE EGLE FORMER FIERO ASSEMBLY SITE-SPECIFIC CRITERIA EVALUATION DATED APRIL 21, 2020.
 - UTILITIES ON FIGURE ARE ONLY SHOWN IN VICINITY OF SOUTHWESTERN PROPERTY BOUNDARY.



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FORMER FIERO GROUNDWATER ANALYTICAL SUMMARY



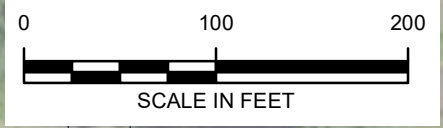
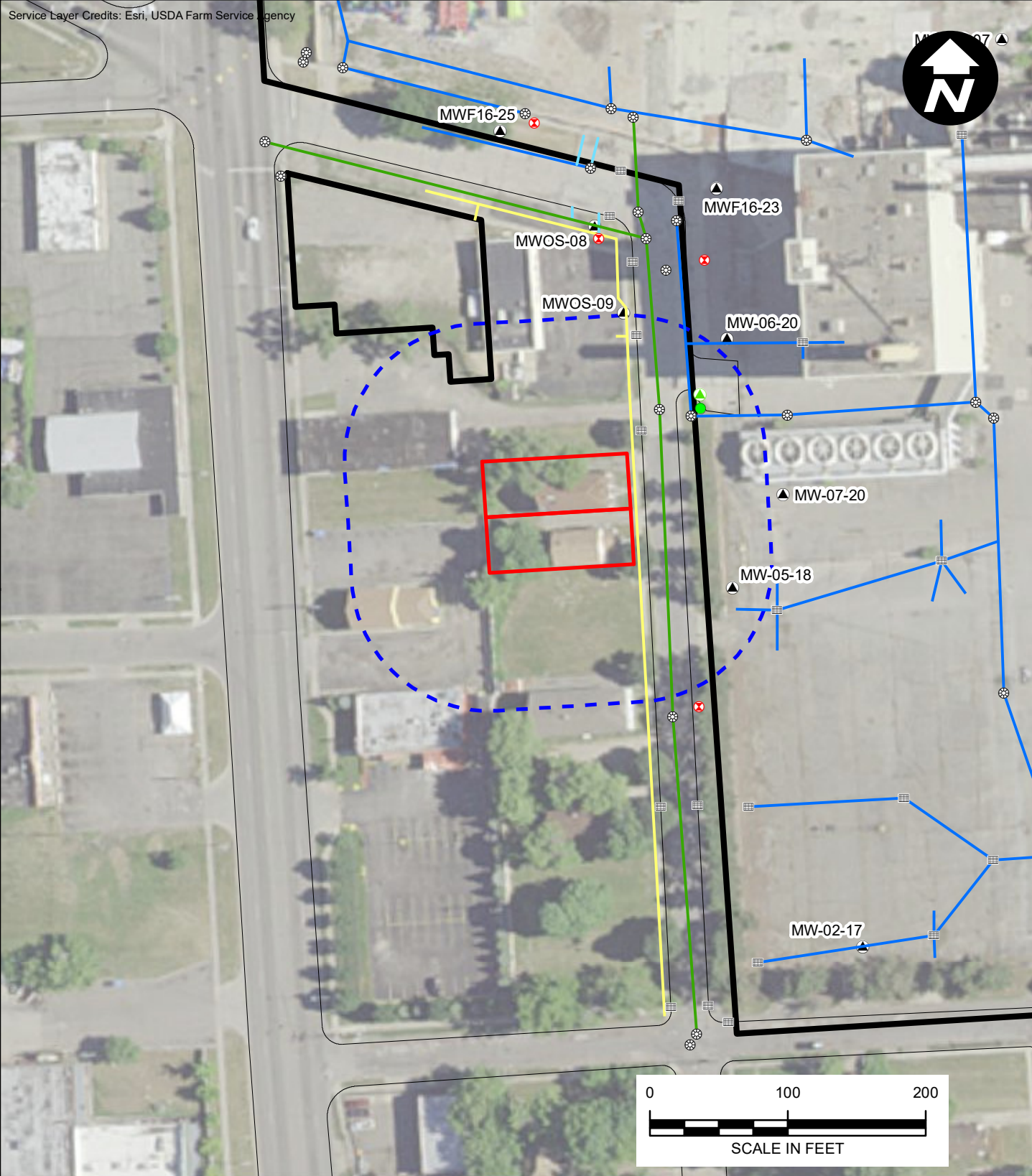
LEGEND	
	EXISTING MONITORING WELL
	CATCH_BASIN
	MANHOLE
	FIRE_HYDRANT
	GAS_LINE
	SANITARY
	STORM_SEWER
	WATER_LINE
	CURRENT OR FORMER RACER PROPERTY
	PROPERTY SOLD BY RACER

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FORMER FIERO UTILITY LOCATIONS

	Design & Consultancy for natural and built assets
	FIGURE 6

Service Layer Credits: Esri, USDA Farm Service Agency



LEGEND	
	PROPOSED MONITORING WELL (MW-08-21)
	PROPOSED NESTED SOIL VAPOR MONITORING POINT
	EXISTING MONITORING WELL
	CATCH BASIN
	MANHOLE
	FIRE HYDRANT
	GAS LINE
	SANITARY
	STORM SEWER
	WATER LINE
	CURRENT OR FORMER RACER PROPERTY
	RESIDENTIAL STRUCTURES WITH FINISHED BASEMENTS
	100 FT VAPOR INTRUSION BUFFER ZONE

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PROPOSED MONITORING WELL AND NESTED SOIL VAPOR MONITORING POINT LOCATION

	Design & Consultancy for natural and built assets	FIGURE 7
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TABLES



Table 1
Gauging and Sampling Summary
Fiero Property VI Well Installation and Groundwater Monitoring Report
RACER Trust Pontiac North Campus

Well ID	August Event ¹		December Event ²		March Event ³	
	Gauged	Sampled	Gauged	Sampled	Gauged	Sampled
Fiero VI GW Monitoring Wells						
MWOS-08	X	X	X	X	X	X
MWOS-09	X	X	X	X	X	
MW-05-18	X	X	X	X	X	X
MW-06-20	X	X	X	X	X	X
MW-07-20	X	X	X	X	X	X
MWF16-05			X	X	X	X
MWF16-06					X	X
MWF16-07			X	X		
MWF16-11			X	X	X	X
MWF16-12					X	X
MWF16-15	X	X	X		X	
MWF16-16	X	X	X	X	X	X
MWF16-17					X	X
MWF16-18					X	X
MWF16-22	X	X	X		X	
MWF16-23	X	X	X	X	X	X
MWF16-25	X	X	X	X	X	X
MWF16-26	X	X	X		X	

Footnotes:

¹ Gauging and sampling took place the week of August 31, 2020

² Gauging and sampling took place the week of December 7, 2020

³ Gauging and sampling took place the week of March 8, 2021

Table 2
Groundwater Elevation Summary
Fiero Property VI Well Installation and Groundwater Monitoring Report
RACER Trust Pontiac North Campus

Well ID	Well Elevation ¹	Total Depth (ft)	Date	Depth to Water (ft) ²	Groundwater Elevation	Date	Depth to Water (ft) ²	Groundwater Elevation	Date	Depth to Water (ft) ²	Groundwater Elevation
Fiero VI GW Monitoring Wells											
MWOS-08	975.09	28.87	8/31/2020	25.58	949.51	12/7/2020	26.09	949.00	3/9/2021	26.51	948.58
MWOS-09	976.42	28.03	8/31/2020	27.16	949.26	12/7/2020	27.67	948.75	3/9/2021	27.71	948.71
MW-05-18	975.21	33.58	8/31/2020	26.90	948.31	12/7/2020	27.32	947.89	3/9/2021	27.65	947.56
MW-06-20	974.97	29.23	8/31/2020	25.64	949.33	12/7/2020	26.10	948.87	3/9/2021	26.50	948.47
MW-07-20	975.06	30.16	8/31/2020	26.26	948.80	12/7/2020	26.72	948.34	3/9/2021	27.08	947.98
MWF16-05	973.32	22.60	8/31/2020	--	--	12/7/2020	20.40	952.92	3/9/2021	20.86	952.46
MWF16-06	973.77	28.64	8/31/2020	--	--	12/7/2020	--	--	3/9/2021	14.56	959.21
MWF16-07	972.65	17.46	8/31/2020	--	--	12/7/2020	7.03	965.62	3/9/2021	--	--
MWF16-11	973.36	25.95	8/31/2020	--	--	12/7/2020	19.72	953.64	3/9/2021	20.20	953.16
MWF16-12	973.20	18.91	8/31/2020	--	--	12/7/2020	--	--	3/9/2021	15.82	957.38
MWF16-15	972.71	35.46	8/31/2020	21.42	951.29	12/7/2020	22.67	950.04	3/9/2021	22.46	950.25
MWF16-16	973.22	31.24	8/31/2020	22.00	951.22	12/7/2020	22.62	950.60	3/9/2021	23.04	950.18
MWF16-17	973.32	31.70	8/31/2020	--	--	12/7/2020	--	--	3/9/2021	20.45	952.87
MWF16-18	973.22	31.95	8/31/2020	--	--	12/7/2020	--	--	3/12/2021 ³	21.41	951.81
MWF16-22	973.18	33.50	8/31/2020	22.88	950.30	12/7/2020	23.41	949.77	3/9/2021	23.84	949.34
MWF16-23	973.39	30.52	8/31/2020	23.46	949.93	12/7/2020	24.03	949.36	3/9/2021	24.45	948.94
MWF16-25	975.24	37.16	8/31/2020	25.59	949.65	12/7/2020	26.08	949.16	3/9/2021	26.51	948.73
MWF16-26	974.14	36.71	8/31/2020	24.01	950.13	12/7/2020	24.51	949.63	3/9/2021	24.94	949.20

Abbreviations:

-- Not available
ft Feet

Footnotes:

- ¹ Top of Casing Elevation is in feet National Vertical Geodetic Datum (1988).
- ² Depth to water measurements collected from top of well casing.
- ³ Well was covered with gravel pile during gauging. Water depth taken just before sampling a few days later after gravel pile was moved.

Table 3
 Summary of Groundwater Analytical Results
 Fiero Property VI Well Installation and Groundwater Monitoring Report
 RACER Trust Pontiac North Campus



Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MW-05-18 08/31/20 MW-05-18_GW-083120	MW-05-18 12/07/20 MW-05-18_GW-120720	MW-05-18 03/09/21 MW-05-18_GW-030921	MW-06-20 09/01/20 MW-06-20_GW-090120	MW-06-20 12/07/20 MW-06-20_GW-120720	MW-06-20 03/09/21 MW-06-20_GW-030921	MW-07-20 08/31/20 MW-07-20_GW-083120	MW-07-20 12/07/20 MW-07-20_GW-12072020	MW-07-20 03/12/21 MW-07-20_GW-031221
Volatiles Organics																
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	34	18	1,100	510	1,700	760	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromofrom	6,400	3,200	200,000	83,000	300,000	120,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	59	33	1,200	580	1,900	860	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-11	300	160	6,000	2,700	9,000	4,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	71	38	1,400	640	2,100	960	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	1,300	720	27,000	12,000	41,000	18,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	58	29	4,400	1,800	6,600	2,800	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	19	10	610	270	910	410	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	2,600	1,400	53,000	24,000	55,000	36,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	0.00045	0.00045	0.042	0.029	0.061	0.042	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	8	4	250	110	370	160	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	19,000	9,900	160,000	160,000	160,000	160,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	130	70	2,700	1,200	4,000	1,700	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	3	8	6	7	8	10	9	10	12
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1 U	2	1	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	3	15	11	7	7	8	9	12	15
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane	9,100	5,000	190,000	88,000	280,000	130,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	100	56	2,100	950	3,200	1,400	ug/L	1 U	1 U	1 U	1 U	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	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	--	--	--	--	--	--	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl acetate	--	--	--	--	--	--	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl N-Butyl Ketone	24,000	12,000	490,000	220,000	740,000	320,000	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Methylcyclohexane	--	--	--	--	--	--	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Methyl tert-butyl ether	10,000	5,300	320,000	150,000	490,000	220,000	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	1,400	740	45,000	20,000	67,000	30,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	130	66	4,100	1,800	6,200	2,600	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	3	7	5	4	4	4	5	5	5
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	1 U	1 U	1 U	7	8	11	2	2	3
1,1,2-trichloro-1,2,2-trifluoroethane	7,100	3,600	140,000	58,000	170,000	88,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2.2	1.2	260	120	390	180	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
m&p-Xylene	--	--	--	--	--	--	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	--	--	--	--	--	--	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Volatiles Organics-SIM																
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	2	1 U	1 U	5	3	1 U	1	1 U	1 U

See notes on last page.

Table 3
Summary of Groundwater Analytical Results
Fiero Property VI Well Installation and Groundwater Monitoring Report
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-05 12/08/20 MWF16-05_GW-120820	MWF16-05 03/10/21 MWF16-05_GW-031021	MWF16-06 03/10/21 MWF16-06_GW-031021	MWF16-07 12/07/20 MWF16-07_GW-120720	MWF16-11 12/08/20 MWF16-11_GW-120820	MWF16-11 03/10/21 MWF16-11_GW-031021	MWF16-12 03/10/21 MWF16-12_GW-031021	MWF16-15 09/01/20 MWF16-15_GW-090120	MWF16-16 09/02/20 MWF16-16_GW-090220
Volatiles Organics																
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	500 UY	500 UY	500 UY	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	34	18	1,100	510	1,700	760	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	6,400	3,200	200,000	83,000	300,000	120,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	59	33	1,200	580	1,900	860	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	250 UY	250 UY	250 UY	25 U	25 U	25 U	25 U	25 U	25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	3
CFC-11	300	160	6,000	2,700	9,000	4,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
CFC-12	71	38	1,400	640	2,100	960	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	1,300	720	27,000	12,000	41,000	18,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	58	29	4,400	1,800	6,600	2,800	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	19	10	610	270	910	410	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	2
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	2,600	1,400	53,000	24,000	55,000	36,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	0.00045	0.00045	0.042	0.029	0.061	0.042	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	8	4	250	110	370	160	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	19,000	9,900	160,000	160,000	160,000	160,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	130	70	2,700	1,200	4,000	1,700	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	10 UY	10 UY	290 Y	1 U	1 U	1 U	1 U	1	5
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	10 UY	10 UY	30 Y	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	10 UY	10 UY	150 Y	1 U	1 U	1 U	1 U	1	15
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Dichloromethane	9,100	5,000	190,000	88,000	280,000	130,000	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	100	56	2,100	950	3,200	1,400	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	--	--	--	--	--	--	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	--	--	--	--	--	--	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Methyl acetate	--	--	--	--	--	--	ug/L	100 UY	100 UY	100 UY	10 U	10 U	10 U	10 U	10 U	10 U
Methyl N-Butyl Ketone	24,000	12,000	490,000	220,000	740,000	320,000	ug/L	500 UY	500 UY	500 UY	50 U	50 U	50 U	50 U	50 U	50 U
Methylcyclohexane	--	--	--	--	--	--	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	500 UY	500 UY	500 UY	50 U	50 U	50 U	50 U	50 U	50 U
Methyl tert-butyl ether	10,000	5,300	320,000	150,000	490,000	220,000	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	1,400	740	45,000	20,000	67,000	30,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	130	66	4,100	1,800	6,200	2,600	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	470 Y	530 Y	100 Y	1 U	98	90	40	1 U	250 Y
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	50 UY	50 UY	50 UY	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	10 UY	10 UY	190 Y	1 U	1 U	1 U	1 U	5	9
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	30 Y	30 Y	30 Y	1 U	2	2	1 U	1 U	19
1,1,2-trichloro-1,2,2-trifluoroethane	7,100	3,600	140,000	58,000	170,000	88,000	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	2.2	1.2	260	120	390	180	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
m&p-Xylene	--	--	--	--	--	--	ug/L	20 UY	20 UY	20 UY	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	--	--	--	--	--	--	ug/L	10 UY	10 UY	10 UY	1 U	1 U	1 U	1 U	1 U	1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	20 UY	20 UY	20 UY	2 U	2 U	2 U	2 U	2 U	2 U
Volatiles Organics-SIM																
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	1 U	1 U	16	1 U	1 U	1 U	1 U	3	24

See notes on last page.

Table 3
 Summary of Groundwater Analytical Results
 Fiero Property VI Well Installation and Groundwater Monitoring Report
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-16 12/08/20 MWF16-16_GW-120820	MWF16-16 03/10/21 MWF16-16_GW-031021	MWF16-17 03/10/21 MWF16-17_GW-031021	MWF16-18 03/12/21 MWF16-18_GW-031221	MWF16-22 09/02/20 MWF16-22_GW-090220	MWF16-23 09/01/20 MWF16-23_GW-090120	MWF16-23 12/08/20 MWF16-23_GW-120820	MWF16-23 03/09/21 MWF16-23_GW-030921	MWF16-25 09/01/20 MWF16-25_GW-090120
Volatile Organics																
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	500 UY	500 UY	50 U	500 UY	50 U	50 U [50 U]	50 U [50 U]	50 U [50 U]	50 U
Benzene	34	18	1,100	510	1,700	760	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Bromoform	6,400	3,200	200,000	83,000	300,000	120,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Bromomethane	59	33	1,200	580	1,900	860	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	250 UY	250 UY	25 U	250 UY	25 U	25 U [25 U]	25 U [25 U]	25 U [25 U]	25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	10UY	10UY	1 U	10UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
CFC-11	300	160	6,000	2,700	9,000	4,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
CFC-12	71	38	1,400	640	2,100	960	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
Chlorobenzene	1,300	720	27,000	12,000	41,000	18,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Chlorodibromomethane	58	29	4,400	1,800	6,600	2,800	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
Chloroform	19	10	610	270	910	410	ug/L	10 UY	10 UY	1 U	10 UY	1 U	2 [2]	1 [1]	1 [1]	6
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
Cyclohexane	2,600	1,400	53,000	24,000	55,000	36,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,2-Dibromo-3-chloropropane	0.00045	0.00045	0.042	0.029	0.061	0.042	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
1,2-Dibromoethane	8	4	250	110	370	160	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,2-Dichlorobenzene	19,000	9,900	160,000	160,000	160,000	160,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,3-Dichlorobenzene	130	70	2,700	1,200	4,000	1,700	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	10 UY	10 UY	1 U	10 UY	1	9 [8]	6 [6]	5 [6]	5
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 [1]	1 [1]	1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	10 UY	10 UY	1 U	20 Y	5	11 [10]	11 [11]	11 [11]	9
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	10 UY	10 UY	1 U	10 UY	1 U	2 [2]	1 [1]	1 [1]	1 U
Dichloromethane	9,100	5,000	190,000	88,000	280,000	130,000	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
1,2-Dichloropropane	100	56	2,100	950	3,200	1,400	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
cis-1,3-Dichloropropene	--	--	--	--	--	--	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
trans-1,3-Dichloropropene	--	--	--	--	--	--	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Methyl acetate	--	--	--	--	--	--	ug/L	100 UY	100 UY	10 U	100 UY	10 U	10 U [10 U]	10 U [10 U]	10 U [10 U]	10 U
Methyl N-Butyl Ketone	24,000	12,000	490,000	220,000	740,000	320,000	ug/L	500 UY	500 UY	50 U	500 UY	50 U	50 U [50 U]	50 U [50 U]	50 U [50 U]	50 U
Methylcyclohexane	--	--	--	--	--	--	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	500 UY	500 UY	50 U	500 UY	50 U	50 U [50 U]	50 U [50 U]	50 U [50 U]	50 U
Methyl tert-butyl ether	10,000	5,300	320,000	150,000	490,000	220,000	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
Styrene	1,400	740	45,000	20,000	67,000	30,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,1,2,2-Tetrachloroethane	130	66	4,100	1,800	6,200	2,600	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	260 Y	260 Y	1 U	740 Y	73	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	50 UY	50 UY	5 U	50 UY	5 U	5 U [5 U]	5 U [5 U]	5 U [5 U]	5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	10 UY	10 UY	2	10 UY	1	12 [11]	10 [10]	12 [11]	4
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	10 UY	10 UY	1 U	10 Y	2	23 [21]	20 [21]	21 [21]	1 U
1,1,2-trichloro-1,2,2-trifluoroethane	7,100	3,600	140,000	58,000	170,000	88,000	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Vinyl Chloride	2.2	1.2	260	120	390	180	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
m&p-Xylene	--	--	--	--	--	--	ug/L	20 UY	20 UY	2 U	20 UY	2 U	2 U [2 U]	2 U [2 U]	2 U [2 U]	2 U
o-Xylene	--	--	--	--	--	--	ug/L	10 UY	10 UY	1 U	10 UY	1 U	1 U [1 U]	1 U [1 U]	1 U [1 U]	1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	20 UY	20 UY	2 U	20 UY	2 U	2 U [2 U]	2 U [2 U]	2 U [2 U]	2 U
Volatiles Organics-SIM																
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	1 U	1 U	1 U	1 U	1 U	1 [3]	1 U [1 U]	1 U [1 U]	1

See notes on last page.

Table 3
Summary of Groundwater Analytical Results
Fiero Property VI Well Installation and Groundwater Monitoring Report
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-25 12/09/20 MWF16-25_GW-120920	MWF16-25 03/12/21 MWF16-25_GW-031221	MWF16-26 09/01/20 MWF16-26_GW-090120	MWOS-08 09/02/20 MWOS-08_GW-090220	MWOS-08 12/09/20 MWOS-08_GW-120920	MWOS-08 03/12/21 MWOS-08_GW-031221	MWOS-09 09/02/20 MWOS-09_GW-090220	MWOS-09 12/08/20 MWOS-09_GW-120820
Volatiles Organics															
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	50 U	50 U	50 U [50 U]	50 U	50 U [50 U]	50 U [50 U]	50 U	50 U
Benzene	34	18	1,100	510	1,700	760	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Bromoform	6,400	3,200	200,000	83,000	300,000	120,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Bromomethane	59	33	1,200	580	1,900	860	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	25 U	25 U	25 U [25 U]	25 U	25 U [25 U]	25 U [25 U]	25 U	25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
CFC-11	300	160	6,000	2,700	9,000	4,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
CFC-12	71	38	1,400	640	2,100	960	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
Chlorobenzene	1,300	720	27,000	12,000	41,000	18,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Chlorodibromomethane	58	29	4,400	1,800	6,600	2,800	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
Chloroform	19	10	610	270	910	410	ug/L	6	4	1 U [1 U]	1 U	1 U [1 U]	1 U [1]	1 U	1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
Cyclohexane	2,600	1,400	53,000	24,000	55,000	36,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,2-Dibromo-3-chloropropane	0.00045	0.00045	0.042	0.029	0.061	0.042	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
1,2-Dibromoethane	8	4	250	110	370	160	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,2-Dichlorobenzene	19,000	9,900	160,000	160,000	160,000	160,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,3-Dichlorobenzene	130	70	2,700	1,200	4,000	1,700	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	4	4	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	8	12	1 U [1 U]	4	4 [4]	6 [6]	1	1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Dichloromethane	9,100	5,000	190,000	88,000	280,000	130,000	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
1,2-Dichloropropane	100	56	2,100	950	3,200	1,400	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [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	1 U [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	1 U [1 U]	1 U [1 U]	1 U	1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Methyl acetate	--	--	--	--	--	--	ug/L	10 U	10 U	10 U [10 U]	10 U	10 U [10 U]	10 U [10 U]	10 U	10 U
Methyl N-Butyl Ketone	24,000	12,000	490,000	220,000	740,000	320,000	ug/L	50 U	50 U	50 U [50 U]	50 U	50 U [50 U]	50 U [50 U]	50 U	50 U
Methylcyclohexane	--	--	--	--	--	--	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	50 U	50 U	50 U [50 U]	50 U	50 U [50 U]	50 U [50 U]	50 U	50 U
Methyl tert-butyl ether	10,000	5,300	320,000	150,000	490,000	220,000	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
Styrene	1,400	740	45,000	20,000	67,000	30,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,1,2,2-Tetrachloroethane	130	66	4,100	1,800	6,200	2,600	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	5 U	5 U	5 U [5 U]	5 U	5 U [5 U]	5 U [5 U]	5 U	5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	4	3	1 U [1 U]	3	3 [3]	3 [3]	1 U	1 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
1,1,2-trichloro-1,2,2-trifluoroethane	7,100	3,600	140,000	58,000	170,000	88,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Vinyl Chloride	2.2	1.2	260	120	390	180	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
m&p-Xylene	--	--	--	--	--	--	ug/L	2 U	2 U	2 U [2 U]	2 U	2 U [2 U]	2 U [2 U]	2 U	2 U
o-Xylene	--	--	--	--	--	--	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	2 U	2 U	2 U [2 U]	2 U	2 U [2 U]	2 U [2 U]	2 U	2 U
Volatiles Organics-SIM															
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	1 U	1 U	1 U [1 U]	1 U	1 U [1 U]	1 U [1 U]	1 U	1 U

See notes on last page.

Table 3
Summary of Groundwater Analytical Results
Fiero Property VI Well Installation and Groundwater Monitoring Report
RACER Trust Pontiac North Campus

Notes:

- 1) Criteria listed are from the EGLE Former Fiero Assembly Site-Specific Criteria Evaluation dated April 21, 2020.
- 2) Values in bold italics denotes exceedance and/or equal to Residential Site-Specific Volatilization to Indoor Air Criteria.
- 3) Values in red type denotes exceedance and/or equal to Non-Residential Site-Specific Volatilization to Indoor Air Criteria.
- 4) Duplicate analyses are presented in brackets.

Abbreviations:

µg/L	Micrograms per liter.
BAS	Basement scenario.
NR	Non-Residential
Res	Residential
SOG	Slab-On-Grade scenario
SSVIAC	Site-Specific Volatilization to Indoor Air Criteria
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.
<50k	Less than 50,000 square feet
>50k	Greater than 50,000 square feet

ATTACHMENT 1

Right-of-Way Permit Documentation





City of Pontiac
Department of Public Works & Utilities
 47450 Woodward Ave, Pontiac, Michigan 48342
 (248) 758-3615 (248) 758-3750 - fax

Permit No. 20-0255
 Date of Issuance 7/31/2020
 Expiration Date 1/31/2020

MAYOR DEIRDRE WATERMAN

RIGHT-OF-WAY PERMIT

Arcadis of Michigan, LLC

Applicant
Brad Saunders
 Contact Person
28550 Cabot Drive, Suite 500
 Address
Novi **Mi.** **48377**
 City State Zip Code

Racer Trust

Owner
1505 Woodward Ave. Suite 200
 Address
Detroit **Mi.** **48226**
 City State Zip Code
 Email

24-Hour Emergency Number: 517 974-4441 Phone Number _____ Fax Number: _____

APPLICANT DESIGNATION:

Contractor Homeowner Utility Company Other :

RIGHT-OF-WAY PERMIT ISSUED FOR:

Sign/Subdivision Entrance Marker Landscaping/Grading Public Utility (i.e. electric, gas, telephone) Water Main
 Approach/Private Road Access Pathway/Sidewalk Sanitary/Storm Sewer Other: Monitor Well

PROJECT ADDRESS: E. Kennett Rd. and St. Clair St.

Project Description

Install two flush mount, groundwater monitoring wells in the greenbelt area adjacent to E. Kennett Rd. and St. Clair St. per submitted description and plan drawings.

The above activities will be carried out in accordance with plans, specifications, maps and statements filed with the City of Pontiac/Engineering Division as part of this application, and if said application is approved, the above named applicant agrees to abide by the **CONDITIONS** contained on the reverse side. Since a permit will have to be secured from the City of Pontiac/Engineering Division prior to the start of any construction or maintenance operations proposed by this application, it is intended that the **SUPPLEMENTAL SPECIFICATIONS**, on the reverse side, are to be incorporated as part of the plans or specifications required for this proposed work.

City Engineer Requirements/Special Provisions

Contactors MUST contact the City of Pontiac Engineering Dept. at 248 758-3742 at least 24 hours prior to request all required inspections.

This application is approved subject to the **CITY ENGINEER REQUIREMENTS/MANDATES STATED HEREIN, CONDITIONS** and **SUPPLEMENTAL SPECIFICATIONS** contained on the reverse side of this application. Approval of this application does not relieve applicant from meeting any applicable requirements or duties of law or other public bodies or agencies. **APPROVAL OF THIS APPLICATION EXPIRES IN ONE YEAR IF A PERMIT HAS NOT BEEN ISSUED. RESUBMITTAL OF CURRENT PLANS, PERMIT APPLICATION REVIEW FEES AND PERMIT APPLICATION IS REQUIRED IF APPROVAL OF THIS APPLICATION HAS EXPIRED.**

Application Fee:	\$	50.00	
Estimated Inspection Fee:	\$	388.50	
Deposit Fee: (Cash or Bond)	\$	4,467.75	(Refundable upon project final inspection, completion & as-built preparation)
Total Fees at time of Permit Issuance:	\$	4,906.25	
Public Liability Insurance Required:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Amount:	\$

Application Approved By:

By: _____
 John V. Balint, City Engineer

By: Vincente R. Jimenez
 Vincente R. Jimenez
 R.O.W. Permit Inspector

By: _____
 Clerk

AS A CONDITION OF THE APPROVAL OF THIS APPLICATION, THE APPLICANT AGREES TO THE FOLLOWING CONDITIONS:

1. The Applicant agrees to secure a Permit from the City of Pontiac - Engineering Division prior to the commencement of construction, maintenance or demolition operations within City Right-of-Way. If a Contractor is to perform the operations entailed in this application, the Contractor shall secure the Permit and thereby assume responsibility, along with the Applicant, for any provisions.
2. Any and all operations proposed under this application shall adhere to the standards and direction of the Engineering Division together with the mandates set forth within this application.
3. The Applicant agrees to save harmless, indemnify, defend and represent the City of Pontiac elected officials, its agents and employees against any and all claims for bodily injury, property damage on any claim arising out of or related to the creation, operation, use, or continuing existence of the structure or facility covered by this Permit.
4. Deposit fees are refundable six (6) months after completion of the specified project, provided there occurs no undue settlement, spalling, etc. and/or work is approved by the City of Pontiac Right-of-Way Inspection.
5. Forty-eight (48) hours advance notice shall be given to the Engineering Division prior to the commencement of any proposed work within City Right-of-Way.
6. All road detours and associated barricades required and implemented as a part of the work identified in the Permit shall be designed and installed in accordance with the current Michigan Manual of Uniform Traffic Control Devices.
7. The Applicant shall surrender all rights implied as a part of this Permit; cease operations; and remove/relocate at the Applicants expense any and all facilities installed as a part of this Permit whenever ordered to do so by the Engineering Division due to the need for the area for public uses on a default in any of the conditions specified in this Permit. Failure to remove/relocate or otherwise surrender the facilities pursuant to Engineering Division requests shall deem the Applicant responsible for the costs incurred by the Engineering Division in doing so.
8. This application shall not be constructed to grant rights whatsoever to any public utility, except as to the consent specifically outlined.
9. The Applicant agrees to construct, operate, use and/or maintain facilities to the satisfaction of the Engineering Division as long as the facility remains in Right-of-Way under jurisdiction of the Engineering Division. Applicant is obligated to repair any and all damages to the Right-of-Way resulting from installation of the facility, occurring or appearing after the Permit Licensee is released.
10. Excavation/Excavated Material Disposal

The applicant shall assume the full responsibility for the protection of existing Right-of-Way installations, including pavement, curb and gutter, sidewalk, storm drains, water mains, sanitary sewers, or roadside plantings, during excavation operations. The Applicant shall provide, as necessary, any required sheeting, shoring or bracing to protect the above listed items.

Unless approved as a special provision within this application, all surplus material generated shall become property of the Applicant. All surplus material shall be disposed of outside the limits of the Right-of-Way.

11. Backfill/Compaction Requirements

All trenches, pits, voids and other general excavations shall be appropriately backfilled with sound earth (greenbelt areas) or granular material, placed in successive layers, not more than 12" in depth, and shall be thoroughly compacted, subject to verification by the Controlled Density Method (granular minimum 95%; earth backfill minimum 90%).

Unless otherwise approved, granular backfill material shall meet the gradation requirements of M.D.O.T. Class III Material.

All Right-of-Way excavations outside traveled roadways/sidewalk/driveways shall be maintained until such time as all settlement has occurred and the area has been restored to a condition equal to or better than the original condition, in accordance with Engineering Division Standards.

The Permit and Deposit will not be released until such time as settlement and restoration items have been completed.

City of Pontiac, DPW – Engineering Right-of-Way Permit

Date

7/31/2020

Invoice #

20200731-01

Arcadis of Michigan, LLC

Applicant

28550 Cabot Drive, Suite 500

Address

Novi

Mi.

48377

City

State

Zip Code

FUND	ACTIVITY	ACCOUNT DETAIL	
101	000	478	449
101	000	615	000
101	000	283	050
101	000	283	060
101	000	283	062

PROGRAM BUDGET	AMMOUNT
	\$ 50.00
	\$ 388.50
	\$ 4,467.75
TOTAL	\$ 4,906.25

Ref No. ROW permit # 20-0255

Check No. 299274 = \$4,467.75
299275 = \$438.50

Address E. Kennett Rd.

Check Date 5/22/2020

City of Pontiac
 Department of Public Works
 47450 Woodward Avenue
 Pontiac, MI 48342

Arcadis of Michigan, LLC
 28550 Cabot Drive
 Suite 500
 Novi
 Michigan 48377
 Tel 248 994 2240
 Fax 248 994 9941
www.arcadis.com

Subject:
 Right of Way Permit Application and Engineering Cost Estimate
 RACER Trust
 East Kennett Rd & Saint Clair St.
 Pontiac, Michigan

ENVIRONMENT

Date:
 May 26, 2020

To Whom It May Concern:

Contact:
 Brad Saunders

Revitalizing Auto Communities Environmental Response Trust (RACER) has contracted with Arcadis of Michigan, LLC (Arcadis) to conduct select environmental investigation activities associated with corrective actions being conducted in coordination with the United States Environmental Protection Agency (USEPA) and Michigan Department of Environment, Great Lakes, & Energy Quality (EGLE). In accordance with a recently approved work plan to further investigate groundwater quality west of the RACER Pontiac North Campus former Fiero property, Arcadis is respectfully requesting permission to complete two (2) monitoring wells within the City of Pontiac rights-of-way (ROW) of East Kennett Road and Saint Clair Street, in Pontiac, Michigan for the purpose of periodic groundwater sampling and analysis.

Phone:
 517-974-4441

Email:
Brad.Saunders@arcadis.com

Our ref:
 30042811.00005

Monitoring well installation costs associated with the project are presented below and based off of actual bidding by a licensed drilling firm which will be subcontracted to perform the work:

Description	Rate	Quantity	Total Cost
2-person crew, Geoprobe 6600 drill rig	\$1,925/day	1.5 days	\$2,887.50
2" Flush Mount Monitoring Well Installation Materials	\$206/well	2 wells	\$412.00
Construction Materials	\$292.75/well	2 wells	\$585.50
Total Monitoring Well Installation Costs			\$3,885.00

As part of our ROW Permit Application, please find enclosed the following:

- 1) ROW Permit Application with the associated combined ROW Permit & Inspection Fee payment and the separate ROW Deposit Fee payment
- 2) Site map (3 copies), and
- 3) Typical Monitoring Well Construction Detail (3 copies).

The enclosed Site maps identify the two new monitoring well locations, which depending on utility locations are proposed in vegetated land or adjacent sidewalks within the ROW, offset from the paved portions of East Kennett Road and Saint Clair Street.

Prior to 72 hours before scheduled work activities, a Public MISS DIG call will be placed to locate utilities in the vicinity of the proposed wells. In addition, upon identifying the proposed exact locations of the wells based on MISS DIG markings, a private utility search utilizing GPR technology will be conducted to clear the two drilling locations. The monitoring wells will be installed using a Geoprobe® drill rig equipped with hollow-stem augers. The monitoring wells will be constructed using 2-inch-diameter, flush joint, schedule 40 PVC risers with a 5-foot, 10-slot PVC screen targeted within the top range of the fluctuating water table will be utilized in each monitoring well. The filter pack sand will be installed approximately 2 feet above the top of the screen followed by a hydrated bentonite chip seal. Monitoring wells will be finished in vegetation or on the sidewalk(s) with flush mounted well vaults and developed using pumping and surge block methods (see attached Typical Monitoring Well Construction Detail). If installed through concrete sidewalks, the flush mounts will seal over the concrete penetrations; although not anticipated to be required, any damage to the surrounding concrete surfaces will be patched/repared. After installation, the monitoring wells will be properly developed, surveyed and sampled. The length of time the wells will be needed is uncertain at this time, but in many instances may be several years.

Please also include additional contact information so that we can coordinate our plans with you, via email or phone. Upon review of the application, if you have any questions or requests for additional information, please contact me at 517-974-4441 or by email at Brad.Saunders@arcadis.com. Upon issuance of a permit, email transmittal of the permit is a preferred method of delivery versus hardcopy transmittal.

Sincerely,

Arcadis of Michigan, LLC



Brad Saunders, P.E.
Project Manager

Copies:

Dave Favero – Deputy Cleanup Manager, Michigan, RACER Trust

Enclosures:

- 1 **ROW Permit Application with ROW Permit-Inspection Fee and ROW Deposit Fee**
- 2 **Site Map (3 copies)**
- 3 **Typical Monitoring Well Construction Detail (3 copies)**



Mayor Deirdre Waterman

CITY OF PONTIAC
DEPARTMENT OF PUBLIC WORKS

47450 WOODWARD AVENUE
PONTIAC, MICHIGAN 48342

PHONE: (248) 758-3600 FAX: (248) 758-3750

RIGHT-OF-WAY PERMIT APPLICATION

(TYPE OR PRINT IN INK)

Arcadis of Michigan, LLC
Applicant
Brad Saunders
Contact Person
28550 Cabot Drive, Suite 500
Applicant's Address
Novi MI 48377
City State Zip Code

RACER Trust
Owner
1505 Woodward Avenue, Suite 200
Address
Detroit MI 48226
City State Zip Code

24-Hour Emergency Number: 517-974-4441 Phone Number: 517-974-4441 Fax Number:

APPLICANT DESIGNATION:

[X] Contractor [] Homeowner [] Utility Company [] Other

PROJECT ADDRESS: East Kennett Rd and Saint Clair St (west and south of intersection) - south and east of RACER Trust former Fiero property.

PROJECT DESCRIPTION

(PROVIDE A DETAILED DESCRIPTION OF ALL RIGHT-OF-WAY WORK PROPOSED IN THE SPACE BELOW)

The applicant is proposing to install and periodically monitor two flush-mount groundwater monitoring wells in the Rights-of-Way (ROW) of E. Kennett Rd and Saint Clair St. The purpose of installing the wells is to investigate groundwater quality south and east of the former GM Fiero property as part of an USEPA- and EGLE-approved groundwater investigation work plan.

PERMIT/INSPECTION FEES

(PREPARE AND ATTACH TO THIS APPLICATION: AN ENGINEER'S ESTIMATE WHICH DETAILS ALL WORK PROPOSED WITHIN THE RIGHT-OF-WAY. THE ESTIMATE WILL BE UTILIZED TO DETERMINE REQUIRED FEES BELOW.)

- A. TOTAL INSTALLATION COST: \$ 3885.00
B. RIGHT-OF-WAY PERMIT FEE: \$ 50.00
C. RIGHT-OF-WAY INSPECTION FEE: \$ 388.50
D. RIGHT-OF-WAY DEPOSIT FEE: \$ 4,467.75

PERMIT APPLICATION REQUIREMENTS

- A. COMPLETE PERMIT APPLICATION
B. PREPARE AN ENGINEER'S ESTIMATE AND CALCULATE PERMIT/INSPECTION AND DEPOSIT FEES. MAKE ALL CHECKS PAYABLE TO: CITY OF PONTIAC-ENGINEERING DIVISION.
C. SUBMIT APPLICATION, ENGINEER'S ESTIMATE, THREE (3) COPIES OF ENGINEERING DRAWINGS PREPARED DETAILING PROPOSED INSTALLATION AND THE ABOVE CALCULATED FEES FOR REVIEW AND PROCESSING.

AS A CONDITION OF THE APPROVAL OF THIS APPLICATION, THE APPLICANT AGREES TO THE FOLLOWING CONDITIONS:

1. The Applicant agrees to secure a Permit from the City of Pontiac - Engineering Division prior to the commencement of construction, maintenance or demolition operations within City Right-of-Way. If a Contractor is to perform the operations entailed in this application, the Contractor shall secure the Permit and thereby assume responsibility, along with the Applicant, for any provisions.
2. Any and all operations proposed under this application shall adhere to the standards and direction of the Engineering Division together with the mandates set forth within this application.
3. The Applicant agrees to save harmless, indemnify, defend and represent the City of Pontiac elected officials, its agents and employees against any and all claims for bodily injury, property damage on any claim arising out of or related to the creation, operation, use, or continuing existence of the structure or facility covered by this Permit.
4. Deposit fees are refundable six (6) months after completion of the specified project, provided there occurs no undue settlement, spalling, etc. and/or work is approved by the City of Pontiac Right-of-Way Inspection.
5. Forty-eight (48) hours advance notice shall be given to the Engineering Division prior to the commencement of any proposed work within City Right-of-Way.
6. All road detours and associated barricades required and implemented as a part of the work identified in the Permit shall be designed and installed in accordance with the current Michigan Manual of Uniform Traffic Control Devices.
7. The Applicant shall surrender all rights implied as a part of this Permit; cease operations; and remove/relocate at the Applicants expense any and all facilities installed as a part of this Permit whenever ordered to do so by the Engineering Division due to the need for the area for public uses on a default in any of the conditions specified in this Permit. Failure to remove/relocate or otherwise surrender the facilities pursuant to Engineering Division requests shall deem the Applicant responsible for the costs incurred by the Engineering Division in doing so.
8. This application shall not be constructed to grant rights whatsoever to any public utility, except as to the consent specifically outlined.
9. The Applicant agrees to construct, operate, use and/or maintain facilities to the satisfaction of the Engineering Division as long as the facility remains in Right-of-Way under jurisdiction of the Engineering Division. Applicant is obligated to repair any and all damages to the Right-of-Way resulting from installation of the facility, occurring or appearing after the Permit Licensee is released.
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All trenches, pits, voids and other general excavations shall be appropriately backfilled with sound earth (greenbelt areas) or granular material, placed in successive layers, not more than 12" in depth, and shall be thoroughly compacted, subject to verification by the Controlled Density Method (granular minimum 95%; earth backfill minimum 90%).

Unless otherwise approved, granular backfill material shall meet the gradation requirements of M.D.O.T. Class III Material.

All Right-of-Way excavations outside traveled roadways/sidewalk/driveways shall be maintained until such time as all settlement has occurred and the area has been restored to a condition equal to or better than the original condition, in accordance with Engineering Division Standards.

The Permit and Deposit will not be released until such time as settlement and restoration items have been completed.

12. Additional Project Conditions:

The Applicant agrees to obtain all required construction plan approvals from the City, County and State prior to start of any construction. (DEQ Utility Permits, MPDES Permit, SESC Permit, etc.)

The Applicant agrees to install all required utilities per City of Pontiac Standards, including but not limited to public sidewalks and street lights.

ARCADIS Design & Consultancy
for natural and built assets
630 Plaza Drive, Suite 600 • Highlands Ranch, Colorado 80129
Tel 720/344-3500 • Fax 720/344-3535

Bank of America, N.A.
70-2328/719 IL

299275
CHECK DATE

May 22, 2020

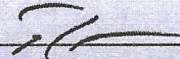
PAY
Four hundred thirty-eight and 50/100


AMOUNT

438.50

TO
City of Pontiac-Engineering Division
Department of Public Works
47450 Woodward Ave
Pontiac, MI 48342
United States

ARCADIS


VOID AFTER 90 DAYS ^{MP}

 Security Check features included. Details on back.

⑈ 299275⑈ ⑆ 071923284⑆ 8765030442⑈

ARCADIS Design & Consultancy
for natural and built assets
630 Plaza Drive, Suite 600 • Highlands Ranch, Colorado 80129 Tel 720/344-3500 • Fax 720/344-3535

EMILY BUSINESS FORMS 800.392.6018 VISION

299275

Check Date: 05/22/2020

Invoice Number	Date	Voucher	Amount	Discount	Previous Pay	Net Amount
05212020 PERMIT FEE	05/21/2020	34210685	\$438.50			\$438.50
City of Pontiac-Engineering Division		TOTAL	\$438.50			\$438.50
ABOFAA	C299275C	1013941				



630 Plaza Drive, Suite 600 • Highlands Ranch, Colorado 80129
Tel 720/344-3500 • Fax 720/344-3535

Bank of America, N.A.
70-2328/719 IL

299274

CHECK DATE

May 22, 2020

PAY

AMOUNT

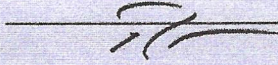
Four thousand four hundred sixty-seven and
75/100

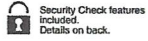
4,467.75

TO

City of Pontiac-Engineering Division
Department of Public Works
47450 Woodward Ave
Pontiac, MI 48342
United States

ARCADIS

 VOID AFTER 90 DAYS ^{MP}



⑈ 299274 ⑆ ⑆ 071923284 ⑆ ⑆ 8765030442 ⑆ ⑆



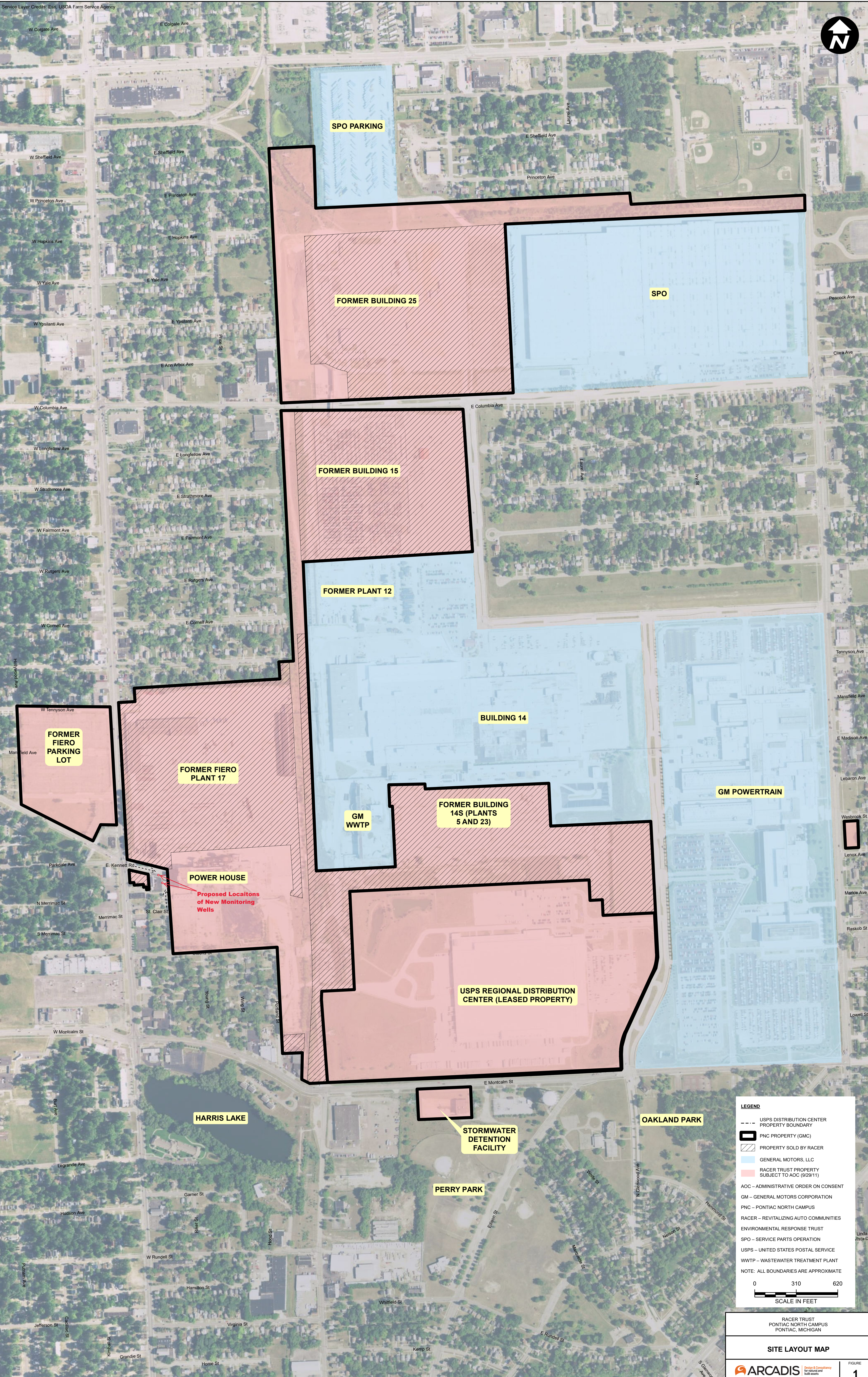
630 Plaza Drive, Suite 600 • Highlands Ranch, Colorado 80129 Tel 720/344-3500 • Fax 720/344-3535

EMILY BUSINESS FORMS 800.392.6018 VISION

299274

Check Date: 05/22/2020

Invoice Number	Date	Voucher	Amount	Discount	Previous Pay	Net Amount
05212020 DEPOSIT	05/21/2020	34210684	\$4,467.75			\$4,467.75
City of Pontiac-Engineering Division			TOTAL			\$4,467.75
ABOFAA	C299274C	1013941				



CITY: NOV, MI, DIV: ENV, DB: TRY, POC: PM, B. SANDERS, TM: TR, PROJECT NUMBER: 30006882
 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
 03/25/2019 11:37:02 AM BY: T.Y. (through)

LEGEND

- USPS DISTRIBUTION CENTER PROPERTY BOUNDARY
- PNC PROPERTY (GMC)
- PROPERTY SOLD BY RACER
- GENERAL MOTORS, LLC
- RACER TRUST PROPERTY SUBJECT TO AOC (9/29/11)

AOC – ADMINISTRATIVE ORDER ON CONSENT
 GM – GENERAL MOTORS CORPORATION
 PNC – PONTIAC NORTH CAMPUS
 RACER – REVITALIZING AUTO COMMUNITIES ENVIRONMENTAL RESPONSE TRUST
 SPO – SERVICE PARTS OPERATION
 USPS – UNITED STATES POSTAL SERVICE
 WWTP – WASTEWATER TREATMENT PLANT
 NOTE: ALL BOUNDARIES ARE APPROXIMATE

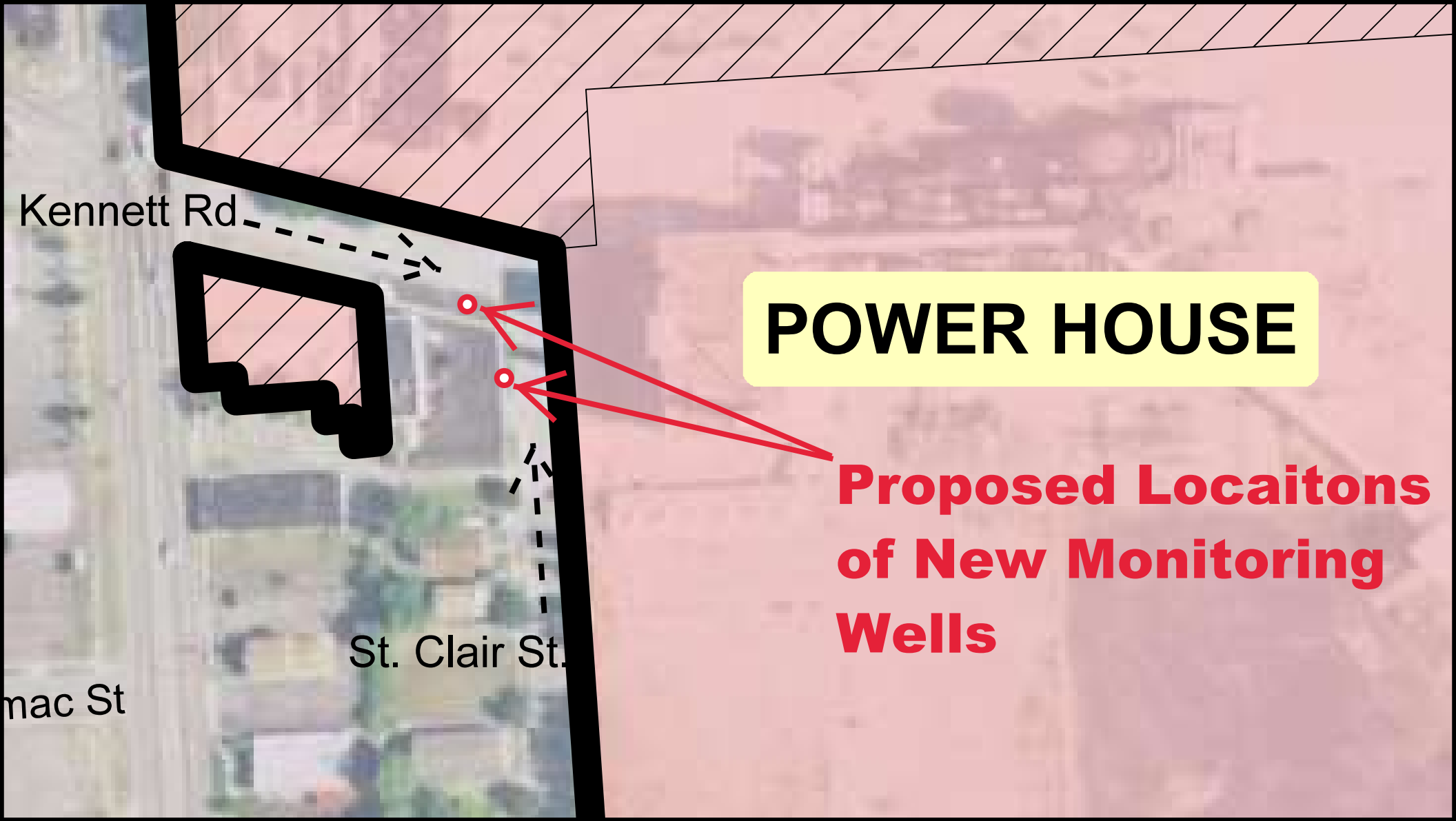
0 310 620

 SCALE IN FEET

RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

SITE LAYOUT MAP

Design & Consultancy for natural and built assets
FIGURE 1



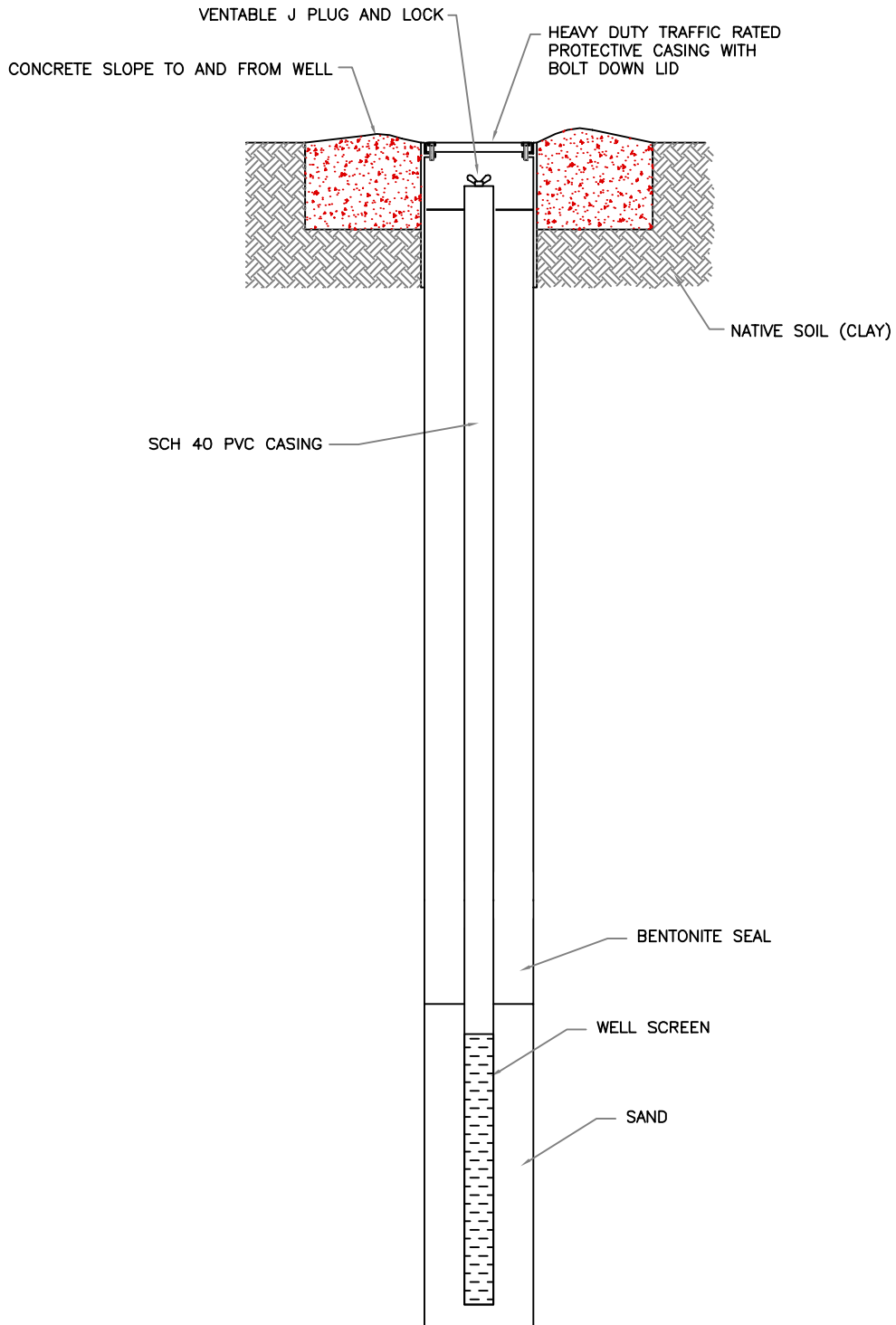
Kennett Rd

POWER HOUSE

**Proposed Locaitons
of New Monitoring
Wells**

St. Clair St.

mac St



28550 Cabot Drive, Suite 500
 Novi, MI 48377
 Phone: 248.994.2240
 Fax: 248.994.2241

TYPICAL MONITORING WELL CONSTRUCTION

DATE	PROJECT MANAGER	DRAWING NAME
DRAWN	LEAD DESIGN PROF.	CHECKED
PROJECT NUMBER		FIGURE NUMBER


ATTACHMENT 2

Soil Boring and Well Construction Logs

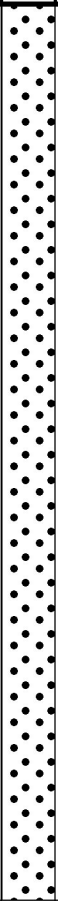

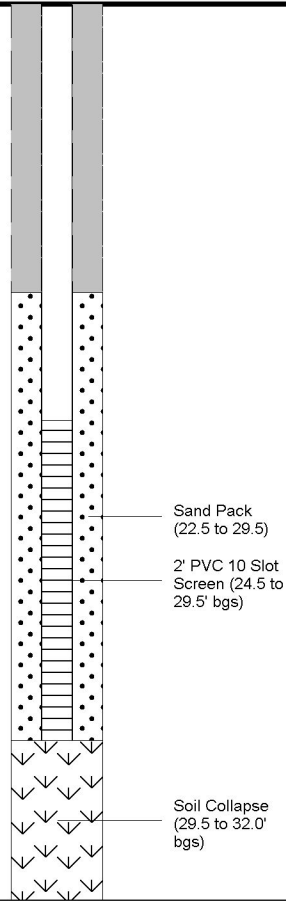



Date Start: 7/21/2020 Date Finish: 7/21/2020 Drilling Company: Terra Probe Environmental Driller's Name: S. Seals Drilling Method: Hand Auger/Hollow Stem Auger Sampling Method: Continuous Rig Type: Direct Push Water Level Start (ft. bgs.): 27.0 Water Level Finish (ft. btoc.): NA	Northing: 424651.13 Easting: 13410621.14 Casing Elevation: 974.97 Borehole Depth (ft. bgs.): 32.0 Surface Elevation: 975.54 Descriptions By: C. Weaver	Well/Boring ID: MW-06-20 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 82F
--	---	--

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							(0.0-0.2') ASPHALT.		
		1	0.0-5.0'	5.0	0.0			(0.2-11.0') CLAY, high plasticity, slow to no dilatancy, little sand, fine to medium, subrounded to subangular; trace small pebbles, subangular; dry; stiff, grayish brown (10YR 5/2). NOTE: Wood fragments from 0.2 to 1.0' bgs.; wet from 6.0 to 10.5' bgs.; dry at 10.5' bgs.		Cement Grout (0.0 to 0.5' bgs)
		2	5.0-8.0'	2.4	0.0					
-5	-5									
		3	8.0-12.0'	2.6	0.0			(11.0-15.0') SILT, non-plastic, rapid dilatancy; trace sand, fine; dry to moist; soft, light yellowish brown (10YR 6/4).		
										Bentonite Pellets (0.5 to 22.5' bgs) 2' PVC Well Casing (0.0 to 24.5' bgs)
		4	12.0-16.0'	3.3	0.0			(15.0-15.2') CLAY, high plasticity, slow dilatancy; little silt; moist; soft, brown (10YR 5/3).		
-10	-10							(15.2-16.0') SILT, non-plastic, rapid dilatancy; trace sand, fine; dry; brownish yellow (10YR 6/6).		
								(16.0-32.0') SAND, fine to medium, subrounded to subangular; trace silt; well sorted; dry to wet; very pale brown (10YR 7/3)		
-15	-15									

 <small>Design & Consultancy for natural and built assets</small>	Remarks: bgs = below ground surface Boring diameter: 8"
---	---


Date Start: 7/21/2020 Date Finish: 7/21/2020 Drilling Company: Terra Probe Environmental Driller's Name: S. Seals Drilling Method: Hand Auger/Hollow Stem Auger Sampling Method: Continuous Rig Type: Direct Push Water Level Start (ft. bgs.): 27.0 Water Level Finish (ft. btoc.): NA	Northing: 424651.13 Easting: 13410621.14 Casing Elevation: 974.97 Borehole Depth (ft. bgs.): 32.0 Surface Elevation: 975.54 Descriptions By: C. Weaver	Well/Boring ID: MW-06-20 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 82F
--	---	--

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
-20	-20	5	16.0-20.0	2.75	0.0			NOTE: Wet at 27 ft bgs.		
		6	20.0-24.0	NA	0.0					
-25	-25	7	24.0-28.0	NA	0.0					
-30	-30	8	28.0-32.0	NA	0.0					
							End of boring at 32.0' bgs.			
-35	-35									

 ARCADIS Design & Consultancy for natural and built assets	Remarks: bgs = below ground surface Boring diameter: 8"
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Date Start: 7/21/2020 Date Finish: 7/21/2020 Drilling Company: Terra Probe Environmental Driller's Name: S. Seals Drilling Method: Hand Auger/Hollow Stem Auger Sampling Method: Continuous Rig Type: Direct Push Water Level Start (ft. bgs.): 27.0 Water Level Finish (ft. btoc.): NA	Northing: 424538.38 Easting: 13410661.92 Casing Elevation: 975.06 Borehole Depth (ft. bgs.): 32.0 Surface Elevation: 975.48 Descriptions By: C. Weaver	Well/Boring ID: MW-07-20 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 82F
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DEPTH (feet bgl.)	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headpace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0	0							(0.0-0.2') ASPHALT.		
		1	0.0-5.0'	5.0	0.0			(0.2-1.5') PEBBLES, small to medium, subrounded to subangular; little sand, fine to medium, subrounded to subangular; well sorted; dry; light brownish gray (10YR 6/2).		Cement Grout (0.0 to 0.5' bgs)
					0.0			(1.5-12.0') CLAY, high plasticity, slow to no dilatancy; trace sand, fine to medium, subrounded to subangular; trace small pebbles, subrounded to subangular; dry; stiff; yellowish brown (10YR 5/4)		
		2	5.0-8.0'	3.0	0.0					
					0.0					
-5	-5				0.0					
		3	8.0-12.0'	3.3	0.0					
					0.0					
					0.0					
-10	-10				0.0					
		4	12.0-16.0'	2.9	0.0			(12.0-13.5') SAND, fine to medium, subrounded to subangular; some silt; well sorted; moist; brown (10YR 5/3).		Bentonite Pellets (0.5 to 23.5' bgs)
					0.0			(13.5-14.0') CLAY, medium plasticity, slow dilatancy; some to little sand, fine to medium, subrounded to subangular; moist; soft to medium stiff; brown (10YR 4/3).		2' PVC Well Casing (0.0 to 25.5' bgs)
					0.0			(14.0-20.5') SILT, non-plastic, rapid dilatancy; some sand, fine to medium, subrounded to subangular; moist; soft; light yellowish brown (10YR 6/4).		
-15	-15				0.0					
					0.0					
					0.0					

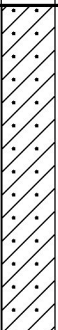
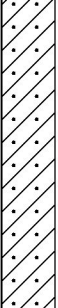
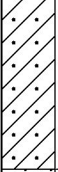
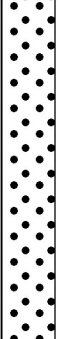
	Remarks: bgs = below ground surface Boring diameter: 8"
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Date Start: 7/21/2020 Date Finish: 7/21/2020 Drilling Company: Terra Probe Environmental Driller's Name: S. Seals Drilling Method: Hand Auger/Hollow Stem Auger Sampling Method: Continuous Rig Type: Direct Push Water Level Start (ft. bgs.): 27.0 Water Level Finish (ft. btoc.): NA	Northing: 424538.38 Easting: 13410661.92 Casing Elevation: 975.06 Borehole Depth (ft. bgs.): 32.0 Surface Elevation: 975.48 Descriptions By: C. Weaver	Well/Boring ID: MW-07-20 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 82F
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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
-20	-20	5	16.0-20.0	2.6	0.0			(20.5-32.0') SAND, fine to medium, subrounded to subangular; trace silt; well sorted; moist to wet; light gray (10YR 7/2).	27.0	<p>Sand Pack (23.5 to 30.5)</p> <p>2' PVC 10 Slot Screen (25.5 to 30.5' bgs)</p> <p>Soil Collapse (30.5 to 32.0' bgs)</p>
		6	20.0-24.0	3.0	0.0					
-25	-25	7	24.0-28.0	2.75	0.0					
		8	28.0-32.0	2.5	0.0					
							NOTE: Wet at 27 ft. bgs.			
								End of boring at 32.0' bgs.		
-35	-35									

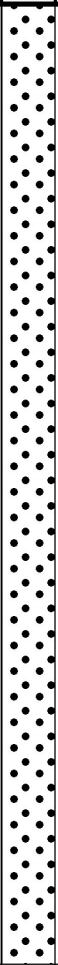
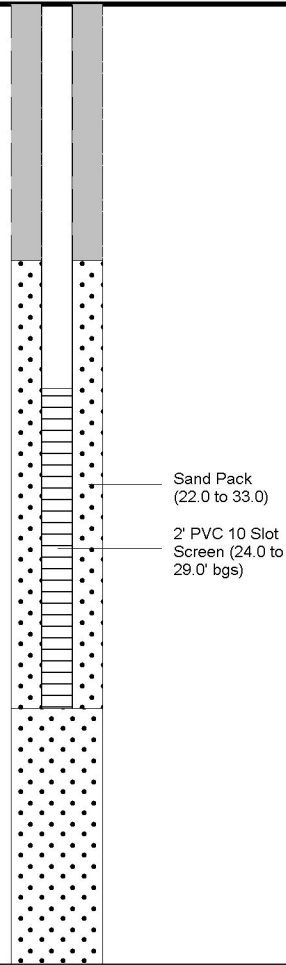
<p>ARCADIS Design & Consultancy for natural and built assets</p>	Remarks: bgs = below ground surface Boring diameter: 8"
---	---

Date Start: 8/24/2020	Northing: 424732.93	Well/Boring ID: MWOS-08
Date Finish: 8/24/2020	Easting: 13410525.07	Client: RACER
Drilling Company: Terra Probe Environmental	Casing Elevation: 975.09	Location: RACER PNC
Driller's Name: S. Seals	Borehole Depth (ft. bgs.): 33.0	Weather Conditions: Sunny, 78F
Drilling Method: Hand Auger/Hollow Stem Auger	Surface Elevation: 975.55	
Sampling Method: Macrocore	Descriptions By: S. Turner	
Rig Type: Direct Push		
Water Level Start (ft. bgs.): 26.5		
Water Level Finish (ft. btoc.): NA		

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			(0.0-12.5') SAND and CLAY, very fine to medium, subangular to subrounded, well sorted, non-plastic, no dilatency, dry to moist, very dense, brown (10YR 5/3)		Cement (0.0 to 0.5' bgs)
		2	5.0-9.0'	2.6	0.0					
		3	9.0-13.0'	3.4	0.0					
								(12.5-33.0') SAND, fine to medium, subangular to subrounded; well sorted; moist; medium dense; pale brown (10YR 6/3).		Bentonite (0.5 to 22.0' bgs) 2' PVC Well Casing (0.0 to 24.0' bgs)
		4	13.0-17.0'	4.08	0.0					
15	-15									

 <p>ARCADIS Design & Consultancy for natural and built assets</p>	<p>Remarks: bgs = below ground surface Boring diameter: 8"</p>
---	---

Date Start: 8/24/2020 Date Finish: 8/24/2020 Drilling Company: Terra Probe Environmental Driller's Name: S. Seals Drilling Method: Hand Auger/Hollow Stem Auger Sampling Method: Macrocore Rig Type: Direct Push Water Level Start (ft. bgs.): 26.5 Water Level Finish (ft. btoc.): NA	Northing: 424732.93 Easting: 13410525.07 Casing Elevation: 975.09 Borehole Depth (ft. bgs.): 33.0 Surface Elevation: 975.55 Descriptions By: S. Turner	Well/Boring ID: MWOS-08 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 78F
---	---	---


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
20 -20		5	17.0-21.0	3.5	0.0					
		6	21.0-25.0	4.5	0.0					
25 -25		7	25.0-29.0	4.3	0.0					
		8	29.0-33.0	3.5	0.0					
30 -30					0.0					
					0.0					
					0.0					
					0.0					
35 -35							End of boring at 33.0' bgs.			

Remarks: bgs = below ground surface
Boring diameter: 8"




Date Start: 8/24/2020 Date Finish: 8/24/2020 Drilling Company: Terra Probe Environmental Driller's Name: S. Seals Drilling Method: Hand Auger/Hollow Stem Auger Sampling Method: Macrocore Rig Type: Direct Push Water Level Start (ft. bgs.): 26.5 Water Level Finish (ft. btoc.): NA	Northing: 424670.17 Easting: 13410546.22 Casing Elevation: 976.42 Borehole Depth (ft. bgs.): 33.0 Surface Elevation: 976.70 Descriptions By: S. Turner	Well/Boring ID: MWOS-09 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 78F
---	---	---

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							(0.0-0.5') CONCRETE.		Cement (0.0 to 0.5' bgs)
		1	0.0-5.0'	5.0	0.0			(0.5-13.5') SAND, very fine to medium, subangular to subrounded; well sorted; trace clay, non-plastic, no dilatancy; dry to moist; very dense; brown (10YR 5/3).		
		2	5.0-9.0'	3.0	0.0					
		3	9.0-13.0'	4.5	0.0					Bentonite (0.5 to 22.0' bgs) 2' PVC Well Casing (0.0 to 24.0' bgs)
		4	13.0-17.0'	4.3	0.0			(13.5-33.0') SAND, fine to medium, subangular to subrounded; well sorted; moist; medium dense; pale brown (10YR 6/3).		
					0.0					

 <small>Design & Consultancy for natural and built assets</small>	Remarks: bgs = below ground surface Boring diameter: 8"
---	---

Date Start: 8/24/2020	Northing: 424670.17	Well/Boring ID: MWOS-09
Date Finish: 8/24/2020	Easting: 13410546.22	Client: RACER
Drilling Company: Terra Probe Environmental	Casing Elevation: 976.42	Location: RACER PNC
Driller's Name: S. Seals	Borehole Depth (ft. bgs.): 33.0	Weather Conditions: Sunny, 78F
Drilling Method: Hand Auger/Hollow Stem Auger	Surface Elevation: 976.70	
Sampling Method: Macrocore	Descriptions By: S. Turner	
Rig Type: Direct Push		
Water Level Start (ft. bgs.): 26.5		
Water Level Finish (ft. btoc.): NA		

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
-20	-20	5	17.0-21.0	3.5	0.0					
					0.0					
					0.0					
		6	21.0-25.0	4.5	0.0			NOTE: Color change to dark yellowish brown (10YR 4/6) from 23.0 to 26.0' bgs.		
-25	-25				0.0					
					0.0					
		7	25.0-29.0	4.3	0.0			NOTE: Wet at 26.5 ft. bgs.		
					0.0					
					0.0					
-30	-30	8	29.0-33.0'	1.0	0.0					
					0.0					
					0.0					
					0.0					
					0.0					
					0.0			End of boring at 33.0' bgs.		
-35	-35									

	Remarks: bgs = below ground surface Boring diameter: 8"
---	---

ATTACHMENT 3

Groundwater Sampling Logs



Groundwater Sampling Form



Project Number	30042811	Well ID	MW-05-18	Date	08/31/2020
Project Name/Location	RACER PNC		Weather(°F)	75.0 degrees F and Mostly Cloudy. The wind is blowing S at 37.0 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	26.9	Total Depth (ft-bmp)	33.58	Water Column(ft)	6.68
MP Elevation		Pump Intake (ft-bmp)	30	Purge Method	Low-Flow
Sample Time	15:15	Volumes Purged		Sample ID	NA
Purge Start	14:35	Gallons Purged		Replicate/ Code No.	
Purge End	15:18				

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
14:38	0	0	250	26.94		6.71	1.12	30.1	1.76	26.9	231.5		
14:43	5	5	250	26.94		6.95	1.12	19.7	0.71	21.9	155.2		
14:48	5	10	250	26.94		6.91	1.13	13.2	0.77	22	139.8		
14:53	5	15	250	26.94		6.97	1.13	6.09	0.57	22.2	122.4		
14:58	5	20	250	26.94		6.98	1.12	3.76	0.59	22.1	106.9		
15:03	5	25	250	26.94		6.99	1.11	4.08	0.57	22	98.7		
15:08	5	30	250	26.94		6.99	1.1	2.54	0.58	21.7	92.7		
15:13	5	35	250	26.94		6.98	1.09	2.11	0.6	21.6	89.6		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF-16-15	Date	09/01/2020
Project Name/Location	RACER PNC		Weather(°F)	78.1 degrees F and Partly Cloudy. The wind is blowing S/SW at 20.9 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	21.44	Total Depth (ft-bmp)	34.49	Water Column(ft)	13.05
MP Elevation		Pump Intake (ft-bmp)	32	Purge Method	Low-Flow
Sample Time	13:00	Volumes Purged		Sample ID	NA
Purge Start	11:57	Gallons Purged		Replicate/ Code No.	
Purge End	13:03				

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
11:59	0	0	250	21.46		6.95	1.67	17.2	1.58	21.2	125.6		
12:04	5	5	250	21.46		6.85	1.15	5.89	0.64	19.7	130.4		
12:09	5	10	250	21.46		6.86	1.16	4.06	0.3	18.7	128		
12:14	5	15	250	21.46		6.95	1.14	3.38	0.2	18.1	114.9		
12:19	5	20	250	21.46		6.96	1.14	3.9	0.24	18	113.9		
12:24	5	25	250	21.46		6.96	1.13	2.76	0.21	18	113.5		
12:29	5	30	250	21.46		7	1.09	2.02	0.29	17.7	108.3		
12:34	5	35	250	21.46		6.99	1.07	0.99	0.3	17.7	107.2		
12:39	5	40	250	21.46		6.98	1.06	1.74	0.39	17.5	104.6		
12:44	5	45	250	21.46		7	1.06	1.28	0.4	17.2	103.1		
12:49	5	50	250	21.46		7	1.05	1.03	0.41	17.3	102.2		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

ft-bmp = feet below measuring point mS/cm = milliSiemens per centimeter mV = millivolts
 in = inches °F = degrees Fahrenheit
 ft = feet mg/L = milligrams per liter °C = degrees Celsius
 mL/min = milliliters per minute

Groundwater Sampling Form



Project Number	30042811	Well ID	MW-06-20	Date	09/01/2020
Project Name/Location	RACER PNC		Weather(°F)	81.0 degrees F and Mostly Cloudy. The wind is blowing S at 41.1 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	25.65	Total Depth (ft-bmp)	29.23	Water Column(ft)	3.58
MP Elevation		Pump Intake (ft-bmp)	27	Purge Method	Low-Flow
Sample Time	14:20	Volumes Purged		Sample ID	NA
Purge Start	13:40	Gallons Purged		Replicate/ Code No.	
Purge End	14:23				

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
13:43	0		250	25.68		7.14	1.01	5.97	2.62	20.3	115.4		
13:48	5	05	250	25.68		7.06	1.02	3.61	2.94	18.6	122.2		
13:53	5	10	250	25.68		7.06	1.03	3.87	2.56	17.9	121.3		
14:58	5	15	250	25.68		7.12	1.04	2.47	2.71	18.1	116.3		
14:03	5	20	250	25.68		7.14	1.04	2.11	2.59	17.8	115.1		
14:08	5	25	250	25.68		7.14	1.05	1.97	2.49	17.7	113.7		
14:13	5	30	250	25.68		7.16	1.05	2.1	2.53	17.5	111.9		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

ft-bmp = feet below measuring point mS/cm = milliSiemens per centimeter mV = millivolts
 in = inches NTU = Nephelometric Turbidity Unit °F = degrees Fahrenheit
 ft = feet mg/L = milligrams per liter °C = degrees Celsius
 mL/min = milliliters per minute

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-25	Date	09/01/2020
Project Name/Location	RACER PNC		Weather(°F)	82.9 degrees F and Cloudy. The wind is blowing S/SW at 33.0 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	25.61	Total Depth (ft-bmp)	37.16	Water Column(ft)	11.55
MP Elevation		Pump Intake (ft-bmp)	35	Purge Method	Low-Flow
Sample Time	17:05	Volumes Purged		Sample ID	NA
Purge Start	16:00	Gallons Purged		Replicate/ Code No.	
Purge End	17:08				

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
16:02	0	0	250	25.64		7.06	0.87	44.6	2		17.6		
16:07	5	5	250	25.65		7.05	0.86	42.5	1.9	17.4	124.4		
16:12	5	10	250	25.65		7.07	0.84	37.5	2.19	17.4	123.9		
16:17	5	15	250	25.65		7.14	0.84	30.4	2.65	17.6	120.2		
16:22	5	20	250	25.65		7.16	0.84	23.5	3.81	17.4	119		
16:27	5	25	250	25.65		7.16	0.83	23.8	3.81	17.1	119.4		
16:32	5	30	250	25.65		7.18	0.82	25.7	3.84	17.1	118.2		
16:37	5	35	250	25.65		7.24	0.79	26	3.75	17.6	114.9		
16:42	5	40	250	25.65		7.26	0.573	24.8	3.7	17.6	114.5		
16:47	5	45	250	25.65		7.24	0.569	25.3	2.99	17.7	116.3		
16:52	5	50	250	25.65		7.25	0.574	23.1	2.91	17.5	116.5		
16:57	5	55	250	25.65		7.24	0.575	24.5	3.06	17.4	117.1		
17:00	3	58	250	25.65		7.24	0.576	24.8	3.03	17.4	118.2		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: Turbidity stabilized at ~25 NTU.

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MW-07-20	Date	08/31/2020		
Project Name/Location	RACER PNC		Weather(°F)	75.0 degrees F and Mostly Cloudy. The wind is blowing S at 37.0 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)	26.26	Total Depth (ft-bmp)	30.16	Water Column(ft)	3.9	Gallons in Well	0.63
MP Elevation		Pump Intake (ft-bmp)	28.5	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	16:30	Volumes Purged		Sample ID	NA	Sampled by	Shantel Johnson
Purge Start	15:45	Gallons Purged		Replicate/ Code No.			
Purge End	16:33						

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
15:47	0	0	250	26.34		7.14	0.91	103	1.22	18.9	100.2		
15:52	5	5	250	26.34		7.11	0.91	61.7	0.72	19.1	103.1		
15:57	5	10	250	26.34		7.13	0.89	38.4	0.74	19	102		
16:02	5	15	250	26.34		7.16	0.88	27.7	1.08	18.3	99.5		
16:07	5	20	250	26.34		7.21	0.85	16.3	1.57	18.1	99.8		
16:12	5	25	250	26.34		7.24	0.83	10.9	2.54	18.3	100.1		
16:17	5	30	250	26.34		7.29	0.83	11.3	2.74	18.1	98.8		
16:22	5	35	250	26.34		7.26	0.83	8.63	2.77	18	101.4		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: MS/MSD

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-26	Date	09/01/2020
Project Name/Location	RACER PNC		Weather(°F)	75.0 degrees F and Mostly Cloudy. The wind is blowing S at 37.0 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	23.98	Total Depth (ft-bmp)	35.83	Water Column(ft)	11.85
MP Elevation		Pump Intake (ft-bmp)	32.5	Purge Method	Low-Flow
Sample Time	11:00	Volumes Purged		Sample ID	NA
Purge Start	10:05	Gallons Purged		Replicate/ Code No.	DUP-01
Purge End	11:05				

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
10:07	0	0	250	24.04		7.05	1.37	24.8	6.36	17.5	198		
10:12	5	5	250	24.05		7.04	1.45	10.6	3.56	16.4	191.5		
10:17	5	10	250	24.05		7.07	1.41	6.51	3.82	16.8	181.4		
10:22	5	15	250	24.05		7.12	1.38	8.04	3.81	16.7	170.3		
10:27	5	20	250	24.05		7.12	1.34	4.57	3.9	16.5	163.7		
10:32	5	25	250	24.05		7.12	1.32	3.21	4.08	16.6	157.5		
10:37	5	30	250	24.05		7.14	1.3	4.17	4.5	16.5	152.3		
10:42	5	35	250	24.05		7.14	1.27	3.22	5	16.6	147.2		
10:47	5	40	250	24.05		7.16	1.27	2.56	5.16	16.8	141.3		
10:52	5	45	250	24.05		7.16	1.27	2.99	5.14	17	137.4		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: DUP-01

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-23	Date	09/01/2020		
Project Name/Location	RACER PNC		Weather(°F)	75.0 degrees F and Mostly Cloudy. The wind is blowing S at 37.0 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)	23.48	Total Depth (ft-bmp)	30.52	Water Column(ft)	7.04	Gallons in Well	1.14
MP Elevation		Pump Intake (ft-bmp)		Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	15:30	Volumes Purged		Sample ID	NA	Sampled by	Shantel Johnson
Purge Start	14:44	Gallons Purged		Replicate/ Code No.	DUP-02		
Purge End	15:33						

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
14:46	0	0	250	23.5		7.12	0.55	17	0.92	21.3	114		
14:51	5	5	250	23.5		7.08	0.55	11.7	0.42	19.9	115.6		
14:56	5	10	250	23.5		7.02	0.545	9.49	0.25	20	115.3		
15:01	5	15	250	23.51		7.03	0.545	6.79	0.21	19.6	111.1		
15:06	5	20	250	23.51		7.07	0.543	5.04	0.18	19.5	104.4		
15:11	5	25	250	23.51		7.07	0.545	2.24	0.18	19.1	101.8		
15:16	5	30	250	23.51		7.08	0.545	1.55	0.17	19.2	97.6		
15:21	5	35	250	23.51		7.1	0.546	1.26	0.17	19.1	96.2		

Constituent Sampled	Container	Number	Preservative
VOCs	40 mL Glass	3	HCL

Comments: DUP-02

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-22	Date	09/02/2020
Project Name/Location	RACER PNC		Weather(°F)		
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	22.91	Total Depth (ft-bmp)	33.5	Water Column(ft)	10.59
MP Elevation		Pump Intake (ft-bmp)	31.5	Purge Method	Low-Flow
Sample Time	11:30	Volumes Purged		Sample ID	NA
Purge Start	10:40	Gallons Purged		Replicate/ Code No.	
Purge End	11:33				

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
10:43	0	0	250	22.93		7.23	0.72	11.3	3.07	18.7	181.4		
10:48	5	5	250	22.93		7.09	0.75	6.05	0.35	18.5	168.4		
10:53	5	10	250	22.93		7.1	0.75	4.23	0.32	18.6	166.9		
10:58	5	15	250	22.93		7.18	0.76	3.84	0.28	19	156.5		
11:03	5	20	250	22.93		7.19	0.77	2.51	0.24	19	149.3		
11:08	5	25	250	22.93		7.2	0.77	2.11	0.21	19	144.6		
11:13	5	30	250	22.93		7.2	0.76	2.12	0.28	19.1	141.3		
11:18	5	35	250	22.93		7.22	0.76	1.92	0.29	19.6	137.3		
11:23	5	40	250	22.93		7.23	0.76	1.84	0.31	19.4	135.1		
11:28	5	45	250	22.93		7.25	0.75	2	0.3	19.3	133.9		

Constituent Sampled	Container	Number	Preservative
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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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-16	Date	09/02/2020
Project Name/Location	RACER PNC		Weather(°F)	71.1 degrees F and Cloudy. The wind is blowing W/SW at 54.0 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	22.1	Total Depth (ft-bmp)	31.24	Water Column(ft)	9.14
MP Elevation		Pump Intake (ft-bmp)	29	Purge Method	Low-Flow
Sample Time	12:50	Volumes Purged		Sample ID	NA
Purge Start	12:05	Gallons Purged		Replicate/ Code No.	
Purge End	12:53				

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
12:07	0	0	250	22.3		7.2	0.88	23.7	1.56	19.5	150.4		
12:12	5	5	250	22.3		7.14	0.9	14.5	1.44	19.7	152.9		
12:17	5	10	250	22.3		7.13	0.9	10.3	1.27	20.2	151.3		
12:22	5	15	250	22.3		7.18	0.92	8.76	1.14	19.8	141.8		
12:27	5	20	250	22.3		7.18	0.92	3.95	1.64	19	135.1		
12:32	5	25	250	22.3		7.16	0.92	1.73	1.57	19	135.1		
12:37	5	30	250	22.3		7.16	0.92	1.17	1.55	18.8	132.6		
12:42	5	35	250	22.3		7.16	0.92	1.2	1.59	18.8	138.9		

Constituent Sampled	Container	Number	Preservative
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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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWOS-08	Date	09/02/2020
Project Name/Location	RACER PNC		Weather(°F)	78.1 degrees F and Mostly Cloudy. The wind is blowing W at 58.0 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	25.57	Total Depth (ft-bmp)	28.87	Water Column(ft)	3.3
MP Elevation		Pump Intake (ft-bmp)	27	Purge Method	Low-Flow
Sample Time	16:20	Volumes Purged		Sample ID	NA
Purge Start	15:12	Gallons Purged		Replicate/ Code No.	
Purge End	16:23				

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
15:15	0	0	250	25.59		7.03	0.75	36.5	6.5	17.2	66.7		
15:20	5	5	250	25.59		6.9	0.86	27.7	5.89	17	71.5		
15:25	5	10	250	25.59		6.99	0.87	19.4	5.64	17.6	67.8		
15:30	5	15	250	25.59		7.02	0.88	10.8	5.67	17.8	65.2		
15:35	5	20	250	25.59		7.08	0.84	7.44	5.36	17.6	64.3		
15:40	5	25	250	25.59		7.11	0.88	7.5	5.07	17.6	64.4		
15:45	5	30	250	25.59		7.11	0.74	5.41	5.09	17.5	64		
15:50	5	35	250	25.59		7.11	0.74	4.86	5.18	17.4	64.6		
15:55	5	40	250	25.59		7.12	0.78	3.97	5.67	17.3	64.1		
16:00	5	45	250	25.59		7.07	0.84	2.28	6.07	17.8	65.1		
16:05	5	50	250	25.59		7.06	0.89	2.37	6.24	17.3	63.3		
16:10	5	55	250	25.59		7.04	0.89	2.1	5.95	17.2	67.4		
16:15	5	60	250	25.59		7.03	0.9	1.49	5.58	17.1	68.2		

Constituent Sampled	Container	Number	Preservative
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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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

Project Number	30042811	Well ID	MWOS-09	Date	09/02/2020
Project Name/Location	RACER PNC		Weather(°F)	73.9 degrees F and Mostly Cloudy. The wind is blowing W at 33.0 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)	27.15	Total Depth (ft-bmp)	28.03	Water Column(ft)	0.88
				Gallons in Well	0.14
MP Elevation		Pump Intake (ft-bmp)	27.5	Purge Method	Low-Flow
				Sample Method	Low-Flow
Sample Time	14:40	Volumes Purged		Sample ID	NA
				Sampled by	Shantel Johnson
Purge Start	13:50	Gallons Purged		Replicate/ Code No.	
Purge End	14:44				

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
13:54	0	0	250	27.38		7.47	0.025		5.81	18.4	-60.1		
13:59	5	5	250	27.74		6.66	1.18		3.38	17.9	-85.5		
14:04	5	10	250	27.93		7.34	1.2		3.99	19	-89.9		

Constituent Sampled	Container	Number	Preservative
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Comments: Grab sample (purged well dry, turbidity of 582 NTUs before sampling)

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: _____	Well Locked at Arrival: _____
Condition of Well: _____	Well Locked at Departure: _____
Well Completion: NA _____	Key Number To Well: NA _____

ft-bmp = feet below measuring point	mS/cm = milliSiemens per centimeter	mV = millivolts
in = inches	NTU = Nephelometric Turbidity Unit	°F = degrees Fahrenheit
ft = feet	mg/L = milligrams per liter	°C = degrees Celsius
mL/min = milliliters per minute		

Groundwater Sampling Form



Project Number	30042811	Well ID	MW-05-18	Date	12/07/2020		
Project Name/Location	RACER PNC		Weather(°F)	30.9 degrees F and Cloudy. The wind is blowing N/NW at 41.1 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)	27.32	Total Depth (ft-bmp)	33.6	Water Column(ft)	6.28	Gallons in Well	1.02
MP Elevation		Pump Intake (ft-bmp)	30.46	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	12:57	Volumes Purged		Sample ID	MW-05-18_GW-120720	Sampled by	Julia McClafferty
Purge Start	12:24	Gallons Purged		Replicate/ Code No.			
Purge End	12:59						

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
12:25	0	0	150	27.31	--	7.53	0.73	0.54	0.88	12.2	87.7	--	--
12:30	5	5	150	27.31	--	7.25	0.73	0.02	0.82	12.6	72.5	--	--
12:35	5	10	150	27.31	--	7.25	0.73	0.02	0.95	12.6	69.4	--	--
12:40	5	15	150	27.31	--	7.24	0.73	0.02	0.9	12.5	68.4	--	--
12:45	5	20	150	27.31	--	7.23	0.73	0.02	0.77	12.5	67.6	--	--
12:50	5	25	150	27.31	--	7.23	0.73	0.02	0.79	12.5	67.5	--	--
12:55	5	30	150	27.31	--	7.22	0.73	0.02	0.76	12.6	67.2	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

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: Onsite Powerhouse	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MW-07-20	Date	12/07/2020		
Project Name/Location	RACER PNC		Weather(°F)	28.9 degrees F and Cloudy. The wind is blowing N/NW at 37.0 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)	26.72	Total Depth (ft-bmp)	30.18	Water Column(ft)	3.46	Gallons in Well	0.56
MP Elevation		Pump Intake (ft-bmp)	28.45	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	12:04	Volumes Purged		Sample ID	MW-07-20_GW-120720	Sampled by	Julia McClafferty
Purge Start	11:00	Gallons Purged		Replicate/ Code No.	MW-07-20_GW-120720		
Purge End	12:08						

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
11:01	0	0	150	26.71	--	6.59	0.61	27.7	1.16	11.3	187	--	--
11:06	5	5	150	26.71	--	7.37	0.6	36	1.4	12.1	140.7	--	--
11:11	5	10	150	26.71	--	7.45	0.59	21.7	2.02	12.2	116	--	--
11:16	5	15	150	26.71	--	7.46	0.59	15.2	2.14	12.2	108.5	--	--
11:21	5	20	150	26.71	--	7.46	0.59	10.4	2.38	12.4	101.4	--	--
11:26	5	25	150	26.71	--	7.46	0.59	6.96	2.37	12.5	97	--	--
11:31	5	30	150	26.71	--	7.45	0.59	3.91	2.6	12.5	96	--	--
11:36	5	35	150	26.71	--	7.45	0.59	1.98	2.48	12.5	133.1	--	--
11:41	5	40	150	26.71	--	7.45	0.59	0.93	2.8	12.6	126.6	--	--
11:46	5	45	150	26.71	--	7.45	0.59	0.83	3.31	12.8	127.3	--	--
11:51	5	50	150	26.71	--	7.45	0.59	0.02	3.78	12.7	126.5	--	--
11:56	5	55	150	26.71	--	7.44	0.59	0.11	4.13	12.6	124.7	--	--
11:01	1385	1440	150	26.71	--	7.44	0.59	0.42	4.13	12.8	124.1	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	9	HCL

Comments:

Well Casing Volume Conversion

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form

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: Onsite of Powerhouse	Well Locked at Arrival: no
Condition of Well: Good condition,Missing lock	Well Locked at Departure: no
Well Completion: Flush mount	Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MW-06-20	Date	12/07/2020		
Project Name/Location	RACER PNC		Weather(°F)	33.1 degrees F and Cloudy. The wind is blowing NW at 45.9 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)	26.1	Total Depth (ft-bmp)	29.22	Water Column(ft)	3.12	Gallons in Well	0.51
MP Elevation		Pump Intake (ft-bmp)	27.66	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	16:19	Volumes Purged		Sample ID	MW-06-20_GW-120720	Sampled by	Julia McClafferty
Purge Start	15:40	Gallons Purged		Replicate/ Code No.			
Purge End	16:20						

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
15:42	0	0	150	26.1	--	7.72	0.75	19	2.37	12.8	15.7	--	--
15:47	5	5	150	26.1	--	7.27	0.73	13	1.76	13.2	3	--	--
15:52	5	10	150	26.1	--	7.26	0.74	11.5	1.78	13.1	2.8	--	--
15:57	5	15	150	26.1	--	7.25	0.74	8.56	1.73	13.4	4	--	--
16:02	5	20	150	26.1	--	7.25	0.74	4.42	1.81	13.2	6.9	--	--
16:07	5	25	150	26.1	--	7.25	0.75	3.74	2.04	13	10.7	--	--
16:12	5	30	150	26.1	--	7.26	0.75	3.38	2.05	13.1	12.4	--	--
16:17	5	35	150	26.1	--	7.26	0.75	2.91	2	13.1	13.7	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

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: Onsite; outside of fence	Well Locked at Arrival: no
Condition of Well: Good condition, Missing lock	Well Locked at Departure: no
Well Completion: Flush mount	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-07	Date	12/07/2020		
Project Name/Location	RACER PNC		Weather(°F)	32.0 degrees F and Cloudy. The wind is blowing NW at 41.1 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)	7.03	Total Depth (ft-bmp)	17.46	Water Column(ft)	10.43	Gallons in Well	1.69
MP Elevation		Pump Intake (ft-bmp)	15	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	15:07	Volumes Purged		Sample ID	MWF16-07_GW-120720	Sampled by	Julia McClafferty
Purge Start	14:04	Gallons Purged		Replicate/ Code No.			
Purge End	15:09						

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
14:05	0	0	150	7.1	--	6.27	1.02	101	0.47	12.3	0.9	--	--
14:10	5	5	150	7.51	--	6.31	1.03	90.9	0.36	12.6	-4.5	--	--
14:15	5	10	150	7.91	--	6.3	1.03	78.3	0.23	12.9	-10.6	--	--
14:20	5	15	150	8.06	--	6.3	1.02	38	0.55	12.7	-15.2	--	--
14:25	5	20	150	8.29	--	6.29	1.02	57.9	0.56	12.8	-20	--	--
14:30	5	25	150	8.39	--	6.29	1.03	22.8	0.61	12.9	-22.3	--	--
14:35	5	30	150	8.56	--	6.29	1.02	19.3	0.62	12.8	-25.6	--	--
14:40	5	35	150	8.75	--	6.29	1.02	17	0.63	12.8	-28.6	--	--
14:45	5	40	150	8.93	--	6.3	1.03	13.4	0.65	12.9	-31.9	--	--
14:50	5	45	150	9.18	--	6.3	1.03	10.8	0.61	12.9	-35	--	--
14:55	5	50	150	9.32	--	6.31	1.03	9.01	0.61	12.9	-37	--	--
15:00	5	55	150	9.51	--	6.31	1.03	8.4	0.6	13	-39.1	--	--
15:05	5	60	150	9.66	--	6.3	1.04	7.31	0.6	13	-40.9	Yellow tint	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

Comments: Missing lock

Well Casing Volume Conversion

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

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: Onsite Powerhouse	Well Locked at Arrival: no
Condition of Well: Good condition	Well Locked at Departure: no
Well Completion: Flush mount	Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-05	Date	12/08/2020		
Project Name/Location	RACER PNC		Weather(°F)	21.9 degrees F and Mostly Cloudy. The wind is blowing undefined at 0.0 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)	20.42	Total Depth (ft-bmp)	22.6	Water Column(ft)	2.18	Gallons in Well	0.35
MP Elevation		Pump Intake (ft-bmp)	21.5	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	10:04	Volumes Purged		Sample ID	MWF16-05_GW-120820	Sampled by	Julia McClafferty
Purge Start	09:02	Gallons Purged		Replicate/ Code No.			
Purge End	10:06						

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
09:03	0	0	150	20.48	--	7.84	0.284	11.6	5.15	12.5	46.7	--	--
09:08	5	5	150	20.48	--	7.81	3.49	881	3.44	13.2	33.5	--	--
09:13	5	10	150	20.48	--	7.73	0.311	647	3.17	13.1	34.1	--	--
09:18	5	15	150	20.48	--	7.72	0.311	361	3.03	13.3	35.1	--	--
09:23	5	20	150	20.48	--	7.69	0.311	180	2.82	13.3	37	--	--
09:28	5	25	150	20.48	--	7.69	0.312	101	2.97	13.4	37	--	--
09:33	5	30	150	20.48	--	7.68	0.313	63	3.08	13.4	38	--	--
09:38	5	35	150	20.48	--	7.67	0.316	34.1	2.87	13.5	39	--	--
09:43	5	40	150	20.48	--	7.66	0.318	21	2.96	13.5	39.8	--	--
09:48	5	45	150	20.48	--	7.65	0.321	17	3.02	13.5	40.6	--	--
09:53	5	50	150	20.48	--	7.64	0.322	10.5	3.09	13.4	41.8	--	--
09:58	5	55	150	20.48	--	7.63	0.323	8.8	3.14	13.4	42.3	--	--
10:03	5	60	150	20.48	--	7.63	0.328	6.57	2.94	13.5	43	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

Comments: Water turned very cloudy at 9:08am

Well Casing Volume Conversion

ft-bmp = feet below measuring point	mS/cm = milliSiemens per centimeter	mV = millivolts
in = inches	NTU = Nephelometric Turbidity Unit	°F = degrees Fahrenheit
ft = feet	mg/L = milligrams per liter	°C = degrees Celsius
mL/min = milliliters per minute		

Groundwater Sampling Form

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: East side former Fiero	Well Locked at Arrival: yes
Condition of Well: Needs repairs, Well vault bent inwards	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-16	Date	12/08/2020		
Project Name/Location	RACER PNC		Weather(°F)	30.9 degrees F and Cloudy. The wind is blowing W at 29.0 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)	22.64	Total Depth (ft-bmp)	31.26	Water Column(ft)	8.62	Gallons in Well	1.4
MP Elevation		Pump Intake (ft-bmp)	26.95	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	11:37	Volumes Purged		Sample ID	MWF16-16_GW-120820	Sampled by	Julia McClafferty
Purge Start	10:39	Gallons Purged		Replicate/ Code No.			
Purge End	11:39						

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
10:40	0	0	150	22.64	--	8.06	0.52	19.7	2.65	12.4	72.6	--	--
10:45	5	5	150	22.65	--	7.53	0.477	10.7	2.03	13	57.7	--	--
10:50	5	10	150	22.65	--	7.51	0.472	4.63	3.26	13.2	56.5	--	--
10:55	5	15	150	22.65	--	7.49	0.474	4.05	4	13.2	56.7	--	--
11:00	5	20	150	22.65	--	7.46	0.476	2.59	3.94	13.3	57.2	--	--
11:05	5	25	150	22.65	--	7.46	0.478	2.08	3.96	13.4	57.2	--	--
11:10	5	30	150	22.65	--	7.47	0.483	1.88	4.78	13.4	57.8	--	--
11:15	5	35	150	22.65	--	7.47	0.484	0.51	4.69	13.4	58.4	--	--
11:20	5	40	150	22.65	--	7.45	0.488	1.7	4.58	13.5	57.6	--	--
11:25	5	45	150	22.65	--	7.45	0.486	0.59	4.46	13.5	59.6	--	--
11:30	5	50	150	22.65	--	7.43	0.488	0.25	4.35	13.6	58.8	--	--
11:35	5	55	150	22.65	--	7.41	0.495	0.02	4.7	13.7	59	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

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

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

Well Information

Well Location: South Central Fiero
Condition of Well: Good condition
Well Completion: Flush mount

Well Locked at Arrival: yes
Well Locked at Departure: yes
Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-23	Date	12/08/2020		
Project Name/Location	RACER PNC		Weather(°F)	36.0 degrees F and Cloudy. The wind is blowing W/SW at 37.0 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)	24.02	Total Depth (ft-bmp)	30.46	Water Column(ft)	6.44	Gallons in Well	1.05
MP Elevation		Pump Intake (ft-bmp)	27.24	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time		Volumes Purged		Sample ID	MWF16-23_GW-120820	Sampled by	Julia McClafferty
Purge Start	12:50	Gallons Purged		Replicate/ Code No.	DUP-01_GW-120820		
Purge End	01:57						

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
12:52	0	0	150	24.03	--	7.36	0.54	68.7	1.8	13.3	62.2	--	--
12:57	5	5	150	24.03	--	7.38	0.53	41.3	0.99	13.6	47.1	--	--
13:02	5	10	150	24.03	--	7.32	0.56	27.9	1.41	14.2	46.8	--	--
13:07	5	15	150	24.03	--	7.28	0.57	22.5	1.35	14.2	48.6	--	--
13:12	5	20	150	24.03	--	7.25	0.58	17.2	1.32	14.3	50.9	--	--
13:17	5	25	150	24.03	--	7.25	0.57	13.4	1.31	14.2	51.6	--	--
13:22	5	30	150	24.03	--	7.24	0.57	10.9	1.25	14.2	53.9	--	--
13:27	5	35	150	24.03	--	7.22	0.59	9.03	1.22	14.2	55.3	--	--
13:32	5	40	150	24.03	--	7.22	0.58	7.21	1.16	14.3	55.5	--	--
13:37	5	45	150	24.03	--	7.18	0.62	4.09	1.12	14.4	57.9	--	--
13:42	5	50	150	24.03	--	7.18	0.6	4.44	1.06	14.3	58.4	--	--
13:47	5	55	150	24.03	--	7.18	0.6	3.13	1.02	14.2	58.8	--	--
13:52	5	60	150	24.03	--	7.18	0.6	3.79	1.1	14.3	59.2	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	6	HCL

Comments:

Well Casing Volume Conversion

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

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: Onsite, outside of fence	Well Locked at Arrival: yes
Condition of Well: Missing bolts	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWOS-09	Date	12/08/2020		
Project Name/Location	RACER PNC		Weather(°F)	35.1 degrees F and Cloudy. The wind is blowing W at 25.0 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)	27.68	Total Depth (ft-bmp)	28.08	Water Column(ft)	0.3999999999999999	Gallons in Well	0.06
MP Elevation		Pump Intake (ft-bmp)	27.88	Purge Method	Low-Flow	Sample Method	Low-Flow
Sample Time	14:16	Volumes Purged		Sample ID	MWOS-09_GW-120820	Sampled by	Julia McClafferty
Purge Start	12:11	Gallons Purged		Replicate/ Code No.			
Purge End	14:18						

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
12:12	0	0	150	27.68	--							Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

Comments: Ran dry after 2 mins of purging; DTW at 14:10: 27.78 feet

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: Offsite, west of powerhouse	Well Locked at Arrival: no
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>no</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number 30042811 **Well ID** MWOS-08 **Date** 12/09/2020

Project Name/Location RACER PNC **Weather(°F)** 35.1 degrees F and Fog/Mist. The wind is blowing W at 29.0 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) 26.08 **Total Depth (ft-bmp)** 28.8 **Water Column(ft)** 2.72 **Gallons in Well** 0.44

MP Elevation **Pump Intake (ft-bmp)** 27.44 **Purge Method** Low-Flow **Sample Method** Low-Flow

Sample Time 10:44 **Volumes Purged** **Sample ID** MWOS-08_GW-120920 **Sampled by** Julia McClafferty

Purge Start 09:55 **Gallons Purged** **Replicate/Code No.** DUP-02_GW-120920

Purge End 10:47

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
09:57	0	0	150	26.09	--	7.36	0.64	18.9	5.98	12.7	12.9	--	--
10:02	5	5	150	26.09	--	7.28	0.66	11.2	5.44	13.5	8.8	--	--
10:07	5	10	150	26.09	--	7.26	0.66	7.94	5.26	13.6	10	--	--
10:12	5	15	150	26.09	--	7.24	0.67	5.99	5.16	13.7	15.4	--	--
10:17	5	20	150	26.09	--	7.23	0.67	5.42	5.16	13.7	22.7	--	--
10:22	5	25	150	26.09	--	7.23	0.66	3.89	5.15	13.8	27.5	--	--
10:27	5	30	150	26.09	--	7.22	0.66	2.08	5.02	13.8	33	--	--
10:32	5	35	150	26.09	--	7.22	0.66	0.47	5	13.8	37.1	--	--
10:37	5	40	150	26.09	--	7.22	0.66	0.02	4.96	13.7	40.7	--	--
10:42	5	45	150	26.09	--	7.22	0.66	0.02	4.99	13.8	43.6	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	6	HCL

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: Offsite, west of powerhouse

Well Locked at Arrival: no

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

Condition of Well: Good condition,Missing bolts,Missing lock
Well Completion: Flush mount

Well Locked at Departure: no
Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30042811	Well ID	MWF16-25	Date	12/09/2020
Project Name/Location	RACER PNC		Weather(°F)	36.0 degrees F and Haze. The wind is blowing W at 37.0 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)	26.08	Total Depth (ft-bmp)	37.19	Water Column(ft)	11.11
Gallons in Well	1.81				
MP Elevation	Pump Intake (ft-bmp)		32.7	Purge Method	Low-Flow
Sample Method	Low-Flow				
Sample Time	11:53	Volumes Purged	Sample ID		MWF16-25_GW-120920
Sampled by	Julia McClafferty				
Purge Start	11:05	Gallons Purged	Replicate/ Code No.		
Purge End	11:55				

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
11:07	0	0	150	26.08	--	7.4	0.52	18.8	5.01	12.8	50.6	--	--
11:12	5	5	150	26.08	--	7.42	0.54	8.41	5.01	13	43.4	--	--
11:17	5	10	150	26.08	--	7.4	0.54	10.2	3.84	13.1	43.3	--	--
11:22	5	15	150	26.08	--	7.39	0.54	6.04	3.62	13.2	44.4	--	--
11:27	5	20	150	26.08	--	7.38	0.54	5.03	3.87	13.2	46.7	--	--
11:32	5	25	150	26.08	--	7.37	0.54	4.75	4.16	13.2	48.9	--	--
11:37	5	30	150	26.08	--	7.37	0.54	3.73	3.93	13.2	50.5	--	--
11:42	5	35	150	26.08	--	7.37	0.54	2.66	4.43	13.3	52.6	--	--
11:47	5	40	150	26.08	--	7.36	0.54	2.57	4.29	13.3	54.1	--	--
11:52	5	45	150	26.08	--	7.36	0.54	2.5	4.33	13.2	56.2	Clear	None

Constituent Sampled	Container	Number	Preservative
VOCs, 1,4 Dioxane	40 mL Glass	3	HCL

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: Onsite, outside of fence
Well Locked at Arrival: yes

ft-bmp = feet below measuring point	mS/cm = milliSiemens per centimeter	mV = millivolts
in = inches	NTU = Nephelometric Turbidity Unit	°F = degrees Fahrenheit
ft = feet	mg/L = milligrams per liter	°C = degrees Celsius
mL/min = milliliters per minute		

Groundwater Sampling Form



Condition of Well: Missing bolts
Well Completion: Flush mount

Well Locked at Departure: yes
Key Number To Well: NA

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MW-05-18	Date	03/09/2021		
Project Name/Location	RACER PNC		Weather(°F)	55.9 degrees F and Cloudy. The wind is blowing SE at 13.9 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)	27.65	Total Depth (ft-bmp)	33.59	Water Column(ft)	5.94	Gallons in Well	0.97
MP Elevation		Pump Intake (ft-bmp)	31	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	16:55	Volumes Purged	2.58	Sample ID	MW-05-18_GW-030921	Sampled by	Christina Weaver
Purge Start	16:15	Gallons Purged	2.50	Replicate/ Code No.		Sample Tye	Grab

Purge End

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
16:21	0	0	180	27.67	--	7.47	0.98	51.7	0.76	12.8	-126.3	--	--
16:26	5	5	220	27.67	--	7.49	0.97	8.67	0.74	12.9	-111.7	--	--
16:31	5	10	220	27.67	--	7.5	0.96	1.43	0.76	13	-102.1	--	--
16:36	5	15	220	27.67	--	7.5	0.96	0.47	0.76	13	-97.6	--	--
16:41	5	20	220	27.67	--	7.51	0.95	0.68	0.62	13.1	-93.3	--	--
16:46	5	25	220	27.67	--	7.51	0.95	0.02	0.67	13.1	-92.2	--	--
16:51	5	30	220	27.67	--	7.51	0.95	0.02	0.65	13.1	-90.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: Check gauging log for additional captioned photos

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: Inside gate	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>2035</u>

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

Well Completion: Flush mount _____

Key Number To Well: NA _____

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MW-06-20	Date	03/09/2021		
Project Name/Location	RACER PNC		Weather(°F)	52.0 degrees F and Cloudy. The wind is blowing SE at 9.2 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)	26.50	Total Depth (ft-bmp)	29.22	Water Column(ft)	2.72	Gallons in Well	0.44
MP Elevation		Pump Intake (ft-bmp)	27.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	14:35	Volumes Purged	4.09	Sample ID	MW-06-20_GW-030921	Sampled by	Christina Weaver
Purge Start	13:55	Gallons Purged	1.80	Replicate/ Code No.		Sample Tye	Grab
Purge End	14:40						

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
13:58	0	0	180	26.51	--	7.35	0.93	8.68	1.66	13.5	144.9	--	--
14:03	5	5	180	26.51	--	7.47	0.92	3.09	1.44	13.6	131.7	--	--
14:08	5	10	180	26.51	--	7.51	0.91	0.31	1.31	13.3	122.4	--	--
14:13	5	15	180	26.51	--	7.51	0.9	0.28	1.41	13.2	119.5	--	--
14:18	5	20	180	26.51	--	7.52	0.9	0.02	1.33	13.6	111.8	--	--
14:23	5	25	180	26.51	--	7.53	0.9	0.02	1.2	13.9	100.6	--	--
14:28	5	30	180	26.51	--	7.54	0.9	0.02	1.18	13.9	95	--	--
14:33	5	35	180	26.51	--	7.54	0.9	0.02	1.2	13.9	91.2	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: No lock, check gauging log for additional captioned photos

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: <u>Outside fence</u>	Well Locked at Arrival: <u>no</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>no</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point	mS/cm = milliSiemens per centimeter	mV = millivolts
in = inches	NTU = Nephelometric Turbidity Unit	°F = degrees Fahrenheit
ft = feet	mg/L = milligrams per liter	°C = degrees Celsius
mL/min = milliliters per minute		

Groundwater Sampling Form

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-16	Date	03/10/2021		
Project Name/Location	RACER PNC		Weather(°F)	46.9 degrees F and Cloudy. The wind is blowing S at 9.2 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)	23.00	Total Depth (ft-bmp)	31.24	Water Column(ft)	8.24	Gallons in Well	1.34
MP Elevation		Pump Intake (ft-bmp)	29	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	09:35	Volumes Purged	1.04	Sample ID	MWF16-16_GW-031021	Sampled by	Christina Weaver
Purge Start	08:55	Gallons Purged	1.40	Replicate/ Code No.		Sample Tye	Grab
Purge End	09:40						

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
08:58	0	0	120	23.01	--	8.74	0.647	16.8	1.06	12.3	148.1	--	--
09:03	5	5	120	23.01	--	9.08	0.602	21	0.85	12.5	106	--	--
09:08	5	10	120	23.01	--	9.08	0.586	22.7	0.91	12.6	91.3	--	--
09:13	5	15	120	23.01	--	9.08	0.579	19.8	0.85	12.4	86.4	--	--
09:18	5	20	120	23.01	--	9.1	0.579	12	0.74	12.4	82.1	--	--
09:23	5	25	120	23.01	--	9.08	0.579	7.47	0.81	12.5	79.1	--	--
09:28	5	30	120	23.01	--	9.08	0.58	6.57	0.85	12.5	75.8	--	--
09:33	5	35	120	23.01	--	9.07	0.582	6.82	0.86	12.5	74.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: Check gauging log for additional captioned photos. Small black particulates in sample

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: <u>GFLsouth</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>Don't have key</u>

ft-bmp = feet below measuring point	mS/cm = milliSiemens per centimeter	mV = millivolts
in = inches	NTU = Nephelometric Turbidity Unit	°F = degrees Fahrenheit
ft = feet	mg/L = milligrams per liter	°C = degrees Celsius
mL/min = milliliters per minute		

Groundwater Sampling Form

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-06	Date	03/10/2021		
Project Name/Location	RACER PNC		Weather(°F)	48.9 degrees F and Cloudy. The wind is blowing S at 9.2 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)	14.53	Total Depth (ft-bmp)	28.64	Water Column(ft)	14.11	Gallons in Well	2.29
MP Elevation		Pump Intake (ft-bmp)	26	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	10:32	Volumes Purged	0.66	Sample ID	MWF16-06_GW-031021	Sampled by	Christina Weaver
Purge Start	00:58	Gallons Purged	1.50	Replicate/ Code No.		Sample Tye	Grab
Purge End	10:37						

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	140	14.73	--	9.32	0.632	45.4	3.41	11	69	--	--
10:05	5	5	140	14.73	--	9.21	0.634	28.6	3.08	11.2	79.3	--	--
10:10	5	10	140	14.73	--	9.21	0.648	16.8	3.01	11.3	78.9	--	--
10:15	5	15	140	14.74	--	9.21	0.642	7.05	2.98	11.3	79.9	--	--
10:20	5	20	140	14.74	--	9.21	0.643	6.64	2.97	11.3	78.1	--	--
10:25	5	25	140	14.74	--	9.22	0.64	6.16	2.93	11.4	75.9	--	--
10:30	5	30	140	14.74	--	9.22	0.64	6.25	2.97	11.4	75.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: See gauging log for additional captioned photos, small black particles in sample

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: <u>GFL Southeast</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-05	Date	03/10/2021
Project Name/Location	RACER PNC		Weather(°F)	51.1 degrees F and Cloudy. The wind is blowing S at 10.3 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	20.78	Total Depth (ft-bmp)	22.6	Water Column(ft)	1.82
MP Elevation		Pump Intake (ft-bmp)	21.5	Purge Method	Low-Flow
Sample Time	11:20	Volumes Purged	4.67	Sample ID	MWF16-05_GW-031021
Purge Start	10:52	Gallons Purged	1.40	Replicate/ Code No.	
Purge End	11:33			Sample Tye	Grab

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
10:55	0	0	150	20.88	--	9.54	0.423	65.4	4.87	13	136.9	--	--
11:00	5	5	150	20.88	--	9.3	0.427	132	3.35	13	128.1	--	--
11:05	5	10	150	20.88	--	9.48	0.428	21	4.4	13	117.8	--	--
11:10	5	15	150	20.88	--	9.29	0.431	20.1	3.08	13	112.8	--	--
11:15	5	20	150	20.88	--	9.27	0.431	9.8	3.21	13.1	104.2	--	--
11:20	5	25	150	20.88	--	9.27	0.431	9.5	3.12	13.2	103.2	--	--
11:25	5	30	150	20.88	--	9.28	0.432	8.9	3.26	13.2	96.8	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: See gauging log for additional captioned photos

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: GFL East	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-11	Date	03/10/2021		
Project Name/Location	RACER PNC		Weather(°F)	55.9 degrees F and Cloudy. The wind is blowing S at 12.8 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)	20.06	Total Depth (ft-bmp)	25.85	Water Column(ft)	5.79	Gallons in Well	0.94
MP Elevation		Pump Intake (ft-bmp)	23.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	12:30	Volumes Purged	1.60	Sample ID	MWF16-11_GW-031021	Sampled by	Christina Weaver
Purge Start	11:55	Gallons Purged	1.50	Replicate/ Code No.		Sample Tye	Grab
Purge End	12:35						

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
11:57	0	0	200	20.18	--	9.48	0.485	3.45	3.8	12.9	97.2	--	--
12:02	5	5	140	20.10	--	9.37	0.485	0.02	3.27	12.8	95.3	--	--
12:07	5	10	140	20.08	--	9.35	0.485	0.02	3.21	12.8	92.3	--	--
12:12	5	15	140	20.07	--	9.36	0.485	0.02	3.13	12.9	86.8	--	--
12:17	5	20	140	20.07	--	9.35	0.485	0.02	3.15	13.1	82.1	--	--
12:22	5	25	140	20.07	--	9.35	0.485	0.02	2.88	13.2	75.3	--	--
12:27	5	30	140	20.07	--	9.35	0.485	0.02	3.02	13.3	72.9	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: For additional captioned photos see gauging log

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: GFL east	Well Locked at Arrival: yes
Condition of Well: Good condition	Well Locked at Departure: yes
Well Completion: Flush mount	Key Number To Well: NA

ft-bmp = feet below measuring point mS/cm = milliSiemens per centimeter mV = millivolts
 in = inches NTU = Nephelometric Turbidity Unit °F = degrees Fahrenheit
 ft = feet mg/L = milligrams per liter °C = degrees Celsius
 mL/min = milliliters per minute

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-12	Date	03/10/2021		
Project Name/Location	RACER PNC		Weather(°F)	59.0 degrees F and Cloudy. The wind is blowing S at 15.0 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)	15.32	Total Depth (ft-bmp)	18.91	Water Column(ft)	3.59	Gallons in Well	0.58
MP Elevation		Pump Intake (ft-bmp)	16	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	13:35	Volumes Purged	2.76	Sample ID	MWF16-12_GW-031021	Sampled by	Christina Weaver
Purge Start	12:58	Gallons Purged	1.60	Replicate/ Code No.		Sample Tye	Grab
Purge End	13:40						

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
13:02	0	0	140	15.62	--	1.19	0.585	1.06	3.4	12.4	503	--	--
13:07	5	5	140	15.70	--	9.02	0.586	0.22	3.22	12.5	37	--	--
13:12	5	10	140	15.73	--	8.97	0.604	0.02	3.09	12.4	49.7	--	--
13:17	5	15	140	15.73	--	8.88	0.68	0.02	2.87	12.5	55.5	--	--
13:22	5	20	140	15.72	--	8.83	0.7	0.02	2.84	12.4	57.9	--	--
13:27	5	25	140	15.72	--	8.8	0.69	0.02	2.89	12.7	58	--	--
13:32	5	30	140	15.72	--	8.8	0.7	0.02	2.9	12.5	64.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane, VOCs	40 mL Glass	3	HCL

Comments: Initial parameters unusual. Moving YSI normalized parameters after first reading. For additional captioned photos check gauging log

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: <u>GFI east</u>	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

ft-bmp = feet below measuring point mS/cm = milliSiemens per centimeter mV = millivolts
 in = inches NTU = Nephelometric Turbidity Unit °F = degrees Fahrenheit
 ft = feet mg/L = milligrams per liter °C = degrees Celsius
 mL/min = milliliters per minute

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-17	Date	03/10/2021
Project Name/Location	RACER PNC		Weather(°F)	63.0 degrees F and Cloudy. The wind is blowing S/SW at 13.9 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	20.32	Total Depth (ft-bmp)	31.7	Water Column(ft)	11.38
MP Elevation		Pump Intake (ft-bmp)	29	Purge Method	Low-Flow
Sample Time	14:35	Volumes Purged	0.86	Sample ID	MWF16-17_GW-031021
Purge Start	13:55	Gallons Purged	1.60	Replicate/ Code No.	
Purge End	14:40			Sample Tye	Grab

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
13:56	0	0	140	20.32	--	8.79	1.44	25.2	4.72	13.3	77.2	--	--
14:01	2	2	140	20.33	--	8.8	1.43	19	5.26	13.2	77.3	--	--
14:06	5	7	140	20.33	--	8.77	1.43	17.5	5.57	12.8	84.4	--	--
14:11	5	12	140	20.33	--	8.76	1.43	15.7	5.31	12.8	83.1	--	--
14:16	5	20	140	20.33	--	8.76	1.43	10.1	5.25	12.8	81.4	--	--
14:21	5	25	140	20.33	--	8.76	1.43	8.4	5.09	12.8	75	--	--
14:26	5	30	140	20.33	--	8.76	1.43	7.44	4.96	12.6	72.5	--	--
14:31	5	35	140	20.33	--	8.76	1.43	7.5	4.89	12.7	71	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: For additional captioned photos check gauging log

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: GFL east

Well Locked at Arrival: yes

Condition of Well: Good condition,Lid fits on but vault not compatible. Vault is for 2 bolts, lid has 3. Vault has bolts broken off so lid just sits flush on top

Well Locked at Departure: yes

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

Well Completion: Flush mount _____

Key Number To Well: NA _____

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number 30075936 **Well ID** MW-07-20 **Date** 03/12/2021

Project Name/Location RACER PNC **Weather(°F)**

Measuring Pt. Description Top of Inner Casing **Screen Setting (ft-bmp)** -- **Casing Diameter (in)** 2 **Well Casing Material** PVC

Static Water Level (ft-bmp) 27.08 **Total Depth (ft-bmp)** 30.11 **Water Column(ft)** 3.03 **Gallons in Well** 0.49

MP Elevation **Pump Intake (ft-bmp)** 28 **Purge Method** Low-Flow **Purge Equipment** Peristaltic

Sample Time 09:07 **Volumes Purged** 3.88 **Sample ID** MW-07-20_GW-031221 **Sampled by** Christina Weaver

Purge Start 08:25 **Gallons Purged** 1.90 **Replicate/Code No.** MS/MSD same ID as sample **Sample Tye** Grab

Purge End 09:22

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
08:29	0	0	120	27.09	--	7.24	0.83	742	3.01	11.1	224.6	--	--
08:34	5	5	120	27.09	--	7.18	0.82	211	2.54	11.2	181.8	--	--
08:39	5	10	120	27.09	--	7.19	0.82	32.7	3.17	11.2	177.6	--	--
08:44	5	15	120	27.09	--	7.2	0.82	11.7	3.67	11.4	174	--	--
08:49	5	20	120	27.09	--	7.21	0.82	5.22	3.49	11.5	171.9	--	--
08:54	5	25	120	27.09	--	7.2	0.82	3.16	3.56	11.4	164.4	--	--
08:59	5	30	120	27.09	--	7.2	0.82	2.29	3.38	11.4	161.4	--	--
09:04	5	35	120	27.09	--	7.21	0.82	2.53	3.5	11.4	159.3	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	9	HCL

Comments: See gauging log for additional captioned photos

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: Fiero South west Well Locked at Arrival: no
 Condition of Well: Good condition Well Locked at Departure: no
 Well Completion: Flush mount Key Number To Well: NA

ft-bmp = feet below measuring point mS/cm = milliSiemens per centimeter mV = millivolts
 in = inches NTU = Nephelometric Turbidity Unit °F = degrees Fahrenheit
 ft = feet mg/L = milligrams per liter °C = degrees Celsius
 mL/min = milliliters per minute

Groundwater Sampling Form

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MW-OS-08	Date	03/12/2021		
Project Name/Location	RACER PNC		Weather(°F)	46.0 degrees F and Mostly Clear. The wind is blowing W at 15.0 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)	26.51	Total Depth (ft-bmp)	28.8	Water Column(ft)	2.29	Gallons in Well	0.37
MP Elevation		Pump Intake (ft-bmp)	27.5	Purge Method	Low-Flow	Purge Equipment	Peristaltic
Sample Time	11:07	Volumes Purged	3.78	Sample ID	MW-OS-08_GW-031221	Sampled by	Christina Weaver
Purge Start	10:33	Gallons Purged	1.40	Replicate/ Code No.	DUP-02	Sample Tye	Grab

Purge End 11:12

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
10:35	0	0	100	26.53	--	8.67	1.04	4.35	5.91	12.7	107.4	--	--
10:40	5	5	120	26.53	--	7.26	0.88	7.89	6.35	13	129.6	--	--
10:45	5	10	120	26.53	--	7.08	0.86	5.42	6.75	13	137.5	--	--
10:50	5	15	120	26.53	--	7.01	0.85	3.46	6.6	13	141.8	--	--
10:55	5	20	120	26.53	--	7	0.83	0.02	6.51	13.1	142.7	--	--
11:00	5	25	120	26.53	--	6.99	0.83	0.02	6.6	13.2	143.8	--	--
11:05	5	30	120	26.53	--	6.99	0.83	0.02	6.55	13.1	145.4	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane, VOCs	40 mL Glass	3	HCL

Comments: Missing one bolt. For additional captioned photos check gauging log

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: West of Fiero South	Well Locked at Arrival: no
Condition of Well: Good condition, Missing bolts	Well Locked at Departure: no
Well Completion: Flush mount	Key Number To Well: NA

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-25	Date	03/12/2021
Project Name/Location	RACER PNC		Weather(°F)	48.9 degrees F and Mostly Clear.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	26.52	Total Depth (ft-bmp)	37.15	Water Column(ft)	10.63
MP Elevation		Pump Intake (ft-bmp)	34.5	Purge Method	Low-Flow
Sample Time	12:20	Volumes Purged	0.81	Sample ID	MWF16-25_GW-031221
Purge Start	11:46	Gallons Purged	1.40	Replicate/ Code No.	
Purge End	12:25				

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
11:48	0	0	120	26.53	--	7.58	0.69	22.7	4.23	13.6	146.7	--	--
11:53	5	5	120	26.53	--	7.22	0.68	7	3.6	14	165.7	--	--
11:58	5	10	120	26.53	--	7.2	0.68	6.48	3.56	14	172.3	--	--
12:03	5	15	120	26.53	--	7.2	0.68	5.24	3.48	14	182.2	--	--
12:08	5	20	120	26.53	--	7.19	0.68	3.98	3.31	14	184.5	--	--
12:13	5	25	120	26.53	--	7.2	0.67	3.08	3.26	13.7	185.2	--	--
12:18	5	30	120	26.53	--	7.18	0.69	3.54	3.15	13.7	186.5	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane,VOCs	40 mL Glass	3	HCL

Comments: For additional captioned photos check gauging log

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: West of south Fiero	Well Locked at Arrival: <u>yes</u>
Condition of Well: <u>Good condition,Missing bolts</u>	Well Locked at Departure: <u>yes</u>
Well Completion: <u>Flush mount</u>	Key Number To Well: <u>NA</u>

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form



Project Number	30075936	Well ID	MWF16-18	Date	03/12/2021
Project Name/Location	RACER PNC		Weather(°F)	52.0 degrees F and Mostly Clear and Windy. The wind is blowing W at 19.7 mph.	
Measuring Pt. Description	Top of Inner Casing	Screen Setting (ft-bmp)	--	Casing Diameter (in)	2
Static Water Level (ft-bmp)	21.41	Total Depth (ft-bmp)	31.95	Water Column(ft)	10.54
MP Elevation		Pump Intake (ft-bmp)	30.5	Purge Method	Low-Flow
Sample Time	13:40	Volumes Purged	1.35	Sample ID	MWF16-18_GW-031221
Purge Start	12:54	Gallons Purged	2.30	Replicate/ Code No.	
Purge End	13:45			Sample Tye	Grab

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
12:56	0	0	140	21.42	--	7.16	0.77	0.37	0.7	12.5	239.2	--	--
13:01	5	5	140	21.42	--	7.16	0.76	0.02	0.62	12.4	224.9	--	--
13:06	5	10	140	21.42	--	7.14	0.77	0.98	0.66	12.4	214.2	--	--
13:11	5	15	140	21.42	--	7.11	0.78	0.02	0.64	12.4	205.1	--	--
13:16	5	20	140	21.42	--	7.1	0.79	0.02	0.76	12.2	184.8	--	--
13:21	5	25	140	21.42	--	7.08	0.8	0.02	0.77	12.1	150.9	--	--
13:26	5	30	140	21.42	--	7.07	0.81	0.02	0.77	11.9	126.8	--	--
13:31	5	35	140	21.42	--	7.07	0.82	0.02	0.77	11.9	122.3	--	--
13:36	5	40	140	21.42	--	7.07	0.83	0.02	0.79	11.8	117.6	Clear	None

Constituent Sampled	Container	Number	Preservative
1,4-dioxane ,VOCs	40 mL Glass	3	HCL

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: GFL central

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

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 = millivolts
 °F = degrees Fahrenheit
 °C = degrees Celsius

Groundwater Sampling Form

Well Completion: Flush mount _____

Key Number To Well: NA _____

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 = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

ATTACHMENT 4

Laboratory Analytical Reports



**August-September 2020
Groundwater Sampling Event**



Analytical Laboratory Report

Report ID: S17185.01(01)
Generated on 09/17/2020

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Additional 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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S17185.01-S17185.11
Project: PNC RACER
Collected Date(s): 08/31/2020 - 09/02/2020
Submitted Date/Time: 09/03/2020 14:30
Sampled by: S. Johnson
P.O. #: 30006882.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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

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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (11 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S17185.01	MW-05-18_GW-083120	Groundwater	08/31/20 15:15
S17185.02	MW-07-20_GW-083120	Groundwater	08/31/20 16:30
S17185.03	MW-07-20_GW-083120 MS	Groundwater	08/31/20 16:30
S17185.04	MW-07-20_GW-083120 MSD	Groundwater	08/31/20 16:30
S17185.05	MW-06-20_GW-090120	Groundwater	09/01/20 13:40
S17185.06	MWF16-23_GW-090120	Groundwater	09/01/20 15:30
S17185.07	MWF16-25_GW-090120	Groundwater	09/01/20 17:05
S17185.08	MWOS-09_GW-090220	Groundwater	09/02/20 14:40
S17185.09	MWOS-08_GW-090220	Groundwater	09/02/20 16:20
S17185.10	DUP-02_GW-090120	Groundwater	09/01/20 00:01
S17185.11	Trip Blank	Water	08/31/20 00:01



Analytical Laboratory Report

Lab Sample ID: S17185.01

Sample Tag: MW-05-18_GW-083120

Collected Date/Time: 08/31/2020 15:15

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 02:42, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	2	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 18:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	3	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.01 (continued)

Sample Tag: MW-05-18_GW-083120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 18:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	3	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.02

Sample Tag: MW-07-20_GW-083120

Collected Date/Time: 08/31/2020 16:30

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/14/20 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 03:03, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	1	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/11/20 14:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	9	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	5	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.02 (continued)

Sample Tag: MW-07-20_GW-083120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/11/20 14:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	2	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	9	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.03

Sample Tag: MW-07-20_GW-083120 MS

Collected Date/Time: 08/31/2020 16:30

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/14/20 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 00:31, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	42	1		ug/L	1	123-91-1	1

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/11/20 11:59, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	61	50		ug/L	1	67-64-1	1
2-Butanone (MEK)	59	25		ug/L	1	78-93-3	1
Benzene	51	1		ug/L	1	71-43-2	1
Bromodichloromethane	53	1		ug/L	1	75-27-4	1
Bromoform	52	1		ug/L	1	75-25-2	1
Bromomethane	57	5		ug/L	1	74-83-9	1
Carbon disulfide	55	5		ug/L	1	75-15-0	1
Carbon tetrachloride	53	1		ug/L	1	56-23-5	1
Chlorobenzene	53	1		ug/L	1	108-90-7	1
Chloroethane	56	5		ug/L	1	75-00-3	1
Chloroform	53	1		ug/L	1	67-66-3	1
Chloromethane	57	5		ug/L	1	74-87-3	1
1,2-Dibromo-3-chloropropane	57	5		ug/L	1	96-12-8	1
1,2-Dichlorobenzene	52	1		ug/L	1	95-50-1	1
1,2-Dichloroethane	50	1		ug/L	1	107-06-2	1
1,2-Dichloropropane	54	1		ug/L	1	78-87-5	1
1,3-Dichlorobenzene	52	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	51	1		ug/L	1	106-46-7	1
cis-1,2-Dichloroethene	59	1		ug/L	1	156-59-2	1
Dibromochloromethane	54	5		ug/L	1	124-48-1	1
Dichlorodifluoromethane	68	5		ug/L	1	75-71-8	1
trans-1,2-Dichloroethene	54	1		ug/L	1	156-60-5	1
Ethylbenzene	52	1		ug/L	1	100-41-4	1
2-Hexanone	58	50		ug/L	1	591-78-6	1
4-Methyl-2-pentanone (MIBK)	57	50		ug/L	1	108-10-1	1
tert-Methyl butyl ether (MTBE)	53	5		ug/L	1	1634-04-4	1
Methylene chloride	54	5		ug/L	1	75-09-2	1
Styrene	54	1		ug/L	1	100-42-5	1
1,1,1-Trichloroethane	59	1		ug/L	1	71-55-6	1
1,1,2-Trichloroethane	55	1		ug/L	1	79-00-5	1
1,2,4-Trichlorobenzene	57	5		ug/L	1	120-82-1	1
Tetrachloroethene	53	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S17185.03 (continued)

Sample Tag: MW-07-20_GW-083120 MS

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/11/20 11:59, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	52	1		ug/L	1	108-88-3	1
Trichloroethene	53	1		ug/L	1	79-01-6	1
Trichlorofluoromethane	56	1		ug/L	1	75-69-4	1
Vinyl chloride	57	1		ug/L	1	75-01-4	1
o-Xylene	53	1		ug/L	1	95-47-6	1
p,m-Xylene*	104	2		ug/L	1		1
Isopropylbenzene	52	1		ug/L	1	98-82-8	1
Cyclohexane	51	1		ug/L	1	110-82-7	1
1,1-Dichloroethane	62	1		ug/L	1	75-34-3	1
1,1-Dichloroethene	55	1		ug/L	1	75-35-4	1
Methyl Acetate	52	10		ug/L	1	79-20-9	1
Methyl cyclohexane	51	1		ug/L	1	108-87-2	1
1,1,2-Trichloro-1,2,2-trifluoroethane	55	1		ug/L	1	76-13-1	1
1,2-Dibromoethane	54	1		ug/L	1	106-93-4	1
1,1,2,2-Tetrachloroethane	53	1		ug/L	1	79-34-5	1
cis-1,3-Dichloropropene	54	1		ug/L	1	10061-01-5	1
trans-1,3-Dichloropropene	56	1		ug/L	1	10061-02-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S17185.04

Sample Tag: MW-07-20_GW-083120 MSD

Collected Date/Time: 08/31/2020 16:30

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/14/20 12:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 00:53, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	42	1		ug/L	1	123-91-1	1

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/11/20 12:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	64	50		ug/L	1	67-64-1	1
2-Butanone (MEK)	59	25		ug/L	1	78-93-3	1
Benzene	50	1		ug/L	1	71-43-2	1
Bromodichloromethane	51	1		ug/L	1	75-27-4	1
Bromoform	50	1		ug/L	1	75-25-2	1
Bromomethane	57	5		ug/L	1	74-83-9	1
Carbon disulfide	55	5		ug/L	1	75-15-0	1
Carbon tetrachloride	52	1		ug/L	1	56-23-5	1
Chlorobenzene	51	1		ug/L	1	108-90-7	1
Chloroethane	56	5		ug/L	1	75-00-3	1
Chloroform	52	1		ug/L	1	67-66-3	1
Chloromethane	58	5		ug/L	1	74-87-3	1
1,2-Dibromo-3-chloropropane	58	5		ug/L	1	96-12-8	1
1,2-Dichlorobenzene	52	1		ug/L	1	95-50-1	1
1,2-Dichloroethane	49	1		ug/L	1	107-06-2	1
1,2-Dichloropropane	52	1		ug/L	1	78-87-5	1
1,3-Dichlorobenzene	51	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	50	1		ug/L	1	106-46-7	1
cis-1,2-Dichloroethene	59	1		ug/L	1	156-59-2	1
Dibromochloromethane	52	5		ug/L	1	124-48-1	1
Dichlorodifluoromethane	69	5		ug/L	1	75-71-8	1
trans-1,2-Dichloroethene	54	1		ug/L	1	156-60-5	1
Ethylbenzene	52	1		ug/L	1	100-41-4	1
2-Hexanone	57	50		ug/L	1	591-78-6	1
4-Methyl-2-pentanone (MIBK)	57	50		ug/L	1	108-10-1	1
tert-Methyl butyl ether (MTBE)	52	5		ug/L	1	1634-04-4	1
Methylene chloride	53	5		ug/L	1	75-09-2	1
Styrene	52	1		ug/L	1	100-42-5	1
1,1,1-Trichloroethane	59	1		ug/L	1	71-55-6	1
1,1,2-Trichloroethane	52	1		ug/L	1	79-00-5	1
1,2,4-Trichlorobenzene	56	5		ug/L	1	120-82-1	1
Tetrachloroethene	52	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S17185.04 (continued)

Sample Tag: MW-07-20_GW-083120 MSD

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/11/20 12:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	51	1		ug/L	1	108-88-3	1
Trichloroethene	53	1		ug/L	1	79-01-6	1
Trichlorofluoromethane	57	1		ug/L	1	75-69-4	1
Vinyl chloride	58	1		ug/L	1	75-01-4	1
o-Xylene	52	1		ug/L	1	95-47-6	1
p,m-Xylene*	101	2		ug/L	1		1
Isopropylbenzene	52	1		ug/L	1	98-82-8	1
Cyclohexane	51	1		ug/L	1	110-82-7	1
1,1-Dichloroethane	61	1		ug/L	1	75-34-3	1
1,1-Dichloroethene	53	1		ug/L	1	75-35-4	1
Methyl Acetate	53	10		ug/L	1	79-20-9	1
Methyl cyclohexane	51	1		ug/L	1	108-87-2	1
1,1,2-Trichloro-1,2,2-trifluoroethane	56	1		ug/L	1	76-13-1	1
1,2-Dibromoethane	52	1		ug/L	1	106-93-4	1
1,1,2,2-Tetrachloroethane	53	1		ug/L	1	79-34-5	1
cis-1,3-Dichloropropene	53	1		ug/L	1	10061-01-5	1
trans-1,3-Dichloropropene	53	1		ug/L	1	10061-02-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S17185.05

Sample Tag: MW-06-20_GW-090120

Collected Date/Time: 09/01/2020 13:40

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 03:26, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	5	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 18:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	7	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	4	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.05 (continued)

Sample Tag: MW-06-20_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 18:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	7	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	7	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.06

Sample Tag: MWF16-23_GW-090120

Collected Date/Time: 09/01/2020 15:30

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 03:48, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	1	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 18:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	2	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	11	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	2	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	12	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.06 (continued)

Sample Tag: MWF16-23_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 18:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	23	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	9	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.07

Sample Tag: MWF16-25_GW-090120

Collected Date/Time: 09/01/2020 17:05

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 04:10, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	1	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 19:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	6	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	9	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	4	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.07 (continued)

Sample Tag: MWF16-25_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 19:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	5	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.08

Sample Tag: MWOS-09_GW-090220

Collected Date/Time: 09/02/2020 14:40

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 04:33, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 19:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	1	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.08 (continued)

Sample Tag: MWOS-09_GW-090220

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 19:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.09

Sample Tag: MWOS-08_GW-090220

Collected Date/Time: 09/02/2020 16:20

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 04:55, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 19:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	4	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.09 (continued)

Sample Tag: MWOS-08_GW-090220

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 19:44, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.10

Sample Tag: DUP-02_GW-090120

Collected Date/Time: 09/01/2020 00:01

Matrix: Groundwater

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/15/20 14:15, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	3	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 20:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	2	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	10	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	2	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	11	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.10 (continued)

Sample Tag: DUP-02_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 20:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	21	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	8	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17185.11

Sample Tag: Trip Blank

Collected Date/Time: 08/31/2020 00:01

Matrix: Water

COC Reference: 127300

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 01:57, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 14:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17185.11 (continued)

Sample Tag: Trip Blank

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 14:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S17185

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: PNC RACER

Submitted:09/03/2020 14:30 Login User: MMC

Attention: Colleen Barton

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

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.7 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: _____



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: COLLEEN BARTEN
COMPANY: ARCADIS
ADDRESS: 28550 CABOT DR #500
CITY: NW1 STATE: MI ZIP CODE: 48317
PHONE NO.: 810.28.1909 FAX NO.:
E-MAIL ADDRESS: COLLEEN.BARTEN@ARCADIS.COM; BRAD.SANDIGTS@ARCADIS.COM

CONTACT NAME: ACCOUNTS PAYABLE
COMPANY: ARCADIS
ADDRESS: 630 PLAZA DR STE 600
CITY: HIGHLANDS RANCH STATE: CO ZIP CODE: 80129
PHONE NO.: E-MAIL ADDRESS: ACCOUNTS.PAYABLE.ADMINISTRATIVE@ARCADIS-US.COM

PROJECT NO./NAME: PWC RACER
SAMPLER(S) PLEASE PRINT/SIGN NAME: [Signature] / S. JOHNSON
TURNAROUND TIME REQUIRED: [X] STANDARD
DELIVERABLES REQUIRED: [X] LEVEL II

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)
Certifications: [] OHIO VAP [] Drinking Water [] DoD [] NPDES
Project Locations: [] Detroit [] New York [X] Other: PATTAC, MI
Special Instructions:

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

Containers & Preservatives
* VOLS (8760)
1/4-DIAPHRAGM 8260 SINGS

Table with columns: MERIT LAB NO., YEAR (DATE, TIME), SAMPLE TAG IDENTIFICATION-DESCRIPTION, MATRIX, # OF BOTTLES, and various chemical tests (NONE, HCl, HNO3, H2SO4, NaOH, MeOH, OTHER). Includes handwritten data for 11 samples.

RELINQUISHED BY: [Signature] DATE: 9/2/20 TIME: 1800
RECEIVED BY: [Signature] DATE: 9/8/20 TIME: 1800
RECEIVED BY: [Signature] DATE: 9/2/20 TIME: 10
RECEIVED BY: [Signature] DATE: 9/3/20 TIME: 1600

RELINQUISHED BY: [Signature] DATE: 9.32 DATE: 9/3/20 TIME: 1430
RECEIVED BY: [Signature] DATE: 9/3/20 TIME: 1430
SEAL NO. SEAL INTACT YES [] NO [] INITIALS
NOTES: TEMP ON ARRIVAL: 4.7



Analytical Laboratory Report

Report ID: S17186.01(01)
Generated on 09/17/2020

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Additional 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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S17186.01-S17186.06
Project: PNC RACER
Collected Date(s): 09/01/2020 - 09/02/2020
Submitted Date/Time: 09/03/2020 14:30
Sampled by: S. Johnson
P.O. #: 30006882.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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

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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S17186.01	MWF16-26_GW-090120	Groundwater	09/01/20 11:00
S17186.02	MWF16-15_GW-090120	Groundwater	09/01/20 13:00
S17186.03	MWF16-22_GW-090220	Groundwater	09/02/20 11:30
S17186.04	MWF16-16_GW-090220	Groundwater	09/02/20 12:50
S17186.05	DUP-01_GW-090120	Groundwater	09/01/20 00:01
S17186.06	Trip Blank	Water	09/01/20 00:01



Analytical Laboratory Report

Lab Sample ID: S17186.01

Sample Tag: MWF16-26_GW-090120

Collected Date/Time: 09/01/2020 11:00

Matrix: Groundwater

COC Reference: 127301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 05:39, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 20:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17186.01 (continued)

Sample Tag: MWF16-26_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 20:23, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17186.02

Sample Tag: MWF16-15_GW-090120

Collected Date/Time: 09/01/2020 13:00

Matrix: Groundwater

COC Reference: 127301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 06:02, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	3	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 20:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	1	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	5	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17186.02 (continued)

Sample Tag: MWF16-15_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 20:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	1	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17186.03

Sample Tag: MWF16-22_GW-090220

Collected Date/Time: 09/02/2020 11:30

Matrix: Groundwater

COC Reference: 127301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 06:24, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 21:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	5	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	1	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	73	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17186.03 (continued)

Sample Tag: MWF16-22_GW-090220

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 21:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	2	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	1	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17186.04

Sample Tag: MWF16-16_GW-090220

Collected Date/Time: 09/02/2020 12:50

Matrix: Groundwater

COC Reference: 127301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 06:46, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	24	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 21:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	3	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	2	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	15	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	9	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	347	1		ug/L	1	127-18-4	E

E-Concentration exceeds calibration range



Analytical Laboratory Report

Lab Sample ID: S17186.04 (continued)

Sample Tag: MWF16-16_GW-090220

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 21:22, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	1		ug/L	1	108-88-3	
Trichloroethene	19	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	5	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Volatile Organics - Arcadis (Replicate 01), Method: SW5030C/8260C, Run Date: 09/10/20 16:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	20	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S17186.04 (continued)

Sample Tag: MWF16-16_GW-090220

Volatile Organics - Arcadis (Replicate 01), Method: SW5030C/8260C, Run Date: 09/10/20 16:36, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	250	10		ug/L	10	127-18-4	Y
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	20	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S17186.05

Sample Tag: DUP-01_GW-090120

Collected Date/Time: 09/01/2020 00:01

Matrix: Groundwater

COC Reference: 127301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/15/20 14:38, Analyst: JML

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 21:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17186.05 (continued)

Sample Tag: DUP-01_GW-090120

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 21:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S17186.06

Sample Tag: Trip Blank

Collected Date/Time: 09/01/2020 00:01

Matrix: Water

COC Reference: 127301

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	09/09/20 09:00	JML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 09/12/20 02:19, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 14:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S17186.06 (continued)

Sample Tag: Trip Blank

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 09/08/20 14:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S17186

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: PNC RACER

Submitted:09/03/2020 14:30 Login User: MMC

Attention: Colleen Barton

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

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.7
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: _____



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: COLLEEN BARTON
 COMPANY: ARCADIS
 ADDRESS: 28550 CABOT DR #500
 CITY: Novi STATE: MI ZIP CODE: 48371
 PHONE NO: 810.225.1969 FAX NO.:
 P.O. NO.: 5006882-0005
 E-MAIL ADDRESS: COLLEEN.BARTON@ARCADIS.COM; BRAD.SANDERS@ARCADIS.COM

CONTACT NAME: ACCOUNTS PAYABLE
 COMPANY: ARCADIS
 ADDRESS: 630 PLAZA DR STE 600
 CITY: HIGHLANDS RANCH STATE: CO ZIP CODE: 80129
 PHONE NO.:
 E-MAIL ADDRESS: ACCOUNTS.PAYABLE.ADMINISTRATION@ARCADIS-US.COM

PROJECT NO./NAME: PNC RACER
 SAMPLER(S) - PLEASE PRINT SIGN NAME: S. JOHNSON
 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 PONTIAC, MI

Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives								* VOCs (8260)	*H-Dioxins 8260 SIMS	Special Instructions
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER				
17186.01	9/1/20	1100	MWFIG-26-GW-090120	GW	3		X						X	X	*SEE ATTACHED VOC LIST	
.02	9/1/20	1300	MWFIG-15-GW-090120		1		X						X	X		
.03	9/2/20	1130	MWFIG-22-GW-090220		1		X						X	X		
.04	9/2/20	1250	MWFIG-16-GW-090220		1		X						X	X		
.05	9/1/20	-	DUP-OL-GW-090120		1		X						X	X		
.06	-	-	TRIP BLANK		2								X	X		

RELINQUISHED BY: [Signature] DATE: 9/4/20 TIME: 1800
 RECEIVED BY: [Signature] DATE: 9/3/20 TIME: 1800
 RECEIVED BY: M. Humphrey DATE: 9-3-20 TIME: 10-
 RECEIVED BY: [Signature] DATE: 9-3-20 TIME: 10-

RELINQUISHED BY: [Signature] DATE: 9-3-20 TIME: 1430
 RECEIVED BY: M. [Signature] DATE: 9/3/2020 TIME: 1430

SEAL NO. SEAL INTACT YES NO INITIALS
 NOTES: TEMP ON ARRIVAL: 4.7

December 2020

Groundwater Sampling Event



Analytical Laboratory Report

Report ID: S19784.01(01)
Generated on 12/18/2020

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Additional Contacts: Brad Saunders, 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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S19784.01-S19784.06
Project: RACER PNC
Collected Date(s): 12/07/2020
Submitted Date/Time: 12/08/2020 13:50
Sampled by: Julia McClafferty
P.O. #: 30042811

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S19784.01	MW-07-20_GW-120720	Groundwater	12/07/20 12:04
S19784.02	MW-07-20_GW-120720 MS	Groundwater	12/07/20 12:04
S19784.03	MW-07-20_GW-120720 MSD	Groundwater	12/07/20 12:04
S19784.04	MW-05-18_GW-120720	Groundwater	12/07/20 12:57
S19784.05	MW-06-20_GW-120720	Groundwater	12/07/20 16:19
S19784.06	Trip Blank	Water	12/07/20 00:01



Analytical Laboratory Report

Lab Sample ID: S19784.01

Sample Tag: MW-07-20_GW-120720

Collected Date/Time: 12/07/2020 12:04

Matrix: Groundwater

COC Reference: 132507

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 17:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 15:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	12	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	5	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19784.01 (continued)

Sample Tag: MW-07-20_GW-120720

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 15:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	2	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	10	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19784.02

Sample Tag: MW-07-20_GW-120720 MS

Collected Date/Time: 12/07/2020 12:04

Matrix: Groundwater

COC Reference: 132507

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 13:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	53	1		ug/L	1	123-91-1	1

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 12:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	63	50		ug/L	1	67-64-1	1
2-Butanone (MEK)	55	25		ug/L	1	78-93-3	1
Benzene	52	1		ug/L	1	71-43-2	1
Bromodichloromethane	53	1		ug/L	1	75-27-4	1
Bromoform	56	1		ug/L	1	75-25-2	1
Bromomethane	48	5		ug/L	1	74-83-9	1
Carbon disulfide	54	5		ug/L	1	75-15-0	1
Carbon tetrachloride	54	1		ug/L	1	56-23-5	1
Chlorobenzene	53	1		ug/L	1	108-90-7	1
Chloroethane	49	5		ug/L	1	75-00-3	1
Chloroform	53	1		ug/L	1	67-66-3	1
Chloromethane	46	5		ug/L	1	74-87-3	1
1,2-Dibromo-3-chloropropane	60	5		ug/L	1	96-12-8	1
1,2-Dichlorobenzene	55	1		ug/L	1	95-50-1	1
1,2-Dichloroethane	51	1		ug/L	1	107-06-2	1
1,2-Dichloropropane	54	1		ug/L	1	78-87-5	1
1,3-Dichlorobenzene	54	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	53	1		ug/L	1	106-46-7	1
cis-1,2-Dichloroethene	62	1		ug/L	1	156-59-2	1
Dibromochloromethane	55	5		ug/L	1	124-48-1	1
Dichlorodifluoromethane	43	5		ug/L	1	75-71-8	1
trans-1,2-Dichloroethene	55	1		ug/L	1	156-60-5	1
Ethylbenzene	54	1		ug/L	1	100-41-4	1
2-Hexanone	53	50		ug/L	1	591-78-6	1
4-Methyl-2-pentanone (MIBK)	54	50		ug/L	1	108-10-1	1
tert-Methyl butyl ether (MTBE)	52	5		ug/L	1	1634-04-4	1
Methylene chloride	52	5		ug/L	1	75-09-2	1
Styrene	53	1		ug/L	1	100-42-5	1
1,1,1-Trichloroethane	60	1		ug/L	1	71-55-6	1
1,1,2-Trichloroethane	52	1		ug/L	1	79-00-5	1
1,2,4-Trichlorobenzene	60	5		ug/L	1	120-82-1	1
Tetrachloroethene	51	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S19784.02 (continued)

Sample Tag: MW-07-20_GW-120720 MS

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 12:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	52	1		ug/L	1	108-88-3	1
Trichloroethene	55	1		ug/L	1	79-01-6	1
Trichlorofluoromethane	55	1		ug/L	1	75-69-4	1
Vinyl chloride	50	1		ug/L	1	75-01-4	1
o-Xylene	54	1		ug/L	1	95-47-6	1
p,m-Xylene*	108	2		ug/L	1		1
Isopropylbenzene	55	1		ug/L	1	98-82-8	1
Cyclohexane	55	1		ug/L	1	110-82-7	1
1,1-Dichloroethane	63	1		ug/L	1	75-34-3	1
1,1-Dichloroethene	57	1		ug/L	1	75-35-4	1
Methyl Acetate	53	10		ug/L	1	79-20-9	1
Methyl cyclohexane	55	1		ug/L	1	108-87-2	1
1,1,2-Trichloro-1,2,2-trifluoroethane	58	1		ug/L	1	76-13-1	1
1,2-Dibromoethane	53	1		ug/L	1	106-93-4	1
1,1,2,2-Tetrachloroethane	55	1		ug/L	1	79-34-5	1
cis-1,3-Dichloropropene	54	1		ug/L	1	10061-01-5	1
trans-1,3-Dichloropropene	55	1		ug/L	1	10061-02-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S19784.03

Sample Tag: MW-07-20_GW-120720 MSD

Collected Date/Time: 12/07/2020 12:04

Matrix: Groundwater

COC Reference: 132507

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 14:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	51	1		ug/L	1	123-91-1	1

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 12:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	63	50		ug/L	1	67-64-1	1
2-Butanone (MEK)	54	25		ug/L	1	78-93-3	1
Benzene	49	1		ug/L	1	71-43-2	1
Bromodichloromethane	51	1		ug/L	1	75-27-4	1
Bromoform	54	1		ug/L	1	75-25-2	1
Bromomethane	46	5		ug/L	1	74-83-9	1
Carbon disulfide	51	5		ug/L	1	75-15-0	1
Carbon tetrachloride	51	1		ug/L	1	56-23-5	1
Chlorobenzene	50	1		ug/L	1	108-90-7	1
Chloroethane	46	5		ug/L	1	75-00-3	1
Chloroform	51	1		ug/L	1	67-66-3	1
Chloromethane	44	5		ug/L	1	74-87-3	1
1,2-Dibromo-3-chloropropane	57	5		ug/L	1	96-12-8	1
1,2-Dichlorobenzene	51	1		ug/L	1	95-50-1	1
1,2-Dichloroethane	49	1		ug/L	1	107-06-2	1
1,2-Dichloropropane	52	1		ug/L	1	78-87-5	1
1,3-Dichlorobenzene	50	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	49	1		ug/L	1	106-46-7	1
cis-1,2-Dichloroethene	60	1		ug/L	1	156-59-2	1
Dibromochloromethane	53	5		ug/L	1	124-48-1	1
Dichlorodifluoromethane	40	5		ug/L	1	75-71-8	1
trans-1,2-Dichloroethene	52	1		ug/L	1	156-60-5	1
Ethylbenzene	51	1		ug/L	1	100-41-4	1
2-Hexanone	52	50		ug/L	1	591-78-6	1
4-Methyl-2-pentanone (MIBK)	52	50		ug/L	1	108-10-1	1
tert-Methyl butyl ether (MTBE)	50	5		ug/L	1	1634-04-4	1
Methylene chloride	50	5		ug/L	1	75-09-2	1
Styrene	50	1		ug/L	1	100-42-5	1
1,1,1-Trichloroethane	57	1		ug/L	1	71-55-6	1
1,1,2-Trichloroethane	50	1		ug/L	1	79-00-5	1
1,2,4-Trichlorobenzene	57	5		ug/L	1	120-82-1	1
Tetrachloroethene	48	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S19784.03 (continued)

Sample Tag: MW-07-20_GW-120720 MSD

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 12:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	49	1		ug/L	1	108-88-3	1
Trichloroethene	52	1		ug/L	1	79-01-6	1
Trichlorofluoromethane	52	1		ug/L	1	75-69-4	1
Vinyl chloride	47	1		ug/L	1	75-01-4	1
o-Xylene	51	1		ug/L	1	95-47-6	1
p,m-Xylene*	102	2		ug/L	1		1
Isopropylbenzene	52	1		ug/L	1	98-82-8	1
Cyclohexane	52	1		ug/L	1	110-82-7	1
1,1-Dichloroethane	60	1		ug/L	1	75-34-3	1
1,1-Dichloroethene	53	1		ug/L	1	75-35-4	1
Methyl Acetate	53	10		ug/L	1	79-20-9	1
Methyl cyclohexane	52	1		ug/L	1	108-87-2	1
1,1,2-Trichloro-1,2,2-trifluoroethane	54	1		ug/L	1	76-13-1	1
1,2-Dibromoethane	51	1		ug/L	1	106-93-4	1
1,1,2,2-Tetrachloroethane	53	1		ug/L	1	79-34-5	1
cis-1,3-Dichloropropene	52	1		ug/L	1	10061-01-5	1
trans-1,3-Dichloropropene	53	1		ug/L	1	10061-02-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S19784.04

Sample Tag: MW-05-18_GW-120720

Collected Date/Time: 12/07/2020 12:57

Matrix: Groundwater

COC Reference: 132507

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 18:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 16:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	15	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	7	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19784.04 (continued)

Sample Tag: MW-05-18_GW-120720

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 16:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	8	1		ug/L	1	75-34-3	
1,1-Dichloroethene	2	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19784.05

Sample Tag: MW-06-20_GW-120720

Collected Date/Time: 12/07/2020 16:19

Matrix: Groundwater

COC Reference: 132507

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 18:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	3	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 16:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	7	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	4	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19784.05 (continued)

Sample Tag: MW-06-20_GW-120720

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 16:38, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	8	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	8	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19784.06

Sample Tag: Trip Blank

Collected Date/Time: 12/07/2020 00:01

Matrix: Water

COC Reference: 132507

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 19:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 15:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19784.06 (continued)

Sample Tag: Trip Blank

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 15:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S19784

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted: 12/08/2020 13:50 Login User: MMC

Attention: Colleen Barton

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

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.3
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: _____



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME *Colleen Burton / Lexi Crisp*
 COMPANY *Arcadis*
 ADDRESS *28550 Cabot Drive Suite 500*
 CITY *Novi* STATE _____ ZIP CODE _____
 PHONE NO. *810-225-1909* FAX NO. *-* PO NO. *30042811*
 E-MAIL ADDRESS *Colleen.burton@arcadis.com, Alexis.Crisp@arcadis.com* QUOTE NO. _____

CONTACT NAME *Accounts Payable* SAME
 COMPANY *Arcadis*
 ADDRESS *630 Plaza Drive Suite 600*
 CITY *Highlands Ranch* STATE *CO* ZIP CODE *80129*
 PHONE NO. *-* E-MAIL ADDRESS *accountspayable.administration@arcadis.com*

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME *RACER PNC* SAMPLER(S) - PLEASE PRINT/SIGN NAME *Julie Mulholland / Julie Mulholland*
 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

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	* See analytic list attached	Certifications	
	DATE	TIME												<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water
<i>101/02/03</i>	<i>12/7/20</i>	<i>1204</i>	<i>MW-07-20-GW-120720</i>	<i>GW</i>	<i>9</i>		<i>9</i>						<input checked="" type="checkbox"/>		<i>Novi MS/MSD</i>
<i>19784.04</i>	<i>12/7/20</i>	<i>1257</i>	<i>MW-05-18-GW-120720</i>	<i>GW</i>	<i>3</i>		<i>3</i>						<input checked="" type="checkbox"/>		
<i>05</i>	<i>12/7/20</i>	<i>1619</i>	<i>MW-06-20-GW-120720</i>	<i>GW</i>	<i>3</i>		<i>3</i>						<input checked="" type="checkbox"/>		
<i>06</i>			<i>Trip Blank</i>										<input checked="" type="checkbox"/>		

Project Locations
 Detroit New York
 Other *Portage, MI*
 Special Instructions

RELINQUISHED BY: *Julie Mulholland / Arcadis* Sampler DATE *12/8/20* TIME *12:30*
 RECEIVED BY: *Amelia* DATE *12/8/20* TIME *1:52*
 RELINQUISHED BY: *Amelia* DATE *12/8/20* TIME *1:52*
 RECEIVED BY: *M. Calabro* DATE *12/8/20* TIME *1:50*

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL *4.3*
 SEAL NO. SEAL INTACT YES NO INITIALS _____

Table 4
 Summary of Groundwater Analytical Results
 RACER Trust Pontiac North Campus
 Pontiac, Michigan

PNC VOC Analyte List - 8260C		
Volatile Organic Compounds		
VOC	Acetone	1
VOC	Benzene	1
VOC	Bromodichloromethane	1
VOC	Bromoform	1
VOC	Bromomethane	1
VOC	2-Butanone	1
VOC	Carbon Disulfide	1
VOC	Carbon Tetrachloride	1
VOC	Chlorobenzene	1
VOC	Chloroethane	1
VOC	Chloroform	1
VOC	Chloromethane	1
VOC	Cumene	1
VOC	Cyclohexane	1
VOC	1,2-Dibromo-3-chloropropane	1
VOC	Dibromochloromethane	1
VOC	1,2-Dibromoethane	1
VOC	1,2-Dichlorobenzene	1
VOC	1,3-Dichlorobenzene	1
VOC	1,4-Dichlorobenzene	1
VOC	Dichlorodifluoromethane	1
VOC	1,1-Dichloroethane	1
VOC	1,2-Dichloroethane	1
VOC	1,1-Dichloroethene	1
VOC	cis-1,2-Dichloroethene	1
VOC	trans-1,2-Dichloroethene	1
VOC	1,2-Dichloropropane	1
VOC	1,3-Dichloropropene (summed)	1
VOC	Ethyl Benzene	1
VOC	2-Hexanone	1
VOC	Methyl Acetate	1
VOC	Methyl tert-butyl ether	1
VOC	4-Methyl-2-pentanone	1
VOC	Methylcyclohexane	1
VOC	Methylene Chloride	1
VOC	Styrene	1
VOC	1,1,2,2-Tetrachloroethane	1
VOC	Tetrachloroethene	1
VOC	Toluene	1
VOC	1,2,4-Trichlorobenzene	1
VOC	1,1,1-Trichloroethane	1
VOC	1,1,2-Trichloroethane	1
VOC	Trichloroethene	1
VOC	Trichlorofluoromethane	1
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	1
VOC	Vinyl Chloride	1
VOC	Xylenes (total)	1

plus 1,4-dioxane with 8260 SIMs



Analytical Laboratory Report

Report ID: S19788.01(01)
Generated on 12/16/2020

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Additional Contacts: Brad Saunders, 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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S19788.01-S19788.05
Project: RACER PNC
Collected Date(s): 12/07/2020 - 12/08/2020
Submitted Date/Time: 12/08/2020 13:50
Sampled by: Julia McClafferty
P.O. #: 30042811

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S19788.01	MWF16-07_GW-120720	Groundwater	12/07/20 15:07
S19788.02	MWF16-11_GW-120820	Groundwater	12/08/20 08:36
S19788.03	MWF16-05_GW-120820	Groundwater	12/08/20 10:04
S19788.04	MWF16-16_GW-120820	Groundwater	12/08/20 11:37
S19788.05	Trip Blank	Water	12/08/20 00:01



Analytical Laboratory Report

Lab Sample ID: S19788.01

Sample Tag: MWF16-07_GW-120720

Collected Date/Time: 12/07/2020 15:07

Matrix: Groundwater

COC Reference: 132505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 19:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 05:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19788.01 (continued)

Sample Tag: MWF16-07_GW-120720

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 05:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19788.02

Sample Tag: MWF16-11_GW-120820

Collected Date/Time: 12/08/2020 08:36

Matrix: Groundwater

COC Reference: 132505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 19:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 06:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	1	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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	98	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19788.02 (continued)

Sample Tag: MWF16-11_GW-120820

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 06:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	2	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19788.03

Sample Tag: MWF16-05_GW-120820

Collected Date/Time: 12/08/2020 10:04

Matrix: Groundwater

COC Reference: 132505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 20:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/15/20 02:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	Not detected	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	470	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S19788.03 (continued)

Sample Tag: MWF16-05_GW-120820

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/15/20 02:44, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	30	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S19788.04

Sample Tag: MWF16-16_GW-120820

Collected Date/Time: 12/08/2020 11:37

Matrix: Groundwater

COC Reference: 132505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 20:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/15/20 03:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	Not detected	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	260	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S19788.04 (continued)

Sample Tag: MWF16-16_GW-120820

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/15/20 03:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	Not detected	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S19788.05

Sample Tag: Trip Blank

Collected Date/Time: 12/08/2020 00:01

Matrix: Water

COC Reference: 132505

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 21:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 04:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19788.05 (continued)

Sample Tag: Trip Blank

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 04:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S19788

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted: 12/08/2020 13:50 Login User: MMC

Attention: Colleen Barton

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

Phone: 810-225-1909

FAX:

Email: Colleen.barton@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.3 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: _____



Report ID: S19831.01(02)
Generated on 12/16/2020
Replaces report S19831.01(01) generated on 12/16/2020

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Additional Contacts: Brad Saunders, Alexis Crisp

Report produced by

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

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S19831.01-S19831.03
Project: RACER PNC
Collected Date(s): 12/08/2020
Submitted Date/Time: 12/09/2020 13:19
Sampled by: Julia McClafferty
P.O. #: 30042811

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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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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

VOC pH checks corrected for sample .02



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
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S19831.01	MWF16-23_GW-120820	Groundwater	12/08/20 13:53
S19831.02	MWOS-09_GW-120820	Groundwater	12/08/20 14:16
S19831.03	DUP-01_GW-120820	Groundwater	12/08/20 00:01



Analytical Laboratory Report

Revised Report

Lab Sample ID: S19831.01

Sample Tag: MWF16-23_GW-120820

Collected Date/Time: 12/08/2020 13:53

Matrix: Groundwater

COC Reference: 128196

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles**Method: SW8260B - SIM, Run Date: 12/15/20 21:36, Analyst: KAG**

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 07:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	1	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	11	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	1	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	10	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Revised Report

Lab Sample ID: S19831.01 (continued)

Sample Tag: MWF16-23_GW-120820

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 07:25, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	20	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	6	1		ug/L	1	75-34-3	
1,1-Dichloroethene	1	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Revised Report

Lab Sample ID: S19831.02

Sample Tag: MWOS-09_GW-120820
 Collected Date/Time: 12/08/2020 14:16
 Matrix: Groundwater
 COC Reference: 128196

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	1
pH check for VOCs (Replicate 01)*	>2	N/A	12/16/20 11:50	KAG	2

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 22:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 07:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	

1-Volatile Organics - Arcadis
 2-1,4-Dioxane, SIMS



Lab Sample ID: S19831.02 (continued)

Sample Tag: MWOS-09_GW-120820

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 07:49, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Revised Report

Lab Sample ID: S19831.03

Sample Tag: DUP-01_GW-120820

Collected Date/Time: 12/08/2020 00:01

Matrix: Groundwater

COC Reference: 128196

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/14/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 22:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 08:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	1	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	11	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	1	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	10	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Revised Report

Lab Sample ID: S19831.03 (continued)

Sample Tag: DUP-01_GW-120820

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/12/20 08:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	21	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	6	1		ug/L	1	75-34-3	
1,1-Dichloroethene	1	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S19831

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted: 12/09/2020 13:19 Login User: SRS

Attention: Colleen Barton

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

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 3.3
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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: _____



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Colleen Barton / Lexi Crisp
 COMPANY Arcadis
 ADDRESS 28550 Cabot Drive Suite 500
 CITY Novi STATE MI ZIP CODE 48377
 PHONE NO. 810-225-1909 FAX NO. - P.O. NO. 30042811
 E-MAIL ADDRESS Colleen.barton@arcadis.com, Alexis.Crisp@arcadis.com QUOTE NO.

CONTACT NAME Accounts Payable SAME
 COMPANY Arcadis
 ADDRESS 630 Plaza Drive Suite 600
 CITY Highlands Ranch STATE CO ZIP CODE 80129
 PHONE NO. - E-MAIL ADDRESS accounts.payable.administration@arcadis.com

PROJECT NO / NAME RACER PNC SAMPLER(S) - PLEASE PRINT/SIGN NAME Julia McEliff / Alexis McEliff
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV PEDD 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 Pontiac, MI

Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							* See analyte list attached (last)
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	
19831.01	12/8/20	1353	MWF16-23-GW-120820	GW	3		3						X
.02	12/8/20	1416	MWOS-09-GW-120820	GW	3		3						X
.03	12/8/20	-	DUP-01-GW-120820	GW	3		3						X

RELINQUISHED BY: Julia McEliff / Arcadis Sampler DATE 12/9/20 TIME 0940
 RECEIVED BY: [Signature] Arcadis DATE 12/9/20 TIME 0941
 RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____

RELINQUISHED BY: [Signature] Arcadis DATE 12/9/20 TIME 1319
 RECEIVED BY: [Signature] DATE 12/9/20 TIME 1319
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL 3.3
 SEAL NO. SEAL INTACT YES NO INITIALS _____



Analytical Laboratory Report

Report ID: S19901.01(01)
Generated on 12/18/2020

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Additional Contacts: Brad Saunders, 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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S19901.01-S19901.03
Project: RACER PNC
Collected Date(s): 12/09/2020
Submitted Date/Time: 12/10/2020 14:40
Sampled by: Julia McClafferty
P.O. #: 30042811

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S19901.01	MWOS-08_GW-120920	Groundwater	12/09/20 10:44
S19901.02	MWF16-25_GW-120920	Groundwater	12/09/20 11:53
S19901.03	DUP-02_GW-120920	Groundwater	12/09/20 00:01



Analytical Laboratory Report

Lab Sample ID: S19901.01

Sample Tag: MWOS-08_GW-120920

Collected Date/Time: 12/09/2020 10:44

Matrix: Groundwater

COC Reference: 128197

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 22:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 17:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	4	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19901.01 (continued)

Sample Tag: MWOS-08_GW-120920

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 17:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19901.02

Sample Tag: MWF16-25_GW-120920

Collected Date/Time: 12/09/2020 11:53

Matrix: Groundwater

COC Reference: 128197

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/15/20 23:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 18:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	6	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	8	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	4	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19901.02 (continued)

Sample Tag: MWF16-25_GW-120920

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 18:10, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	4	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S19901.03

Sample Tag: DUP-02_GW-120920

Collected Date/Time: 12/09/2020 00:01

Matrix: Groundwater

COC Reference: 128197

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	2.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/16/20 11:50	KAG	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 12/16/20 19:27, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 18:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	4	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S19901.03 (continued)

Sample Tag: DUP-02_GW-120920

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 12/17/20 18:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S19901

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted: 12/10/2020 14:40 Login User: MMC

Attention: Colleen Barton

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

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | | |
|-----|--|--|--------|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # | IR 2.6 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun | |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped | |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box | |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked | |

Chain of Custody

- | | | | |
|-----|--|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out | |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab | |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC | |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: | |

Preservation

- | | | | |
|-----|--|---|--|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation | |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) | |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? | |

Bottle Conditions

- | | | | |
|-----|--|---|--|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact | |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used | |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used | |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received | |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration | |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time | |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: _____



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Colleen Barton / Lexi Crisp
 COMPANY Arcadis
 ADDRESS 28550 Cabot Drive Suite 500
 CITY Novi STATE MI ZIP CODE 48377
 PHONE NO. 810-225-1409 FAX NO. - P.O. NO. 30042811
 E-MAIL ADDRESS Colleen.barton@arcadis.com / Alexis.Crisp@arcadis.com QUOTE NO.

CONTACT NAME Accounts Payable SAME
 COMPANY Arcadis
 ADDRESS 630 Plaza Drive Suite 600
 CITY Highlands Ranch STATE CO ZIP CODE 80721
 PHONE NO. - E-MAIL ADDRESS accounts.payable_administration@arcadis.com

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME RACER PNC SAMPLER(S) - PLEASE PRINT/SIGN NAME Julia McElfferty / Julia McElfferty
 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

Containers & Preservatives

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

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HC	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
	DATE	TIME										
19901.01	12/9/20	1344	MW05-08-GW-120920	GW	3		3					
.02	12/9/20	1153	MWF16-25-GW-120920	GW	3		3					
.03	12/9/20	-	DUP-02-GW-120920	GW	3		3					

See analysis list attached

RELINQUISHED BY: Julia McElfferty / Arcadis Sampler DATE 12/10/20 TIME 13:10
 SIGNATURE/Organization
 RECEIVED BY: Novi Cold Storage / Arcadis DATE 12/9/20 TIME 13:10
 SIGNATURE/Organization
 RELINQUISHED BY: M. Merit DATE 12/10/20 TIME 1440
 SIGNATURE/Organization
 RECEIVED BY: M. Chilcote DATE 12/10/20 TIME 1440
 SIGNATURE/Organization

RELINQUISHED BY: Julia McElfferty / Arcadis DATE 12/10/20 TIME 1045
 SIGNATURE/Organization
 RECEIVED BY: Mex DATE 12/10/20 TIME 1045
 SIGNATURE/Organization
 SEAL NO. SEAL INTACT YES NO INITIALS NOTES TEMP. ON ARRIVAL
 SEAL NO. SEAL INTACT YES NO INITIALS 2.6

March 2021

Groundwater Sampling Event



Analytical Laboratory Report

Report ID: S22138.01(01)
Generated on 03/17/2021

Report to

Attention: Colleen Barton
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S22138.01-S22138.11
Project: RACER PNC
Collected Date(s): 03/09/2021 - 03/10/2021
Submitted Date/Time: 03/10/2021 16:10
Sampled by: Christina Weaver
P.O. #: 30075936.00005

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (11 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S22138.01	Trip Blank	Water	03/09/21 00:01
S22138.02	MW-06-20_GW-030921	Groundwater	03/09/21 14:35
S22138.03	MWF16-23_GW-030921	Groundwater	03/09/21 15:50
S22138.04	MW-05-18_GW-030921	Groundwater	03/09/21 16:55
S22138.05	DUP-01_GW-030921	Groundwater	03/09/21 00:01
S22138.06	MWF16-16_GW-031021	Groundwater	03/10/21 09:35
S22138.07	MWF16-06_GW-031021	Groundwater	03/10/21 10:32
S22138.08	MWF16-05_GW-031021	Groundwater	03/10/21 11:28
S22138.09	MWF16-11_GW-031021	Groundwater	03/10/21 12:30
S22138.10	MWF16-12_GW-031021	Groundwater	03/10/21 13:35
S22138.11	MWF16-17_GW-031021	Groundwater	03/10/21 14:35



Analytical Laboratory Report

Lab Sample ID: S22138.01

Sample Tag: Trip Blank

Collected Date/Time: 03/09/2021 00:01

Matrix: Water

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 16:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 02:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.01 (continued)

Sample Tag: Trip Blank

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 02:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.02

Sample Tag: MW-06-20_GW-030921

Collected Date/Time: 03/09/2021 14:35

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 16:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 03:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	8	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	4	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.02 (continued)

Sample Tag: MW-06-20_GW-030921

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 03:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	11	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	10	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.03

Sample Tag: MWF16-23_GW-030921

Collected Date/Time: 03/09/2021 15:50

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 17:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 03:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	1	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	11	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	1	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	12	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.03 (continued)

Sample Tag: MWF16-23_GW-030921

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 03:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	21	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	5	1		ug/L	1	75-34-3	
1,1-Dichloroethene	1	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.04

Sample Tag: MW-05-18_GW-030921

Collected Date/Time: 03/09/2021 16:55

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 17:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 03:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	11	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	5	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.04 (continued)

Sample Tag: MW-05-18_GW-030921

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 03:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	6	1		ug/L	1	75-34-3	
1,1-Dichloroethene	1	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.05

Sample Tag: DUP-01_GW-030921

Collected Date/Time: 03/09/2021 00:01

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 17:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 04:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	1	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	11	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	1	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	11	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.05 (continued)

Sample Tag: DUP-01_GW-030921

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/13/21 04:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	21	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	6	1		ug/L	1	75-34-3	
1,1-Dichloroethene	1	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.06

Sample Tag: MWF16-16_GW-031021

Collected Date/Time: 03/10/2021 09:35

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 18:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 21:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	Not detected	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	260	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22138.06 (continued)

Sample Tag: MWF16-16_GW-031021

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 21:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	Not detected	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22138.07

Sample Tag: MWF16-06_GW-031021

Collected Date/Time: 03/10/2021 10:32

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 18:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	16	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 20:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	30	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	150	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	190	10		ug/L	10	71-55-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	100	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22138.07 (continued)

Sample Tag: MWF16-06_GW-031021

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 20:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	30	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	290	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	30	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22138.08

Sample Tag: MWF16-05_GW-031021

Collected Date/Time: 03/10/2021 11:28

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 19:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 21:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	Not detected	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	530	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22138.08 (continued)

Sample Tag: MWF16-05_GW-031021

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 21:49, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	30	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22138.09

Sample Tag: MWF16-11_GW-031021

Collected Date/Time: 03/10/2021 12:30

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 19:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 20:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
Carbon disulfide	Not detected	5		ug/L	1	75-15-0	
Carbon tetrachloride	1	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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	90	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.09 (continued)

Sample Tag: MWF16-11_GW-031021

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 20:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	2	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.10

Sample Tag: MWF16-12_GW-031021

Collected Date/Time: 03/10/2021 13:35

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 19:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

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

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	40	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.10 (continued)

Sample Tag: MWF16-12_GW-031021

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

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22138.11

Sample Tag: MWF16-17_GW-031021

Collected Date/Time: 03/10/2021 14:35

Matrix: Groundwater

COC Reference: 141906

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/12/21 10:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/11/21 20:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 22:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	2	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22138.11 (continued)

Sample Tag: MWF16-17_GW-031021

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/15/21 22:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S22138

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC

Submitted:03/10/2021 16:10 Login User: SRS

Attention: Colleen Barton

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

Phone: 810-225-1909 FAX:
Email: Colleen.barton@arcadis.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 3.7
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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: _____



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 141906

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME COLLEEN BARTON
 COMPANY ARCADIS
 ADDRESS 28550 CABOT DRIVE STE # 500
 CITY NOVI STATE MI ZIP CODE 48377
 PHONE NO. 330-515-5714 FAX NO. — PO NO. 30075936.00005
 E-MAIL ADDRESS COLLEEN.BARTON@ARCADIS.COM QUOTE NO.

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

PROJECT NO./NAME RACER PNC SAMPLER(S) - PLEASE PRINT/SIGN NAME CHRISTINA WEAVER / Christina
 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

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)		Certifications <input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES Project Locations <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other _____ Special Instructions
	DATE	TIME											PNC	VOC (ATTACHED)	
22138.01	3/9/21	—	TRIP BLANK	GW	1		1						X	X	TRIP BLANK
.02	3/9/21	1435	MW-06-20-GW-030921	GW	3		3						X	X	
.03	3/9/21	1550	MWF16-23-GW-030921	GW	3		3						X	X	
.04	3/9/21	1655	MW-05-18-GW-030921	GW	3		3						X	X	
.05	3/9/21	—	DUP-01-GW-030921	GW	3		3						X	X	
.06	3/10/21	0935	MWF16-16-GW-031021	GW	3		3						X	X	
.07	3/10/21	1032	MWF16-06-GW-031021	GW	3		3						X	X	
.08	3/10/21	1128	MWF16-05-GW-031021	GW	3		3						X	X	
.09	3/10/21	1230	MWF16-11-GW-031021	GW	3		3						X	X	
.10	3/10/21	1335	MWF16-12-GW-031021	GW	3		3						X	X	
.11	3/10/21	1435	MWF16-17-GW-031021	GW	3		3						X	X	

RELINQUISHED BY: Christina Weaver / ARCADIS Sampler DATE 3/10/21 TIME 1450
 RECEIVED BY: [Signature] DATE 3/10/21 TIME 1450
 RELINQUISHED BY: [Signature] DATE 3/10/21 TIME 16:10
 RECEIVED BY: [Signature] DATE 3/10/21 TIME 16:10

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO _____ SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL 3.7

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



Analytical Laboratory Report

Report ID: S22214.01(01)
Generated on 03/19/2021

Report to

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

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

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 Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S22214.01-S22214.08
Project: RACER PNC 30075936.00005
Collected Date(s): 03/12/2021
Submitted Date/Time: 03/12/2021 16:15
Sampled by: Christina Weaver
P.O. #: 30075936.00005

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

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.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

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



Analytical Laboratory 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



Analytical Laboratory Report

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs



Analytical Laboratory Report

Sample Summary (8 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S22214.01	MW-07-20_GW-031221	Groundwater	03/12/21 09:07
S22214.02	MW-07-20_GW-031221 MS	Groundwater	03/12/21 09:07
S22214.03	MW-07-20_GW-031221 MSD	Groundwater	03/12/21 09:07
S22214.04	MW-OS-08_GW-031221	Groundwater	03/12/21 11:07
S22214.05	MWF16-25_GW-031221	Groundwater	03/12/21 12:20
S22214.06	MWF16-18_GW-031221	Groundwater	03/12/21 13:40
S22214.07	DUP-02_GW-031221	Groundwater	03/12/21 00:01
S22214.08	Trip Blank	Water	03/12/21 00:01



Analytical Laboratory Report

Lab Sample ID: S22214.01

Sample Tag: MW-07-20_GW-031221

Collected Date/Time: 03/12/2021 09:07

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 15:28, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 05:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	15	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	5	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22214.01 (continued)

Sample Tag: MW-07-20_GW-031221

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 05:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	3	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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	12	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22214.02

Sample Tag: MW-07-20_GW-031221 MS

Collected Date/Time: 03/12/2021 09:07

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 15:49, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	58	1		ug/L	1	123-91-1	1

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 00:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	57	50		ug/L	1	67-64-1	1
2-Butanone (MEK)	49	25		ug/L	1	78-93-3	1
Benzene	50	1		ug/L	1	71-43-2	1
Bromodichloromethane	54	1		ug/L	1	75-27-4	1
Bromoform	59	1		ug/L	1	75-25-2	1
Bromomethane	45	5		ug/L	1	74-83-9	1
Carbon disulfide	46	5		ug/L	1	75-15-0	1
Carbon tetrachloride	48	1		ug/L	1	56-23-5	1
Chlorobenzene	53	1		ug/L	1	108-90-7	1
Chloroethane	44	5		ug/L	1	75-00-3	1
Chloroform	52	1		ug/L	1	67-66-3	1
Chloromethane	41	5		ug/L	1	74-87-3	1
1,2-Dibromo-3-chloropropane	53	5		ug/L	1	96-12-8	1
1,2-Dichlorobenzene	53	1		ug/L	1	95-50-1	1
1,2-Dichloroethane	50	1		ug/L	1	107-06-2	1
1,2-Dichloropropane	53	1		ug/L	1	78-87-5	1
1,3-Dichlorobenzene	51	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	51	1		ug/L	1	106-46-7	1
cis-1,2-Dichloroethene	65	1		ug/L	1	156-59-2	1
Dibromochloromethane	59	5		ug/L	1	124-48-1	1
Dichlorodifluoromethane	37	5		ug/L	1	75-71-8	1
trans-1,2-Dichloroethene	48	1		ug/L	1	156-60-5	1
Ethylbenzene	50	1		ug/L	1	100-41-4	1
2-Hexanone	51	50		ug/L	1	591-78-6	1
4-Methyl-2-pentanone (MIBK)	51	50		ug/L	1	108-10-1	1
tert-Methyl butyl ether (MTBE)	54	5		ug/L	1	1634-04-4	1
Methylene chloride	53	5		ug/L	1	75-09-2	1
Styrene	54	1		ug/L	1	100-42-5	1
1,1,1-Trichloroethane	52	1		ug/L	1	71-55-6	1
1,1,2-Trichloroethane	57	1		ug/L	1	79-00-5	1
1,2,4-Trichlorobenzene	55	5		ug/L	1	120-82-1	1
Tetrachloroethene	49	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/l



Analytical Laboratory Report

Lab Sample ID: S22214.02 (continued)

Sample Tag: MW-07-20_GW-031221 MS

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 00:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	51	1		ug/L	1	108-88-3	1
Trichloroethene	52	1		ug/L	1	79-01-6	1
Trichlorofluoromethane	50	1		ug/L	1	75-69-4	1
Vinyl chloride	43	1		ug/L	1	75-01-4	1
o-Xylene	52	1		ug/L	1	95-47-6	1
p,m-Xylene*	103	2		ug/L	1		1
Isopropylbenzene	50	1		ug/L	1	98-82-8	1
Cyclohexane	45	1		ug/L	1	110-82-7	1
1,1-Dichloroethane	61	1		ug/L	1	75-34-3	1
1,1-Dichloroethene	48	1		ug/L	1	75-35-4	1
Methyl Acetate	41	10		ug/L	1	79-20-9	1
Methyl cyclohexane	43	1		ug/L	1	108-87-2	1
1,1,2-Trichloro-1,2,2-trifluoroethane	48	1		ug/L	1	76-13-1	1
1,2-Dibromoethane	56	1		ug/L	1	106-93-4	1
1,1,2,2-Tetrachloroethane	56	1		ug/L	1	79-34-5	1
cis-1,3-Dichloropropene	53	1		ug/L	1	10061-01-5	1
trans-1,3-Dichloropropene	53	1		ug/L	1	10061-02-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S22214.03

Sample Tag: MW-07-20_GW-031221 MSD

Collected Date/Time: 03/12/2021 09:07

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 16:09, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	59	1		ug/L	1	123-91-1	1

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 00:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	56	50		ug/L	1	67-64-1	1
2-Butanone (MEK)	49	25		ug/L	1	78-93-3	1
Benzene	48	1		ug/L	1	71-43-2	1
Bromodichloromethane	52	1		ug/L	1	75-27-4	1
Bromoform	59	1		ug/L	1	75-25-2	1
Bromomethane	44	5		ug/L	1	74-83-9	1
Carbon disulfide	44	5		ug/L	1	75-15-0	1
Carbon tetrachloride	46	1		ug/L	1	56-23-5	1
Chlorobenzene	52	1		ug/L	1	108-90-7	1
Chloroethane	42	5		ug/L	1	75-00-3	1
Chloroform	50	1		ug/L	1	67-66-3	1
Chloromethane	39	5		ug/L	1	74-87-3	1
1,2-Dibromo-3-chloropropane	53	5		ug/L	1	96-12-8	1
1,2-Dichlorobenzene	52	1		ug/L	1	95-50-1	1
1,2-Dichloroethane	49	1		ug/L	1	107-06-2	1
1,2-Dichloropropane	52	1		ug/L	1	78-87-5	1
1,3-Dichlorobenzene	50	1		ug/L	1	541-73-1	1
1,4-Dichlorobenzene	50	1		ug/L	1	106-46-7	1
cis-1,2-Dichloroethene	62	1		ug/L	1	156-59-2	1
Dibromochloromethane	57	5		ug/L	1	124-48-1	1
Dichlorodifluoromethane	36	5		ug/L	1	75-71-8	1
trans-1,2-Dichloroethene	46	1		ug/L	1	156-60-5	1
Ethylbenzene	49	1		ug/L	1	100-41-4	1
2-Hexanone	51	50		ug/L	1	591-78-6	1
4-Methyl-2-pentanone (MIBK)	51	50		ug/L	1	108-10-1	1
tert-Methyl butyl ether (MTBE)	52	5		ug/L	1	1634-04-4	1
Methylene chloride	51	5		ug/L	1	75-09-2	1
Styrene	53	1		ug/L	1	100-42-5	1
1,1,1-Trichloroethane	50	1		ug/L	1	71-55-6	1
1,1,2-Trichloroethane	56	1		ug/L	1	79-00-5	1
1,2,4-Trichlorobenzene	54	5		ug/L	1	120-82-1	1
Tetrachloroethene	48	1		ug/L	1	127-18-4	1

1-Spiked at 50ug/l



Analytical Laboratory Report

Lab Sample ID: S22214.03 (continued)
Sample Tag: MW-07-20_GW-031221 MSD

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 00:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	50	1		ug/L	1	108-88-3	1
Trichloroethene	50	1		ug/L	1	79-01-6	1
Trichlorofluoromethane	48	1		ug/L	1	75-69-4	1
Vinyl chloride	41	1		ug/L	1	75-01-4	1
o-Xylene	50	1		ug/L	1	95-47-6	1
p,m-Xylene*	101	2		ug/L	1		1
Isopropylbenzene	49	1		ug/L	1	98-82-8	1
Cyclohexane	42	1		ug/L	1	110-82-7	1
1,1-Dichloroethane	59	1		ug/L	1	75-34-3	1
1,1-Dichloroethene	46	1		ug/L	1	75-35-4	1
Methyl Acetate	39	10		ug/L	1	79-20-9	1
Methyl cyclohexane	42	1		ug/L	1	108-87-2	1
1,1,2-Trichloro-1,2,2-trifluoroethane	47	1		ug/L	1	76-13-1	1
1,2-Dibromoethane	55	1		ug/L	1	106-93-4	1
1,1,2,2-Tetrachloroethane	56	1		ug/L	1	79-34-5	1
cis-1,3-Dichloropropene	51	1		ug/L	1	10061-01-5	1
trans-1,3-Dichloropropene	52	1		ug/L	1	10061-02-6	1

1-Spiked at 50ug/L



Analytical Laboratory Report

Lab Sample ID: S22214.04

Sample Tag: MW-OS-08_GW-031221

Collected Date/Time: 03/12/2021 11:07

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 14:04, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 05:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	1	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	6	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22214.04 (continued)

Sample Tag: MW-OS-08_GW-031221

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 05:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22214.05

Sample Tag: MWF16-25_GW-031221

Collected Date/Time: 03/12/2021 12:20

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 14:25, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 06:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	4	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	12	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22214.05 (continued)

Sample Tag: MWF16-25_GW-031221

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 06:17, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	4	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22214.06

Sample Tag: MWF16-18_GW-031221

Collected Date/Time: 03/12/2021 13:40

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 14:46, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 20:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	500		ug/L	10	67-64-1	Y
2-Butanone (MEK)	Not detected	250		ug/L	10	78-93-3	Y
Benzene	Not detected	10		ug/L	10	71-43-2	Y
Bromodichloromethane	Not detected	10		ug/L	10	75-27-4	Y
Bromoform	Not detected	10		ug/L	10	75-25-2	Y
Bromomethane	Not detected	50		ug/L	10	74-83-9	Y
Carbon disulfide	Not detected	50		ug/L	10	75-15-0	Y
Carbon tetrachloride	Not detected	10		ug/L	10	56-23-5	Y
Chlorobenzene	Not detected	10		ug/L	10	108-90-7	Y
Chloroethane	Not detected	50		ug/L	10	75-00-3	Y
Chloroform	Not detected	10		ug/L	10	67-66-3	Y
Chloromethane	Not detected	50		ug/L	10	74-87-3	Y
1,2-Dibromo-3-chloropropane	Not detected	50		ug/L	10	96-12-8	Y
1,2-Dichlorobenzene	Not detected	10		ug/L	10	95-50-1	Y
1,2-Dichloroethane	Not detected	10		ug/L	10	107-06-2	Y
1,2-Dichloropropane	Not detected	10		ug/L	10	78-87-5	Y
1,3-Dichlorobenzene	Not detected	10		ug/L	10	541-73-1	Y
1,4-Dichlorobenzene	Not detected	10		ug/L	10	106-46-7	Y
cis-1,2-Dichloroethene	20	10		ug/L	10	156-59-2	Y
Dibromochloromethane	Not detected	50		ug/L	10	124-48-1	Y
Dichlorodifluoromethane	Not detected	50		ug/L	10	75-71-8	Y
trans-1,2-Dichloroethene	Not detected	10		ug/L	10	156-60-5	Y
Ethylbenzene	Not detected	10		ug/L	10	100-41-4	Y
2-Hexanone	Not detected	500		ug/L	10	591-78-6	Y
4-Methyl-2-pentanone (MIBK)	Not detected	500		ug/L	10	108-10-1	Y
tert-Methyl butyl ether (MTBE)	Not detected	50		ug/L	10	1634-04-4	Y
Methylene chloride	Not detected	50		ug/L	10	75-09-2	Y
Styrene	Not detected	10		ug/L	10	100-42-5	Y
1,1,1-Trichloroethane	Not detected	10		ug/L	10	71-55-6	Y
1,1,2-Trichloroethane	Not detected	10		ug/L	10	79-00-5	Y
1,2,4-Trichlorobenzene	Not detected	50		ug/L	10	120-82-1	Y
Tetrachloroethene	740	10		ug/L	10	127-18-4	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22214.06 (continued)

Sample Tag: MWF16-18_GW-031221

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 20:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Toluene	Not detected	10		ug/L	10	108-88-3	Y
Trichloroethene	10	10		ug/L	10	79-01-6	Y
Trichlorofluoromethane	Not detected	10		ug/L	10	75-69-4	Y
Vinyl chloride	Not detected	10		ug/L	10	75-01-4	Y
o-Xylene	Not detected	10		ug/L	10	95-47-6	Y
p,m-Xylene*	Not detected	20		ug/L	10		Y
Isopropylbenzene	Not detected	10		ug/L	10	98-82-8	Y
Cyclohexane	Not detected	10		ug/L	10	110-82-7	Y
1,1-Dichloroethane	Not detected	10		ug/L	10	75-34-3	Y
1,1-Dichloroethene	Not detected	10		ug/L	10	75-35-4	Y
Methyl Acetate	Not detected	100		ug/L	10	79-20-9	Y
Methyl cyclohexane	Not detected	10		ug/L	10	108-87-2	Y
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	10		ug/L	10	76-13-1	Y
1,2-Dibromoethane	Not detected	10		ug/L	10	106-93-4	Y
1,1,2,2-Tetrachloroethane	Not detected	10		ug/L	10	79-34-5	Y
cis-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-01-5	Y
trans-1,3-Dichloropropene	Not detected	10		ug/L	10	10061-02-6	Y

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S22214.07

Sample Tag: DUP-02_GW-031221

Collected Date/Time: 03/12/2021 00:01

Matrix: Groundwater

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/16/21 11:15	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 15:07, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 17:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	1	1		ug/L	1	67-66-3	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	6	1		ug/L	1	156-59-2	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	3	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22214.07 (continued)

Sample Tag: DUP-02_GW-031221

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 17:13, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	



Analytical Laboratory Report

Lab Sample ID: S22214.08

Sample Tag: Trip Blank

Collected Date/Time: 03/12/2021 00:01

Matrix: Water

COC Reference: 141907

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.5	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/17/21 11:00	BML	

Organics - Volatiles

Method: SW8260B - SIM, Run Date: 03/18/21 13:43, Analyst: WAT

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 12:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Benzene	Not detected	1		ug/L	1	71-43-2	
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	
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	
1,2-Dibromo-3-chloropropane	Not detected	5		ug/L	1	96-12-8	
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	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
2-Hexanone	Not detected	50		ug/L	1	591-78-6	
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	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
Styrene	Not detected	1		ug/L	1	100-42-5	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S22214.08 (continued)

Sample Tag: Trip Blank

Volatile Organics - Arcadis, Method: SW5030C/8260C, Run Date: 03/16/21 12:13, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
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		
Isopropylbenzene	Not detected	1		ug/L	1	98-82-8	
Cyclohexane	Not detected	1		ug/L	1	110-82-7	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methyl Acetate	Not detected	10		ug/L	1	79-20-9	
Methyl cyclohexane	Not detected	1		ug/L	1	108-87-2	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	

Merit Laboratories Login Checklist

Lab Set ID:S22214

Client:ARCADIS_NOVI (ARCADIS U.S., Inc.)

Project: RACER PNC 30075936.00005

Submitted:03/12/2021 16:15 Login User: SRS

Attention: Alexis Crisp

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

Phone: n/a

FAX:

Email: Alexis.Crisp@arcadis.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.5 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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: _____

Table 4
 Summary of Groundwater Analytical Results
 RACER Trust Pontiac North Campus
 Pontiac, Michigan

PNC VOC Analyte List - 8260C		
VOC	Volatile Organic Compounds	
VOC	Acetone	plus 1,4-dioxane with 8260 SIMs
VOC	Benzene	1
VOC	Bromodichloromethane	1
VOC	Bromoform	1
VOC	Bromomethane	1
VOC	2-Butanone	1
VOC	Carbon Disulfide	1
VOC	Carbon Tetrachloride	1
VOC	Chlorobenzene	1
VOC	Chloroethane	1
VOC	Chloroform	1
VOC	Chloromethane	1
VOC	Cumene	1
VOC	Cyclohexane	1
VOC	1,2-Dibromo-3-chloropropane	1
VOC	Dibromochloromethane	1
VOC	1,2-Dibromoethane	1
VOC	1,2-Dichlorobenzene	1
VOC	1,3-Dichlorobenzene	1
VOC	1,4-Dichlorobenzene	1
VOC	Dichlorodifluoromethane	1
VOC	1,1-Dichloroethane	1
VOC	1,2-Dichloroethane	1
VOC	1,1-Dichloroethene	1
VOC	cis-1,2-Dichloroethene	1
VOC	trans-1,2-Dichloroethene	1
VOC	1,2-Dichloropropane	1
VOC	1,3-Dichloropropene (summed)	1
VOC	Ethyl Benzene	1
VOC	2-Hexanone	1
VOC	Methyl Acetate	1
VOC	Methyl tert-butyl ether	1
VOC	4-Methyl-2-pentanone	1
VOC	Methylcyclohexane	1
VOC	Methylene Chloride	1
VOC	Styrene	1
VOC	1,1,2,2-Tetrachloroethane	1
VOC	Tetrachloroethene	1
VOC	Toluene	1
VOC	1,2,4-Trichlorobenzene	1
VOC	1,1,1-Trichloroethane	1
VOC	1,1,2-Trichloroethane	1
VOC	Trichloroethene	1
VOC	Trichlorofluoromethane	1
VOC	1,1,2-Trichloro-1,2,2-trifluoroethane	1
VOC	Vinyl Chloride	1
VOC	Xylenes (total)	1

ATTACHMENT 5

Historic Groundwater and Soil Analytical Data



Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MW-02-17 4/21/2017 MW-02-17_GW-042117	MW-02-17 7/20/2017 MW-02-17_GW-072017	MW-02-17 10/23/2017 MW-02-17_GW-102317	MW-02-17 1/15/2018 MW-02-17_GW-011518	MW-02-17 10/2/2018 MW-02-17_GW-100218
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 50 U	< 50 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U [< 25 U]	< 25 U	< 25 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2	2 [2]	2	2	2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 50 U	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	12	5 [5]	10	11	6
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U [< 5 U]	< 5 U	< 5 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1 U	3 [4]	5	8	6
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U [< 1 U]	< 1 U	< 1 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	1	2 [2]	2	2	2
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U	< 3 U [< 3 U]	12	19	21

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MW-02-17 10/7/2019 MW-02-17_GW-100719	MW-02-17 10/13/2020 MW-02-17_GW-10132020	MW-05-18 10/1/2018 MW-05-18_GW-100118	MW-05-18 10/7/2019 MW-05-18_GW-100719	MW-05-18 8/31/2020 MW-05-18_GW-083120
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> <td>< 50 U</td> <td>< 50 U</td> </lt;>	< 50 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U [<lt; 25="" td="" u]<=""> <td>< 25 U</td> <td>< 25 U</td> </lt;>	< 25 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> <td>< 5 U</td> </lt;>	< 5 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> <td>< 5 U</td> </lt;>	< 5 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> <td>< 5 U</td> </lt;>	< 5 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2	< 1 U	4 [4]	9	3
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U	6 [6]	13	3
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> <td>< 50 U</td> <td>< 50 U</td> </lt;>	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	10	3	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> <td>< 5 U</td> </lt;>	< 5 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	7	6	4 [4]	8	3
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	4	2	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> <td>< 1 U</td> </lt;>	< 1 U	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	29	30	2 [2]	4	2

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MW-05-18 10/13/2020 MW-05-18_GW-10132020	MW-05-18 12/7/2020 MW-05-18_GW-120720	MW-06-20 9/1/2020 MW-06-20_GW-090120	MW-06-20 12/7/2020 MW-06-20_GW-120720	MW-07-20 8/31/2020 MW-07-20_GW-083120
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	7	8	7	8	9
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	2	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	12	15	7	7	9
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	7	7	4	4	5
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U	7	8	2
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	3	< 1 U	5	3	1

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MW-07-20 12/7/2020 MW-07-20_GW-120720	MWF1 8/23/2001 MWF1-GW(24-34)-N	MWF1 1/7/2002 MWF1-GW	MWF1 11/13/2002 MWF1-GW02	MWF1 5/19/2003 MWF1W(24-34)	MWF1 12/17/2003 MWF1GW(24-34)	MWF1 5/5/2004 MWF1GW
Volatile Organics														
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	17 J [17 J]	< 10 UJ	< 10 UJ	< 10 UJ	< 10 UJ	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 0.17 U [$< 0.17 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 0.41 U [$< 0.41 U$]	< 10 U	< 10 UJ	< 10 UJ	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 0.20 U [$< 0.20 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 0.12 U [$< 0.12 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 0.26 U [$< 0.26 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 0.14 U [$< 0.14 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	0.17 J [$< 0.13 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 0.17 U [$< 0.17 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	10	< 0.16 U [$< 0.16 U$]	1.0	0.85 J	< 1.0 UJ	1.1	0.99 J
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 0.21 U [$< 0.21 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 0.24 U [$< 0.24 U$]	0.97 J	0.81 J	< 1.0 UJ	1.4	0.53 J
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	12	< 0.22 U [$< 0.22 U$]	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 0.15 U [$< 0.15 U$]	< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 0.12 U [$< 0.12 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 0.12 U [$< 0.12 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 0.23 U [$< 0.23 U$]	< 10 U	< 10 U	< 10 UJ	< 10 U	< 10 R
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 0.23 U [$< 0.23 U$]	0.55 J	0.46 J	< 1.0 UJ	< 1.0 U	0.30 J
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 0.18 U [$< 0.18 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 0.17 U [$< 0.17 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	5	0.53 J [0.52 J]	7.0	6.8	< 1.0 UJ	7.2	8.3
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 0.30 U [$< 0.30 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	2	< 0.14 U [$< 0.14 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	< 0.33 U [$< 0.33 U$]	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 U
Volatile Organics-SIM														
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 1 U	NA	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF1 10/27/2004 MWF1-GW-102704	MWF1 5/11/2005 MWF1-GW-051105	MWF1 11/3/2005 MWF1-GW-110305	MWF1 5/18/2006 MWF1-GW-051806	MWF1 11/14/2006 MWF1-WG-11-14-06	MWF1 5/3/2007 MWF1-GW-05-03-07
Volatile Organics													
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 UJ	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 UJ	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	0.22 J	0.17 J	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	1.3	0.44 J	1.1	0.69 J	2.4	2.2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.3 U	< 1.0 U	0.73 J	0.67 J	0.78 J	0.59 J
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.38 J	0.28 J	0.47 J	0.65 J	0.41 J	0.73 J
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	5.7	2.6	7.8	4.5	7.1	8.4
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM													
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF1 11/7/2007 MWF1-GW-110707	MWF1 5/8/2008 MWF1-GW-050808	MWF1 12/15/2009 MWF1-GW-121509	MWF12-01 9/5/2001 MWF12-01-GW(16-26)-090501	MWF12-01 1/4/2002 MWF12-01GW(1626)02
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 10 U	< 10 U [<lt; 10="" td="" u]<=""> <td>< 10 UJ</td> <td>< 20 UJ</td> </lt;>	< 10 UJ	< 20 UJ
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 UJ	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 10 U [<lt; 10="" td="" u]<=""> <td>< 10 U</td> <td>< 20 U</td> </lt;>	< 10 U	< 20 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 UJ	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	0.49 J	< 1.0 U	< 1.0 UJ [<lt; 1.0="" td="" uj]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	1.7	0.55 J	0.70 J [0.70 J]	4.5	5.4
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	0.89 J	0.29 J	0.28 J [0.20 J]	3.5	2.8
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 0.50 U</td> <td>< 1.0 U</td> </lt;>	< 0.50 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 0.50 U</td> <td>< 1.0 U</td> </lt;>	< 0.50 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 10 U [<lt; 10="" td="" u]<=""> <td>< 10 U</td> <td>< 20 U</td> </lt;>	< 10 U	< 20 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.59 J	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	0.41 J [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	7.2	1.2	0.87 J [0.76 J]	30	35
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> <td>0.14 J</td> <td>< 2.0 U</td> </lt;>	0.14 J	< 2.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 UJ	< 2.0 U [<lt; 2.0="" td="" u]<=""> <td>< 1.0 U</td> <td>< 2.0 U</td> </lt;>	< 1.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-01 11/13/2002 MWF12-01-GW	MWF12-01 5/19/2003 MWF1201W(15-25)	MWF12-01 12/16/2003 MWF1201GW(16-26)	MWF12-01 5/4/2004 MWF1201GW	MWF12-01 10/27/2004 MWF12-01-GW-102704	MWF12-01 4/1/2005 MWF12-01-GW-040105
Volatile Organics													
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 25 UJ	< 20 UJ	< 14 U	< 20 U	< 25 U	< 17 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 R	< 2.0 U	< 2.5 U	< 1.7 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 UJ	< 20 UJ	< 14 U	< 20 U	< 25 U	< 17 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Chloroform	19	10	610	270	910	410	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	25	17 J	6.6	5.9	8.0	4.3
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	5.8	3.4 J	2.8	4.8	10	1.4 J
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	1.6	1.3 J	0.74	< 1.0 U	0.67 J	< 1.7 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.2 U	< 1.0 UJ	< 0.72 U	< 1.0 U	< 2.5 U	< 1.7 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 25 R	< 20 R	< 14 U	< 20 U	< 25 U	< 17 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 UJ
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	73	60 J	37	58	81	49
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 2.5 U	< 1.7 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 UJ	< 2.5 U	< 1.7 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.5 U	< 2.0 UJ	< 1.4 U	< 2.0 U	< 5.0 U	< 3.3 U
Volatile Organics-SIM													
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-01 5/11/2005 MWF12-01-GW-051105	MWF12-01 11/3/2005 MWF12-01-GW-110305	MWF12-01 5/18/2006 MWF12-01-GW-051806	MWF12-01 11/10/2006 MWF12-01-WG-111006	MWF12-01 5/2/2007 MWF12-01-GW-05-02-07
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 20 U	< 10 U	< 10 UJ	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 2.0 U	< 1.0 U	0.19 J	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	5.3	5.9	10	0.80 J	4.2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	4.8	6.0	5.7	0.37 J	1.4
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	0.47 J	0.30 J	0.57 J	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	49	79	35	13	22
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 4.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-01 11/7/2007 MWF12-01-GW-110707	MWF12-01 5/7/2008 MWF12-01-GW-050708	MWF12-01 11/4/2008 MWF12-01-GW-110408	MWF12-01 12/15/2009 MWF12-01-GW-121509	MWF12-01 11/4/2010 MWF12-01(110410)-GW
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 20 U	< 10 U	65	< 20 U	1.2 J
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 20 U	< 10 U	< 17 U	< 20 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 5.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	0.84 J	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	9.0	2.8	7.5	6.0	1.6
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	6.2	0.99 J	3.0	3.5	0.66 J
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	0.61 J	< 1.0 U	0.55 J	0.59 J	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 5.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 20 U	< 10 U	< 17 U	< 20 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 2.0 U	< 1.0 UJ	< 1.7 UJ	< 2.0 U	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 5.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	61	22	48	62	9.1
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 2.0 U	< 1.0 U	< 1.7 U	< 2.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 4.0 U	< 2.0 UJ	< 3.3 U	< 4.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-01 9/22/2011 MWF12-01_092211	MWF12-01 10/3/2012 MWF12-01_100312	MWF12-01 12/4/2013 MWF12-01_20131204	MWF12-01 9/19/2014 MWF12-01-091914	MWF12-01 9/22/2015 MWF 12-01 (09222015)
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 1.0 U	< 25 U	2.4 J	< 25 U	< 25 U [<lt; 25="" td="" u]<=""> </lt;>
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 1.0 U	< 25 U	< 25 U	< 25 U	< 25 U [<lt; 25="" td="" u]<=""> </lt;>
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 5.0 U	2.5 J	< 5.0 U	< 5.0 U [<lt; 5.0="" td="" u]<=""> </lt;>
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1 UJ	< 1.0 U	< 1.0 U [UJ]
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	< 1 UJ	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2.4	1.1	4.1	4.6	3.9 [4.1]
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1.0	0.45 J	1.4	2.2	1.2 [1.2]
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	0.20 J	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U [<lt; 5.0="" td="" u]<=""> </lt;>
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 1.0 U	< 50 U	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> </lt;>
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	15	9.0	26	25	22 [18]
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U [<lt; 1.0="" td="" u]<=""> </lt;>
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	U [<lt; 1.0="" td="" u]<=""> </lt;>
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 1.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U [<lt; 2.0="" td="" u]<=""> </lt;>
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-01 5/19/2016 MWF12-01-GW-051916	MWF12-01 9/21/2016 MWF12-01_092116	MWF12-01 4/26/2017 MWF12-01_GW-042617	MWF12-01 7/21/2017 MWF12-01_GW-072117	MWF12-01 10/24/2017 MWF12-01_GW-102417
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	NA	< 50 [< 50]	< 50 U	< 50 U	< 50 U [< 50 U]
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	NA	< 25 [< 25]	< 25 U	< 25 U	< 25 U [< 25 U]
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	NA	< 5 [< 5]	< 5 U	< 5 U	< 5 U [< 5 U]
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	NA	< 5 [< 5]	< 5 U	< 5 U	< 5 U [< 5 U]
Chloroform	19	10	610	270	910	410	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	NA	< 5 [< 5]	< 5 U	< 5 U	< 5 U [< 5 U]
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	NA	3 [4]	4	5	2 [2]
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	NA	< 1 [1]	< 1 U	1	< 1 U [< 1 U]
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	NA	< 5 [< 5]	< 1 U	< 1 U	< 1 U [< 1 U]
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	NA	< 50 [< 50]	< 50 U	< 50 U	< 50 U [< 50 U]
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	NA	< 5 [< 5]	< 5 U	< 5 U	< 5 U [< 5 U]
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	NA	16 [17]	< 1 U	24	8 [10]
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Trichloroethene	15	8.1	210	93	310	140	ug/L	NA	< 1 [< 1]	< 1 U	< 1 U	< 1 U [< 1 U]
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	9.3	NA	6	< 3 U	< 3 U []

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-01 1/16/2018 MWF12-01_GW-011618	MWF12-01 10/3/2018 MWF12-01_GW-100318	MWF12-01R 10/13/2020 MWF12-01R_GW-10132020	MWF12-02 9/5/2001 MWF12-02-GW(15-25)-090501
Volatile Organics											
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	NA	NA	0.78 J [0.63 J]
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	NA	NA	< 10 U [< 10 U]
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	NA	NA	< 1.0 U [< 1.0 U]
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	NA	NA	< 1.0 U [< 1.0 U]
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	NA	NA	0.15 J [0.17 J]
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	NA	NA	< 1.0 U [< 1.0 U]
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	3	NA	NA	0.55 J [0.46 J]
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1	NA	NA	< 1.0 U [< 1.0 U]
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	NA	NA	< 0.50 U [< 0.50 U]
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	NA	NA	< 0.50 U [< 0.50 U]
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	NA	NA	< 10 UJ [< 10 U]
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	NA	NA	0.48 J [0.46 J]
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	NA	NA	< 1.0 U [< 1.0 U]
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	25	NA	NA	0.20 J [< 1.0 U]
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	NA	NA	< 1.0 U [< 1.0 U]
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	0.53 J [< 1.0 U]
Volatile Organics-SIM											
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	5	5	107	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-02 1/4/2002 MWF12-02-GW(15-25)02	MWF12-02 11/13/2002 MWF12-02-GW	MWF12-02 5/19/2003 MWF1202W(15-25)	MWF12-02 12/16/2003 MWF1202GW(15-25)	MWF12-02 5/4/2004 MWF1202GW	MWF12-02 10/27/2004 MWF12-02-GW-102704
Volatile Organics													
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U [< 20 UJ]	< 10 UJ [< 10 UJ]	< 10 UJ	< 10 U	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 R	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U [< 20 U]	< 10 UJ [< 10 UJ]	< 10 UJ	< 10 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2.6 [4.6]	1.8 [1.6]	0.84 J	0.98 J	3.2	3.3
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U [2.3]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 0.50 U [< 1.0 U]	< 0.50 U [< 0.50 U]	< 0.50 UJ	< 0.50 U	< 0.50 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 0.50 U [< 1.0 U]	< 0.50 U [< 0.50 U]	< 0.50 UJ	< 0.50 U	< 0.50 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 UJ [< 20 U]	< 10 R [< 10 R]	< 10 R	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	1.3 [33]	2.0 [1.7]	0.77 J	0.25 J	0.26 J	0.22 J
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 1.0 U [< 2.0 U]	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1.0 U	< 1.0 U	< 2.0 U
Volatile Organics-SIM													
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-02 5/11/2005 MWF12-02-GW-051105	MWF12-02 11/3/2005 MWF12-02-GW-110305	MWF12-02 5/18/2006 MWF12-02-GW-051806	MWF12-02 11/10/2006 MWF12-02-WG-111006	MWF12-02 5/2/2007 MWF12-02-GW-05-02-07
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 10 U	1.0 J	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	0.15 J	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2.1	2.5	1.4	1.7	1.1
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	< 1.0 U	0.18 J	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	0.37 J	0.81 J	1.9	2.9	2.6
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-02 11/7/2007 MWF12-02-GW-110707	MWF12-02 5/7/2008 MWF12-02-GW-050708	MWF12-02 11/4/2008 MWF12-02-GW-110408	MWF12-02 9/21/2016 MWF12-02_092116	MWF12-02 9/22/2016 MWF12-02_092226
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 10 U	200	< 50	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 25 U	< 25	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 5	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 5	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	0.34 J	< 1.0 U	< 2.5 U	< 5	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	1.3	3.4	3.4	2	1
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 5	< 5 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 25 U	< 50	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U	< 1.0 U	< 2.5 UJ	< 1	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 5	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	2.1	2.4	1.2 J	4	3
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 2.5 U	< 1	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 UJ	< 5.0 U	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	3

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-02 4/26/2017 MWF12-02_GW-042617	MWF12-02 7/21/2017 MWF12-02_GW-072117	MWF12-02 10/24/2017 MWF12-02_GW-102417	MWF12-02 1/16/2018 MWF12-02_GW-011618	MWF12-02 10/3/2018 MWF12-02_GW-100318
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> <td>< 50 U</td> </lt;>	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 25 U [<lt; 25="" td="" u]<=""> <td>< 25 U</td> </lt;>	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> </lt;>	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> </lt;>	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> </lt;>	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	1	1	2	2 [2]	2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> <td>< 50 U</td> </lt;>	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U</td> </lt;>	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	2	2	1	1 [1]	1
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U</td> </lt;>	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U	< 3 U	< 3 U	4 [4]	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF12-02 10/7/2019 MWF12-02_GW-100719	MWF12-02 10/13/2020 MWF12-02_GW-10132020	MWF15-01 10/11/2001 MWF15-01-GW(19-29)-N	MWF15-01 1/9/2002 MWF15-01-GW	MWF16-01 11/22/2004 MWF16-01-GW112204
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 0.51 UJ	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 0.17 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U [< 25 U]	< 0.41 UJ	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U [< 5 U]	< 0.20 UJ	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U [< 1 U]	< 0.12 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U [< 5 U]	< 0.26 UJ	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U [< 1 U]	0.54 J	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U [< 5 U]	0.41 J	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U [< 1 U]	< 0.17 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2	2 [2]	7.6	2.0	0.42 J
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 0.21 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U [< 1 U]	< 0.24 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U [< 1 U]	< 0.22 U	< 0.50 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U [< 1 U]	< 0.15 U	< 0.50 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U [< 1 U]	< 0.12 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U [< 1 U]	< 0.12 U	< 1.0 U	1.2
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 0.23 UJ	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U [< 1 U]	0.28 J	< 1.0 U	0.64 J
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U [< 1 U]	0.36 J	0.29 J	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U [< 5 U]	< 0.17 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	1	< 1 U [< 1 U]	< 0.15 U	0.61 J	1.5
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U [< 1 U]	< 0.30 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U [< 1 U]	< 0.14 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	< 0.33 U	0.64 J	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-01 11/15/2006 MWF16-01-WG-11-15-06	MWF16-02 11/22/2004 MWF16-02-GW112204	MWF16-02 11/15/2006 MWF16-02-WG-11-15-06	MWF16-03 11/22/2004 MWF16-03-GW112204	MWF16-03 11/15/2006 MWF16-03-WG-11-15-06
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 1200 UJ	< 620 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	0.73 J	< 1.0 U	< 1.0 U	< 120 U	< 62 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 10 U	1000 J	1200
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Chloroform	19	10	610	270	910	410	ug/L	4.1	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	0.20 J	< 120 U	< 62 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1.0 U	< 1.0 U	0.35 J	< 120 U	< 62 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	530	250
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	0.62 J	< 120 U	< 62 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 1200 U	22 J
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.96 J	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	5900	2100 J
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	2.4	< 1.0 U	< 1.0 U	< 120 U	< 62 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 120 U	< 62 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	0.40 J	< 120 U	< 62 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U	3300	1600
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-04 11/23/2004 MWF16-04-GW-112304	MWF16-04 11/16/2006 MWF16-04-WG-111606	MWF16-05 11/22/2004 MWF16-05-GW112204	MWF16-05 11/16/2006 MWF16-05-WG-111606	MWF16-05 10/25/2017 MWF16-05_GW-102517
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 UJ	< 10 UJ	< 50 U [67 U]	< 17 UJ [10 UJ]	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 50 U [67 U]	< 17 U [10 U]	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 UJ	< 5.0 U [6.7 U]	< 1.7 U [1.0 UJ]	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 UJ	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	< 1.0 U	1.6 J [1.8 J]	< 1.7 U [1.0 U]	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [3.4 J]	< 1.7 U [1.0 U]	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 50 U [67 U]	< 17 U [10 U]	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	1.5	1.3	93 [140]	41 [37]	12
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 UJ	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	3.0	2.9	16 [21]	1.9 [2.1]	2
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 5.0 U [6.7 U]	< 1.7 U [1.0 U]	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	5.9 [15]	1.1 J [1.0]	3
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 10 U [13 U]	< 3.3 U [2.0 U]	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	< 3 U

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-05 12/8/2020 MWF16-05_GW-120820	MWF16-06 11/23/2004 MWF16-06-GW-112304	MWF16-06 11/16/2006 MWF16-06-WG-111606	MWF16-06 4/28/2017 MWF16-06_GW-042817	MWF16-06 10/4/2018 MWF16-06_GW-100418
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 500 UY	< 33 UJ	< 10 UJ	< 50 U	< 250 UY
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 10 UY	< 3.3 U	< 1.0 U	< 1 U	< 5 UY
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 250 UY	< 33 U	< 10 U	< 25 U	< 130 UY
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 50 UY	< 3.3 U	< 1.0 U	< 5 U	< 30 UY
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 10 UY	9.1	2.9	19	14 Y
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 50 UY	1.8 J	0.63 J	< 5 U	< 30 UY
Chloroform	19	10	610	270	910	410	ug/L	< 10 UY	33	9.0	160	38 Y
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 50 UY	< 3.3 UJ	< 1.0 U	< 5 U	< 30 UY
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 10 UY	< 3.3 U	< 1.0 U	< 1 U	< 5 UY
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 10 UY	60	14	167	47 Y
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 10 UY	< 3.3 U	< 1.0 U	2	< 5 UY
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 10 UY	24	6.9	24	9 Y
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 10 UY	14	4.9	28	12 Y
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 10 UY	0.62 J	0.28 J	< 1 U	< 5 UY
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 10 UY	< 3.3 U	< 1.0 U	< 1 U	< 5 UY
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 10 UY	< 3.3 U	< 1.0 U	< 1 U	< 5 UY
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 500 UY	< 33 U	< 10 U	< 50 U	< 250 UY
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	470 Y	9.4	4.9	43	70 Y
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 10 UY	< 3.3 U	< 1.0 U	< 1 U	< 5 UY
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 50 UY	< 3.3 UJ	< 1.0 U	< 5 U	< 30 UY
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 10 UY	97	29	< 1 U	163 Y
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 10 UY	< 3.3 U	< 1.0 U	< 1 U	< 5 UY
Trichloroethene	15	8.1	210	93	310	140	ug/L	30 Y	2.6 J	1.3	11	12 Y
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	< 6.7 U	< 2.0 U	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 1 U	NA	NA	106	15

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-06 10/7/2019 MWF16-06_GW-100719	MWF16-06 10/15/2020 MWF16-06_GW-10152020	MWF16-07 11/22/2004 MWF16-07-GW112204	MWF16-07 11/17/2006 MWF16-07-WG-111706	MWF16-07 12/7/2020 MWF16-07_GW-120720
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 Ur	< 50 U	< 50 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 Ur	< 5.0 U	< 5.0 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 Ur	< 50 U	< 50 UJ	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 Ur	< 5.0 U	< 5.0 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	13	13 r	< 5.0 U	< 5.0 UJ	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 Ur	< 5.0 U	< 5.0 UJ	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	34	34 r	< 5.0 U	< 5.0 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 Ur	< 5.0 U	< 5.0 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 Ur	< 5.0 U	< 5.0 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	67	212 E	< 5.0 U	< 5.0 U	< 1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	1	4 r	< 5.0 U	< 5.0 UJ	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	12	23 r	< 5.0 U	< 5.0 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	17	82 r	< 5.0 U	< 5.0 U	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	2 r	< 5.0 U	< 5.0 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 Ur	< 5.0 U	< 5.0 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 Ur	< 5.0 U	< 5.0 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 Ur	< 50 U	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	76	127 r	< 5.0 U	< 5.0 U	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 Ur	< 5.0 U	< 5.0 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 Ur	< 5.0 U	< 5.0 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	164	201 E	< 5.0 U	< 5.0 U	< 1 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 Ur	< 5.0 U	< 5.0 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	12	24 r	< 5.0 U	< 5.0 U	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	< 10 U	< 10 U	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	29	20	NA	NA	< 1 U

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-08 5/13/2005 MWF16-08-GW-051305	MWF16-08 11/15/2006 MWF16-08-WG-11-15-06	MWF16-09 5/13/2005 MWF16-09-GW-051305	MWF16-09 11/15/2006 MWF16-09-WG-11-15-06	MWF16-10 5/17/2005 MWF16-10-GW-051705
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 UJ	< 10 U	< 10 UJ	< 10 U	< 10 UJ
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	0.34 J	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U	< 1.0 U	1.5	< 1.0 U	3.1
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.59 J
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-10 11/16/2006 MWF16-10-WG-111606	MWF16-10 10/25/2017 MWF16-10_GW-102517	MWF16-11 5/17/2005 MWF16-11-GW-051705	MWF16-11 11/16/2006 MWF16-11-WG-111606	MWF16-11 10/25/2017 MWF16-11_GW-102517
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 UJ	< 50 U	< 10 UJ	< 10 UJ	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 25 U	< 10 U	< 10 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 5 U	< 1.0 U	< 1.0 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1 U	0.38 J	1.0	3
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 UJ	< 5 U	< 1.0 U	< 1.0 UJ	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1 U	0.24 J	0.56 J	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 5 U	< 1.0 U	< 1.0 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1.0 U	< 1 U	0.90 J	0.82 J	< 1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1 U	< 1.0 UJ	< 1.0 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1 U	0.77 J	0.96 J	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 50 U	< 10 U	< 10 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.74 J	11	1.5	4.0	76
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 5 U	< 1.0 U	< 1.0 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	0.29 J	1	0.50 J	1.1	< 1 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1 U	< 1.0 U	< 1.0 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1 U	< 1.0 U	0.80 J	4
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	NA	0.62 J	< 2.0 U	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	< 3 U	NA	NA	< 3 U

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-11 12/8/2020 MWF16-11_GW-120820	MWF16-12 5/13/2005 MWF16-12-GW-051305	MWF16-12 11/16/2006 MWF16-12-WG-111606	MWF16-13 5/12/2005 MWF16-13-GW-051205	MWF16-13 11/17/2006 MWF16-13-WG-111706
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 10 UJ	< 10 UJ	< 10 UJ	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 10 U	< 10 U	< 10 UJ	< 10 UJ
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	1	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 1.0 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1.0 U	0.17 J	0.54 J	0.58 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1 U	1.6	2.1	8.7	6.4
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1.0 U	0.46 J	2.4	4.2
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	11	3.6	2.8	2.0
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	1.8	0.57 J	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 10 U	< 10 U	< 10 UJ	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	98	1.2	6.8	3.3	3.9
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1 U	3.9	7.8	33	31
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1.0 U	< 1.0 U	0.22 J	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	2	0.41 J	0.81 J	0.48 J	0.89 J
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 1 U	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-14 5/16/2005 MWF16-14-GW-051605	MWF16-14 11/17/2006 MWF16-14-WG-111706	MWF16-15 5/16/2005 MWF16-15-GW-051605	MWF16-15 11/17/2006 MWF16-15-WG-111706	MWF16-15 9/22/2016 MWF16-15_092226
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 14 U	< 10 U	< 10 U	< 10 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 14 U	< 10 UJ	< 10 U	< 10 UJ	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.4 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.4 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	0.46 J	0.54 J	< 1.0 U	< 1.0 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	4.3	0.74 J	0.52 J	0.94 J	2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.4 U	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	2.4	0.56 J	0.41 J	0.70 J	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	6.4	1.2	< 1.0 U	< 1.0 U	5
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	0.63 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 14 U	< 10 U	< 10 U	< 10 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	53	7.8	4.4	0.57 J	UJ
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	12	3.5	7.1	8.1	9
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.4 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	25	11	0.42 J	0.29 J	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.9 U	< 2.0 U	< 2.0 U	< 2.0 U	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	13

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-15 4/27/2017 MWF16-15_GW-042717	MWF16-15 10/25/2017 MWF16-15_GW-102517	MWF16-15 9/1/2020 MWF16-15_GW-090120	MWF16-16 5/16/2005 MWF16-16-GW-051605	MWF16-16 11/17/2006 MWF16-16-WG-111706
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 10 U	< 10 UJ
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 UJ
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 UJ
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	< 1 U	0.44 J	0.37 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	4	3	1	2.4	8.3
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 UJ
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 1 U	1.1	1.8
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	14	15	1	4.1	9.1
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 1 U	0.35 J	1.0
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U	< 1 U	0.58 J	0.43 J
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1 U	14	5	8.2	9.7
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	2	2	< 1 U	33	31
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	17	13	3	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-16 10/25/2017 MWF16-16_GW-102517	MWF16-16 9/2/2020 MWF16-16_GW-090220	MWF16-16 12/8/2020 MWF16-16_GW-120820	MWF16-17 5/13/2005 MWF16-17-GW-051305	MWF16-17 11/16/2006 MWF16-17-WG-111606
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 500 UY	< 10 UJ	< 10 UJ
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 250 UY	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 50 UY	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	3	< 10 UY	0.23 J	0.25 J
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 50 UY	< 1.0 U	< 1.0 UJ
Chloroform	19	10	610	270	910	410	ug/L	1	2	< 10 UY	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 50 UY	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	6	5	< 10 UY	< 1.0 U	< 1.0 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	19	15	< 10 UY	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	2	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 500 UY	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	14	250 Y	260 Y	13	8.6
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 50 UY	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	9	9	< 10 UY	4.9	5.1
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 10 UY	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	7	19	< 10 UY	0.47 J	0.36 J
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U	24	< 1 U	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-17 10/26/2017 MWF16-17_GW-102617	MWF16-18 5/17/2005 MWF16-18-GW-051705	MWF16-18 11/17/2006 MWF16-18-WG-111706	MWF16-19 5/17/2005 MWF16-19-GW-051705	MWF16-19 11/16/2006 MWF16-19-WG-111606
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 14 UJ [< 14 UJ]	< 40 U	< 10 U	< 59 UJ
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 14 U [< 14 U]	< 40 UJ	< 10 U	< 59 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 1.4 U [< 1.4 U]	< 4.0 U	0.44 J	< 5.9 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	0.88 J [0.72 J]	< 4.0 UJ	< 1.0 U	2.4 J
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 1.4 U [< 1.4 U]	< 4.0 UJ	1.1	< 5.9 UJ
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	1.4	3.8 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 1.4 U [< 1.4 U]	< 4.0 U	0.45 J	< 5.9 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	32	88
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1.4 U [< 1.4 UJ]	< 4.0 UJ	< 1.0 U	< 5.9 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	0.59 J [0.50 J]	< 4.0 U	3.2	20
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	1.0 J [1.1 J]	< 4.0 U	< 1.0 U	< 5.9 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 14 U [< 14 U]	< 40 U	< 10 U	< 59 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	37 [41]	99	0.37 J	< 5.9 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	2	8.2 [8.6]	6.5	29	170
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1.4 U [< 1.4 U]	< 4.0 U	< 1.0 U	< 5.9 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	31 [33]	14	< 1.0 U	< 5.9 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	< 2.9 U [< 2.9 U]	< 8.0 U	< 2.0 U	< 12 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-19 3/20/2007 MWF16-19-GW-032007	MWF16-19 4/28/2017 MWF16-19_GW-042817	MWF16-20 2/6/2006 MWF16-20-W-020606	MWF16-20 11/16/2006 MWF16-20-WG-111606	MWF16-21 2/6/2006 MWF16-21-W-020606
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 67 U	< 250 UY	< 10 U	< 10 UJ	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 67 U	< 130 UY	< 10 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 6.7 U	< 30 UY	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	1.6 J	< 5 UY	1.8	3.3	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 6.7 U	< 30 UY	< 1.0 U	< 1.0 UJ	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	7.6	37 Y	1.6	2.9	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 6.7 U	< 30 UY	0.38 J	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	140	227 Y	0.33 J	0.87 J	< 1.0 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	16	27 Y	0.66 J	0.78 J	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	0.43 J
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 67 U	< 250 UY	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 6.7 U	< 5 UY	1.2	0.70 J	0.70 J
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 6.7 U	< 30 UY	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	160	< 5 UY	1.7	4.1	< 1.0 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 6.7 U	< 5 UY	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 6.7 U	< 5 UY	0.30 J	0.65 J	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 13 U	NA	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	200 Y	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-21 11/16/2006 MWF16-21-WG-111606	MWF16-22 2/6/2006 MWF16-22-W-020606	MWF16-22 11/17/2006 MWF16-22-WG-111706	MWF16-22 9/2/2020 MWF16-22_GW-090220	MWF16-23 2/7/2006 MWF16-23-WG-020706
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 UJ	< 10 U	< 10 U	< 50 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 10 UJ	< 25 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	0.22 J	< 1.0 UJ	< 1 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 UJ	< 1.0 U	< 1.0 UJ	< 5 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	0.19 J	0.30 J	< 1 U	0.23 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	0.16 J	< 1.0 U	< 5 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	0.37 J	3.9	3.9	1	12
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 UJ	< 1 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1.0 U	0.88 J	0.49 J	< 1 U	2.4
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	1.3	4.1	4.2	5	16
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	0.17 J	0.44 J	0.34 J	< 1 U	1.6
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 10 U	< 50 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.58 J	11	13	73	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1.0 U	2.9	2.4	1	7.3
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	2.6	2.1	2	4.5
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U	NA	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	< 1 U	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-23 11/17/2006 MWF16-23-WG-111706	MWF16-23 10/24/2017 MWF16-23_GW-102417	MWF16-23 10/1/2018 MWF16-23_GW-100118	MWF16-23 10/7/2019 MWF16-23_GW-100719	MWF16-23 9/1/2020 MWF16-23_GW-090120
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 50 U	< 50 U	< 50 U	< 50 U [< 50 U]
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 UJ	< 25 U	< 25 U	< 25 U	< 25 U [< 25 U]
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 5 U	< 5 U	< 5 U	< 5 U [< 5 U]
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 UJ	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 UJ	< 5 U	< 5 U	< 5 U	< 5 U [< 5 U]
Chloroform	19	10	610	270	910	410	ug/L	0.43 J	< 1 U	< 1 U	< 1 U	2 [2]
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 5 U	< 5 U	< 5 U	< 5 U [< 5 U]
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	14	5	9	6	9 [8]
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 UJ	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	2.7	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	25	5	19	21	11 [10]
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	1.7	2	4	3	2 [2]
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 50 U	< 50 U	< 50 U	< 50 U [< 50 U]
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 5 U	< 5 U	< 5 U	< 5 U [< 5 U]
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	9.0	4	9	9	12 [11]
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U	< 1 U [< 1 U]
Trichloroethene	15	8.1	210	93	310	140	ug/L	4.7	9	15	20	23 [21]
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	< 3 U	4	< 1 U	1 [3]

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-23 10/15/2020 MWF16-23_GW-10152020	MWF16-23 12/8/2020 MWF16-23_GW-120820	MWF16-24 7/18/2006 MWF16-24-GW-071806	MWF16-24 11/17/2006 MWF16-24-WG-111706	MWF16-25 7/18/2006 MWF16-25-GW-071806
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 10 UJ	< 10 U	< 10 UJ
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U [< 25 U]	< 10 UJ	< 10 UJ	< 10 UJ
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U [< 5 U]	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 UJ	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U [< 5 U]	< 1.0 U	< 1.0 UJ	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	1	1 [1]	0.56 J	0.29 J	0.66 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U [< 5 U]	0.31 J	< 1.0 U	0.27 J
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	6	6 [6]	1.1	0.71 J	1.3
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 UJ	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	1 [1]	< 1.0 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	10	11 [11]	< 1.0 U	< 1.0 U	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	1	1 [1]	< 1.0 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U [< 50 U]	< 10 UJ	< 10 U	< 10 UJ
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	0.21 J
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U [< 5 U]	< 1.0 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	10	10 [10]	2.7	1.3	2.5
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U [< 1 U]	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	21	20 [21]	< 1.0 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	1	< 1 U [< 1 U]	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-25 11/17/2006 MWF16-25-WG-111706	MWF16-25 10/1/2018 MWF16-25_GW-100118	MWF16-25 10/7/2019 MWF16-25_GW-100719	MWF16-25 9/1/2020 MWF16-25_GW-090120	MWF16-25 10/15/2020 MWF16-25_GW-10152020
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U [< 10 U]	< 50 U	< 50 U	< 50 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 UJ [< 10 UJ]	< 25 U	< 25 U	< 25 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U [< 1.0 U]	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	0.99 J [1.1 J]	< 1 U	1	< 1 U	1
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 UJ [< 1.0 UJ]	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	3.0 [3.0]	4	5	6	6
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U [< 1.0 U]	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	0.30 J [0.29 J]	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2.9 [3.0]	3	4	5	4
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 UJ [< 1.0 UJ]	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	0.40 J [0.39 J]	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	5.0 [5.0]	5	8	9	9
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	0.28 J [0.21 J]	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U [< 10 U]	< 50 U	< 50 U	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U [< 1.0 U]	< 5 U	< 5 U	< 5 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	2.1 [2.5]	3	4	4	4
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U [< 1.0 U]	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U [< 2.0 U]	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	7	4	1	< 1 U

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF16-25 12/9/2020 MWF16-25_GW-120920	MWF16-26 7/19/2006 MWF16-26-GW-071906	MWF16-26 11/17/2006 MWF16-26-WG-111706	MWF16-26 9/1/2020 MWF16-26_GW-090120	MWF1R 11/4/2010 MWF1R(110410)-GW
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 10 U [< 10 U]	< 10 U	< 50 U [< 50 U]	< 25 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 10 U [< 10 U]	< 10 UJ	< 25 U [< 25 U]	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 5 U [< 5 U]	< 5.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1 U [< 1 U]	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 5 U [< 5 U]	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	6	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 1.0 U [0.24 J]	< 1.0 U	< 5 U [< 5 U]	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	4	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	0.22 J
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 UJ	< 1 U [< 1 U]	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	8	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 5.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 10 U [< 10 U]	< 10 U	< 50 U [< 50 U]	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 5 U [< 5 U]	< 5.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	4	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1.0 U [< 1.0 U]	< 1.0 U	< 1 U [< 1 U]	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	< 2.0 U [< 2.0 U]	< 2.0 U	NA	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 1 U	NA	NA	< 1 U [< 1 U]	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF1R 9/22/2011 MWF1R_092211	MWF1R 10/2/2012 MWF-1R_100212	MWF1R 12/4/2013 MWF 1R_20131204	MWF1R 9/19/2014 MWF1R-091914	MWF1R 9/22/2015 MWF-1R (09222015)	MWF1R 9/20/2016 MWF1R_092016
Volatile Organics													
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 1.0 U	< 25 U	< 25 U	< 25 U	< 25 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 1.0 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	0.23 J	< 5.0 U	< 5.0 U	< 5.0 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1 UJ	< 1.0 U	< 1.0 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	0.95 J	< 1.0 U	< 1.0 U	0.28 J	0.61 J	< 1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	0.22 J	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 1.0 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1 UJ	< 1.0 U	< 1.0 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	0.53 J	< 1.0 U	< 1.0 U	< 1.0 U	0.67 J	< 1 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 1.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	NA
Volatile Organics-SIM													
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA	4

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF1R 4/21/2017 MWF1R_GW-042117	MWF1R 7/20/2017 MWF1R_GW-072017	MWF1R 10/23/2017 MWF1R_GW-102317	MWF1R 1/15/2018 MWF1R_GW-011518	MWF2 9/10/2001 MWF2-GW(20-30)	MWF2 1/9/2002 MWF2-GW
Volatile Organics													
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 10 U	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 25 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 0.50 U	< 0.50 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 0.50 U	< 0.50 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	0.18 J	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	0.81 J	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 1.0 U	< 1.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1.0 U	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	0.99 J	< 1.0 U
Volatile Organics-SIM													
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	18	< 3 U	20	4	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-01 10/11/2001 MWF7-01-GW(20-30)-N	MWF7-01 1/9/2002 MWF7-01-GW	MWF7-01 8/11/2003 MWF701GW(20-30)	MWF7-01 12/16/2003 MWF701GW(20-30)-121603	MWF7-01 11/1/2004 MWF7-01-GW-110104
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 0.51 U	< 10 U	NA	< 10 U	< 10 UJ
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 0.17 U	< 1.0 U	NA	< 1.0 R	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 0.41 U	< 10 U	NA	< 10 U	< 10 UJ
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	0.47 J	< 1.0 U	NA	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 0.12 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 0.26 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	0.29 J	< 1.0 U	NA	< 1.0 U	0.18 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	0.28 J	< 1.0 U	NA	< 1.0 U	0.15 J
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 0.17 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	6.0	7.1	NA	9.2	8.2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 0.21 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1.2	1.1	1.8	3.7	< 3.8 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	0.23 J	0.43 J	NA	1.6	1.1
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 0.15 U	< 0.50 U	NA	< 0.50 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 0.12 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 0.12 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 0.23 U	< 10 U	NA	< 10 U	< 10 UJ
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	2.0	0.56 J	0.56 J	1.4	2.6
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	0.20 J	0.21 J	NA	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 0.17 U	< 1.0 U	NA	< 1.0 U	< 1.0 UJ
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	10	6.3	NA	8.2	14
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 0.30 U	< 1.0 U	NA	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 0.14 U	< 1.0 U	NA	< 1.0 U	0.40 J
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 0.33 U	< 1.0 U	NA	< 1.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-01 5/12/2005 MWF7-01-GW-051205	MWF7-01 11/3/2005 MWF7-01-GW-110305	MWF7-01 5/18/2006 MWF7-01-GW-051806	MWF7-01 11/10/2006 MWF7-01-WG-111006	MWF7-01 5/2/2007 MWF7-01-GW-05-02-07
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 UJ	< 10 U	< 10 UJ	1.0 J	< 10 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 UJ	< 10 U	< 10 U	< 10 U	< 10 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	0.39 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	4.7	17	13	8.3	16
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1.8	6.8	8.3	3.0	7.0
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	0.58 J	2.4	2.8	1.2	2.5
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	0.23 J	0.27 J	< 1.0 U	0.20 J
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 UJ	< 10 U	< 10 U	< 10 U	< 10 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	1.1	2.8	5.7	2.3	5.5
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UJ
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	16	23	28	23	34
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	0.33 J	0.49 J	0.55 J	0.44 J	0.43 J
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-01 11/7/2007 MWF7-01-GW-110707	MWF7-01 5/7/2008 MWF7-01-GW-050708	MWF7-01 11/4/2008 MWF7-01-GW-110408	MWF7-01 12/15/2009 MWF7-01-GW-121509	MWF7-01 11/4/2010 MWF7-01(110410)-GW
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 10 U	< 17 U	< 10 U	1.6 J
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 10 U	< 17 U	< 10 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 5.0 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	0.34 J	0.27 J	0.21 J
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	0.31 J	< 1.0 U	< 1.7 U	0.70 J	< 1.0 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	1.9	4.8	12	6.5	4.8
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	0.93 J	1.7	5.6	2.7	1.9
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	0.36 J	0.67 J	2.6	1.3	0.90 J
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 5.0 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 10 U	< 17 U	< 10 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.95 J	1.6	5.5 J	3.3	1.6
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 5.0 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	7.5	14	36	23	14
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.7 U	< 1.0 U	< 1.0 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	0.34 J	0.32 J	0.51 J	0.32 J	< 1.0 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 UJ	< 3.3 U	< 2.0 U	< 2.0 U
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-01 10/3/2012 MWF7-01_100312	MWF7-01 12/4/2013 MWF7-01_20131204	MWF7-01 9/19/2014 MWF7-01-091914	MWF7-01 9/22/2015 MWF 7-01 (09222015)	MWF7-01 5/19/2016 MWF7-01-GW-051916	MWF7-01 9/22/2016 MWF7-01_092216
Volatile Organics													
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 25 U	< 25 U	< 25 U [< 25 U]	< 36 U	NA	< 50
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U [< 25 U]	< 36 U	NA	< 25
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5.0 U	0.25 J	< 5.0 U [< 5.0 U]	< 7.2 U	NA	< 5
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 1.0 U	< 1 UJ	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 5
Chloroform	19	10	610	270	910	410	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	0.68 J	NA	< 1
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 5
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	3.2	1.9	4.9 J [7.2 J]	12	NA	2
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	0.73 J	0.41 J	1.3 [1.7]	3.8	NA	< 1
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	0.40 J	< 1.0 U	0.45 J [0.81 J]	1.9	NA	< 1
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 5.0 U	< 5.0 U	< 5.0 U [< 5.0 U]	< 7.2 U	NA	< 5
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U [< 50 U]	< 72 U	NA	< 50
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	0.57 J	0.74 J	0.91 J [0.99 J]	2.4	NA	< 1
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 5
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	7.5	7.3	14 [14]	35	NA	9
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1.0 U	< 1.0 U [< 1.0 U]	< 1.4 U	NA	< 1
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	< 1.0 U	0.16 J [0.20 J]	0.66 J	NA	< 1
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 2.0 U	< 2.0 U	< 2.0 U [< 2.0 U]	< 2.9 U	NA	NA
Volatile Organics-SIM													
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	NA	NA	NA	22 [29]	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-01 4/21/2017 MWF7-01_GW-042117	MWF7-01 10/24/2017 MWF7-01_GW-102417	MWF7-02 10/11/2001 MWF7-02-GW(19-29)-N	MWF7-02 1/9/2002 MWF7-02-GW	MWF7-02 8/11/2003 MWF702GW(18-28)
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 0.51 UJ	< 10 U	NA
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	2.0	2.2	NA
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 0.41 UJ	< 10 U	NA
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 0.20 UJ	< 1.0 U	NA
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 0.12 U	< 1.0 U	NA
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	4.7 J	3.3	NA
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	9.5	8.5	NA
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 0.13 U	< 1.0 U	NA
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 0.17 U	< 1.0 U	NA
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	2	3	23	11	NA
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 0.21 U	< 1.0 U	NA
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	1	20	9.1	13
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U	0.56	0.33 J	NA
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 0.15 U	< 0.50 U	NA
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 0.12 U	< 1.0 U	NA
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 0.12 U	< 1.0 U	NA
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 0.23 UJ	< 10 U	NA
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	1	4.7	6.3	6.2
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	0.26 J	< 1.0 U	NA
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 0.17 U	< 1.0 U	NA
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	8	18	10	7.4	NA
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 0.30 U	< 1.0 U	NA
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U	0.42 J	0.39 J	NA
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	< 0.33 U	< 1.0 U	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	14	27	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-02 12/16/2003 MWF702GW(18-28)-121603	MWF7-02 9/22/2016 MWF7-02_092226	MWF7-02 4/21/2017 MWF7-02_GW-042117	MWF7-02 10/24/2017 MWF7-02_GW-102417	MWF7-02 10/4/2018 MWF7-02_GW-100418
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 10 U	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> <td>< 50 U [<lt; 50="" td="" u]<=""> </lt;></td></lt;>	< 50 U [<lt; 50="" td="" u]<=""> </lt;>
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1.0 R	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 10 U	< 25 U	< 25 U	< 25 U [<lt; 25="" td="" u]<=""> <td>< 25 U [<lt; 25="" td="" u]<=""> </lt;></td></lt;>	< 25 U [<lt; 25="" td="" u]<=""> </lt;>
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 1.0 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U [<lt; 5="" td="" u]<=""> </lt;></td></lt;>	< 5 U [<lt; 5="" td="" u]<=""> </lt;>
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	0.43 J	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U [<lt; 5="" td="" u]<=""> </lt;></td></lt;>	< 5 U [<lt; 5="" td="" u]<=""> </lt;>
Chloroform	19	10	610	270	910	410	ug/L	0.27 J	2	< 1 U	1 [1]	1 [<lt; 1="" td="" u]<=""> </lt;>
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 1.0 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U [<lt; 5="" td="" u]<=""> </lt;></td></lt;>	< 5 U [<lt; 5="" td="" u]<=""> </lt;>
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	9.5	50	34	51 [52]	48 [48]
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1.0 U	1	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	3.0	20	9	14 [14]	11 [11]
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	1.7	5	2	3 [3]	3 [3]
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	0.25 J	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1.0 U	< 5 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 10 U	< 50 U	< 50 U	< 50 U [<lt; 50="" td="" u]<=""> <td>< 50 U [<lt; 50="" td="" u]<=""> </lt;></td></lt;>	< 50 U [<lt; 50="" td="" u]<=""> </lt;>
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	1.8	34 J	27	26 [26]	34 [33]
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 1.0 U	< 5 U	< 5 U	< 5 U [<lt; 5="" td="" u]<=""> <td>< 5 U [<lt; 5="" td="" u]<=""> </lt;></td></lt;>	< 5 U [<lt; 5="" td="" u]<=""> </lt;>
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	1.2	106	52	76 [78]	73 [73]
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1.0 U	< 1 U	< 1 U	< 1 U [<lt; 1="" td="" u]<=""> <td>< 1 U [<lt; 1="" td="" u]<=""> </lt;></td></lt;>	< 1 U [<lt; 1="" td="" u]<=""> </lt;>
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1.0 U	4	3	4 [4]	3 [3]
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	< 1.0 U	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	NA	540 Y	188	470 Y [480 Y]	500 Y [500 Y]

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-02 10/7/2019 MWF7-02_GW-100719	MWF7-02 10/13/2020 MWF7-02_GW-10132020	MWF7-03 8/11/2003 MWF703GW(22-32)	MWF7-03 12/16/2003 MWF703GW(22-32)-121603	MWF7-03 9/22/2016 MWF7-03_092226
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	NA	< 10 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	NA	< 1.0 R	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	NA	< 10 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	NA	< 1.0 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	NA	< 1.0 U	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	NA	< 1.0 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	1	NA	< 1.0 U	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	NA	< 1.0 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	NA	< 1.0 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	38	24	NA	< 1.0 U	< 1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	NA	< 1.0 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	10	15	< 1.0 U	< 1.0 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	3	3	NA	< 0.50 U	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	NA	< 0.50 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	NA	< 1.0 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	NA	< 1.0 U	< 5 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	NA	< 10 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	54	70	< 1.0 U	< 1.0 U	< 1 UJ
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	NA	< 1.0 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	NA	< 1.0 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	60	77	NA	< 1.0 U	< 1 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	1	NA	< 1.0 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	3	3	NA	< 1.0 U	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	< 1.0 U	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	300 Y	530 Y	NA	NA	< 3 U

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF7-03 4/27/2017 MWF7-03_GW-042717	MWF7-03 10/25/2017 MWF7-03_GW-102517	MWF8-01 10/12/2001 MWF8-01-GW(18-28)-N	MWF8-01 1/9/2002 MWF8-01-GW	MWF8-01 9/21/2016 MWF8-01_092116
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 0.51 UJ	< 10 U	< 50
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 0.17 U	< 1.0 U	< 1
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 0.41 UJ	< 10 U	< 25
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 0.20 U	< 1.0 U	< 5
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 0.12 U	< 1.0 U	< 1
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 0.26 U	< 1.0 U	< 5
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	< 1 U	0.96 J	2.8	< 1
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 0.13 U	< 1.0 U	< 5
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 0.17 U	< 1.0 U	< 1
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1 U	< 1 U	< 0.16 U	< 1.0 U	< 1
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 0.21 U	< 1.0 U	< 1
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 0.24 U	< 1.0 U	< 1
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U	< 0.22 U	< 0.50 U	< 1
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 0.15 U	< 0.50 U	< 1
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 0.12 U	< 1.0 U	< 1
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 0.12 U	< 1.0 U	< 5
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 0.23 UJ	< 10 U	< 50
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U	< 0.23 U	< 1.0 U	< 1
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 0.18 U	< 1.0 U	< 1
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 0.17 U	< 1.0 U	< 5
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1 U	< 1 U	< 0.15 U	< 1.0 U	< 1
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 0.30 U	< 1.0 U	< 1
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U	< 0.14 U	< 1.0 U	< 1
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	< 0.33 U	< 1.0 U	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U	< 3 U	NA	NA	NA

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	MWF8-01 12/22/2016 MWF8-01-GW-122116	MWF8-01 10/26/2017 MWF8-01_GW-102617	MWF8-01 10/4/2018 MWF8-01_GW-100418	MWF8-01 10/7/2019 MWF8-01_GW-100719	MWF8-01 10/15/2020 MWF8-01_GW-10152020
Volatile Organics												
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U	1	2	< 1 U	2
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA	NA	NA	NA	NA
Volatile Organics-SIM												
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U	NA	NA	NA	NA

Table 1
 Historic Groundwater Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Res Fiero SSVIAC SOG	Res Fiero SSVIAC BASE	NR Fiero SSVIAC <50k SOG	NR Fiero SSVIAC <50k BASE	NR Fiero SSVIAC >50k SOG	NR Fiero SSVIAC >50k BASE	Units	Unknown-1 4/28/2017 UNKNOWN-1_GW-042817
Volatile Organics								
Acetone	32,000,000	18,000,000	240,000,000	110,000,000	360,000,000	160,000,000	ug/L	< 50 U
Bromodichloromethane	60	31	1,700	760	2,600	1,100	ug/L	< 1 U
2-Butanone	4,000,000	2,200,000	59,000,000	27,000,000	88,000,000	40,000,000	ug/L	< 25 U
Carbon Disulfide	2,200	1,200	46,000	22,000	70,000	33,000	ug/L	< 5 U
Carbon Tetrachloride	14	7.2	440	190	650	290	ug/L	< 1 U
Chloroethane	15,000	8,600	320,000	150,000	490,000	230,000	ug/L	< 5 U
Chloroform	19	10	610	270	910	410	ug/L	< 1 U
Chloromethane	340	200	7,400	3,500	11,000	5,300	ug/L	< 5 U
1,4-Dichlorobenzene	310	160	9,800	4,300	15,000	6,400	ug/L	< 1 U
1,1-Dichloroethane	160	88	5,300	2,400	8,000	3,600	ug/L	6
1,2-Dichloroethane	50	27	1,600	750	2,500	1,100	ug/L	< 1 U
1,1-Dichloroethene	410	220	8,300	3,800	13,000	5,700	ug/L	1
cis-1,2-Dichloroethene	110	62	2,300	1,100	3,500	1,600	ug/L	< 1 U
trans-1,2-Dichloroethene	480	260	9,800	4,500	15,000	6,700	ug/L	< 1 U
Ethylbenzene	110	60	3,600	1,600	5,400	2,400	ug/L	< 1 U
Isopropylbenzene	26	13	810	360	1,200	540	ug/L	< 1 U
4-Methyl-2-pentanone	1,600,000	810,000	19,000,000	9,500,000	19,000,000	14,000,000	ug/L	< 50 U
Tetrachloroethene	250	130	3,400	1,500	5,000	2,200	ug/L	43
Toluene	56,000	30,000	530,000	250,000	530,000	380,000	ug/L	< 1 U
1,2,4-Trichlorobenzene	270	130	5,100	2,200	7,700	3,300	ug/L	< 5 U
1,1,1-Trichloroethane	22,000	11,000	210,000	92,000	310,000	140,000	ug/L	56
1,1,2-Trichloroethane	21	11	410	180	620	280	ug/L	< 1 U
Trichloroethene	15	8.1	210	93	310	140	ug/L	3
Total Xylenes	3,000	1,600	60,000	27,000	91,000	41,000	ug/L	NA
Volatile Organics-SIM								
1,4-Dioxane	43,000	22,000	1,500,000	670,000	2,300,000	1,000,000	ug/L	< 3 U

Table 1
Historic Groundwater Analytical Data
RACER Trust Pontiac North Campus

Notes:

- 1) Criteria listed are from the EGLE Former Fiero Assembly Site-Specific Criteria Evaluation dated April 21, 2020.
- 2) Values in bold italics denotes exceedance and/or equal to Residential Site-Specific Volatilization to Indoor Air Criteria.
- 3) Values highlighted in gray denote exceedance and/or equal to Non-Residential Site-Specific Volatilization to Indoor Air Criteria
- 4) Duplicate analyses are presented in brackets.

Abbreviations:

µg/L	Micrograms per liter.
BAS	Basement scenario.
NR	Non-Residential
Res	Residential
SOG	Slab-On-Grade scenario
SSVIAC	Site-Specific Volatilization to Indoor Air Criteria
J	Estimated Concentration
r	This analyte is being reported as the best results from multiple runs
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.
<50k	Less than 50,000 square feet
>50k	Greater than 50,000 square feet

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF13-01 BF13-01-S(0-2)-N 7/27/2001	BF13-01 BF13-01-S(8-10)-N 7/27/2001	BF13-02 BF13-02-S(0-2)-N 7/27/2001	BF13-02 BF13-02-S(18-20)-N 7/27/2001	BF13-02 BF13-02-S(8-10)-N 7/27/2001	BF13-03 BF13-03-S(0-2)-N 7/27/2001
Volatile Organics							
Acetone	ug/kg	< 2.4 UJ	< 2.2 UJ	< 2.3 UJ [< 2.3 UJ]	< 2.3 UJ	< 2.5 UJ	< 2.0 UJ
Benzene	ug/kg	< 0.74 U	< 0.70 U	< 0.71 U [< 0.72 U]	< 0.73 U	< 0.76 U	< 0.62 U
Bromodichloromethane	ug/kg	< 1.4 U	< 1.3 U	< 1.3 U [< 1.3 U]	< 1.3 U	< 1.4 U	< 1.1 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 3.1 U	< 2.9 U	< 2.9 UJ [< 3.0 UJ]	< 3.0 U	< 3.2 UJ	< 2.6 U
Carbon disulfide	ug/kg	1.6 J	< 0.84 U	< 0.85 U [< 0.87 U]	< 0.87 U	< 0.91 U	< 0.75 U
Carbon tetrachloride	ug/kg	< 1.1 U	< 1.1 U	< 1.1 U [< 1.1 U]	< 1.1 U	< 1.2 U	< 0.96 U
Chloroethane	ug/kg	< 2.5 U	< 2.4 U	< 2.4 U [< 2.4 U]	< 2.5 U	< 2.6 U	< 2.1 U
Chloroform (Trichloromethane)	ug/kg	< 0.93 U	< 0.88 U	< 0.89 U [< 0.91 U]	< 0.92 U	< 0.96 U	< 0.78 U
Cyclohexane	ug/kg	< 1.1 U	< 1.1 U	< 1.1 U [< 1.1 U]	< 1.1 U	< 1.2 U	< 0.96 U
1,1-Dichloroethane	ug/kg	< 0.66 U	< 0.62 U	< 0.63 U [< 0.65 U]	< 0.65 U	< 0.68 U	< 0.55 U
1,2-Dichloroethane	ug/kg	< 0.83 U	< 0.78 U	< 0.79 U [< 0.81 U]	< 0.82 U	< 0.85 U	< 0.70 U
1,1-Dichloroethene	ug/kg	< 1.4 U	< 1.3 U	< 1.3 U [< 1.3 U]	< 1.3 U	< 1.4 U	< 1.1 U
cis-1,2-Dichloroethene	ug/kg	< 0.95 U	< 0.90 U	< 0.91 U [< 0.93 U]	< 0.94 U	< 0.98 U	< 0.80 U
trans-1,2-Dichloroethene	ug/kg	< 0.83 U	< 0.78 U	< 0.79 U [< 0.81 U]	< 0.82 U	< 0.85 U	< 0.70 U
Methylene chloride	ug/kg	< 1.5 UJ	< 1.4 UJ	< 1.4 U [< 1.4 U]	< 1.5 UJ	< 1.5 U	< 1.2 U
Ethylbenzene	ug/kg	< 0.67 U	< 0.63 U	< 0.64 U [< 0.66 U]	< 0.66 U	< 0.69 U	< 0.56 U
Isopropyl benzene	ug/kg	< 0.79 U	< 0.75 U	< 0.76 U [< 0.78 U]	< 0.78 U	< 0.82 U	< 0.67 U
Methyl acetate	ug/kg	< 1.2 U	1.5 J	< 1.2 U [< 1.2 U]	< 1.2 U	< 1.3 U	< 1.1 U
Methyl cyclohexane	ug/kg	< 0.67 U	< 0.63 U	< 0.64 U [< 0.66 U]	< 0.66 U	< 0.69 U	< 0.56 U
Tetrachloroethene	ug/kg	60	8.3	4.6 J [55.5 J]	< 1.3 U	55.5	61
Toluene	ug/kg	< 0.60 U	3.3 J	0.64 J [< 0.59 U]	1.7 J	< 0.62 U	1.3 J
1,1,1-Trichloroethane	ug/kg	4.9 J	< 0.99 U	< 1.0 U [< 1.0 U]	4.7 J	2.8 J	0.90 J
Trichloroethene	ug/kg	< 0.86 U	< 0.81 U	< 0.83 U [< 0.85 U]	< 0.85 U	< 0.89 U	< 0.73 U
Vinyl chloride	ug/kg	< 1.6 U	< 1.5 U	< 1.5 U [< 1.6 U]	< 1.6 U	< 1.6 U	< 1.3 U
Total Xylenes	ug/kg	< 2.2 U	< 2.0 U	< 2.1 U [< 2.1 U]	< 2.1 U	< 2.2 U	< 1.8 U

Table 2
Historic Soil Analytical Data
RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF13-03 BF13-03-S(18-20)-N 7/27/2001	BF13-03 BF13-03-S(8-10)-N 7/27/2001	BF14-01 BF14-01-S(0-2)-N 7/27/2001	BF14-01 BF14-01-S(18-20)-N 7/27/2001	BF14-01 BF14-01-S(8-10)-N 7/27/2001	BF14-02 BF14-02-S(0-2)-N 7/27/2001
Volatile Organics							
Acetone	ug/kg	< 2.3 UJ	< 1.9 UJ	NA	NA	NA	NA
Benzene	ug/kg	< 0.73 U	< 0.57 U	< 0.59 U	< 0.73 U	< 0.63 U	< 0.60 U
Bromodichloromethane	ug/kg	< 1.3 U	< 1.1 U	NA	NA	NA	NA
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 3.0 U	< 2.4 U	NA	NA	NA	NA
Carbon disulfide	ug/kg	< 0.87 U	< 0.69 U	NA	NA	NA	NA
Carbon tetrachloride	ug/kg	< 1.1 U	< 0.88 U	NA	NA	NA	NA
Chloroethane	ug/kg	< 2.5 U	< 1.9 U	NA	NA	NA	NA
Chloroform (Trichloromethane)	ug/kg	< 0.92 U	< 0.72 U	NA	NA	NA	NA
Cyclohexane	ug/kg	< 1.1 U	< 0.88 U	NA	NA	NA	NA
1,1-Dichloroethane	ug/kg	< 0.65 U	< 0.51 U	NA	NA	NA	NA
1,2-Dichloroethane	ug/kg	< 0.81 U	< 0.64 U	NA	NA	NA	NA
1,1-Dichloroethene	ug/kg	< 1.3 U	< 1.1 U	NA	NA	NA	NA
cis-1,2-Dichloroethene	ug/kg	< 0.94 U	< 0.74 U	NA	NA	NA	NA
trans-1,2-Dichloroethene	ug/kg	< 0.81 U	< 0.64 U	NA	NA	NA	NA
Methylene chloride	ug/kg	< 1.5 UJ	< 1.1 UJ	NA	NA	NA	NA
Ethylbenzene	ug/kg	< 0.66 U	< 0.52 U	< 0.53 U	< 0.66 U	< 0.57 U	< 0.54 U
Isopropyl benzene	ug/kg	< 0.78 U	< 0.62 U	NA	NA	NA	NA
Methyl acetate	ug/kg	< 1.2 U	< 0.97 U	NA	NA	NA	NA
Methyl cyclohexane	ug/kg	< 0.66 U	< 0.52 U	NA	NA	NA	NA
Tetrachloroethene	ug/kg	9.3	120	NA	NA	NA	NA
Toluene	ug/kg	2.4 J	1.1 J	< 0.48 U	< 0.59 U	< 0.52 U	< 0.49 U
1,1,1-Trichloroethane	ug/kg	15	3.5 J	NA	NA	NA	NA
Trichloroethene	ug/kg	< 0.85 U	< 0.67 U	NA	NA	NA	NA
Vinyl chloride	ug/kg	< 1.6 U	< 1.2 U	NA	NA	NA	NA
Total Xylenes	ug/kg	< 2.1 U	< 1.7 U	< 1.7 U	< 2.1 U	< 1.8 U	< 1.7 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF14-02 BF14-02-S(18-20)-N 7/27/2001	BF14-02 BF14-02-S(8-10)-N 7/27/2001	BF15-01 BF15-01-S(0-2)-N 9/27/2001	BF15-01 BF15-01-S(18-20)-N 9/27/2001	BF15-01 BF15-01-S(8-10)-N 9/27/2001	BF15-02 BF15-02-S(0-2) 1/7/2002
Volatile Organics							
Acetone	ug/kg	NA	NA	< 150 U [140 J]	6.5 J	< 65 U	< 9900 U
Benzene	ug/kg	< 0.66 U	< 0.64 U	< 34 U [< 17 U]	< 0.54 U	< 15 U	< 2500 U
Bromodichloromethane	ug/kg	NA	NA	< 20 U [< 10 U]	< 1.0 U	< 8.7 U	< 2500 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	NA	NA	< 160 U [< 82 U]	< 2.3 U	< 70 U	< 9900 U
Carbon disulfide	ug/kg	NA	NA	< 70 U [< 35 U]	< 0.65 U	< 30 U	< 2500 U
Carbon tetrachloride	ug/kg	NA	NA	< 20 U [< 10 U]	< 0.83 U	< 8.7 U	< 2500 U
Chloroethane	ug/kg	NA	NA	< 74 U [< 37 U]	< 1.8 U	120 J	< 4900 U
Chloroform (Trichloromethane)	ug/kg	NA	NA	< 20 U [< 10 U]	< 0.68 U	< 8.7 U	< 2500 U
Cyclohexane	ug/kg	NA	NA	< 17 U [< 8.6 U]	< 0.83 U	< 7.4 U	< 4900 U
1,1-Dichloroethane	ug/kg	NA	NA	530 [240 J]	< 0.48 U	1000	6500
1,2-Dichloroethane	ug/kg	NA	NA	< 22 U [< 11 U]	< 0.61 U	< 9.5 U	< 2500 U
1,1-Dichloroethene	ug/kg	NA	NA	150 J [66 J]	< 1.0 U	< 15 U	2200 J
cis-1,2-Dichloroethene	ug/kg	NA	NA	< 32 U [< 16 U]	< 0.70 U	< 14 U	< 2500 U
trans-1,2-Dichloroethene	ug/kg	NA	NA	< 36 U [< 18 U]	< 0.61 U	< 16 U	< 2500 U
Methylene chloride	ug/kg	NA	NA	< 82 U [< 42 U]	< 1.1 U	93 J	NA
Ethylbenzene	ug/kg	< 0.60 U	< 0.58 U	< 28 U [< 14 U]	< 0.49 U	< 12 U	200 J
Isopropyl benzene	ug/kg	NA	NA	< 16 U [< 8.0 U]	< 0.58 U	< 6.8 U	< 2500 U
Methyl acetate	ug/kg	NA	NA	< 90 U [< 46 U]	< 0.92 U	< 39 U	< 4900 U
Methyl cyclohexane	ug/kg	NA	NA	< 32 U [< 16 U]	< 0.49 U	< 14 U	< 4900 U
Tetrachloroethene	ug/kg	NA	NA	13000 [5700 J]	< 1.0 U	85 J	81000
Toluene	ug/kg	1.1 J	1.3 J	< 20 U [< 10 U]	0.70 J	< 8.7 U	< 2500 R
1,1,1-Trichloroethane	ug/kg	NA	NA	2500 [960 J]	< 0.77 U	< 8.6 U	91000
Trichloroethene	ug/kg	NA	NA	85 J [43 J]	< 0.63 U	90 J	< 2500 U
Vinyl chloride	ug/kg	NA	NA	< 22 U [< 11 U]	< 1.2 U	< 9.5 U	< 4900 U
Total Xylenes	ug/kg	< 1.9 U	< 1.9 U	< 38 U [< 19 U]	< 1.6 U	< 16 U	1100 J

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF15-02 BF15-02-S(20-24) 1/30/2002	BF15-02 BF15-02-S(8-10) 1/30/2002	BF15-03 BF1503MS(8-10) 7/23/2003	BF15-03 BF1503S(0-2) 7/23/2003	BF15-03 BF1503S(27-29) 7/23/2003	BF15-04 BF1504S(0-2) 7/23/2003
Volatile Organics							
Acetone	ug/kg	26 J	< 950 U	< 22 U	< 1200 U	7.5 J	< 2800 U
Benzene	ug/kg	< 4.3 U	17 J	0.86 J	< 310 U	< 4.9 U	< 690 U
Bromodichloromethane	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	11 J	< 950 U	2.2 J	< 1200 U	< 19 U	< 2800 U
Carbon disulfide	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
Carbon tetrachloride	ug/kg	< 4.3 U	< 240 U	< 5.4 UJ	< 310 UJ	< 4.9 U	< 690 UJ
Chloroethane	ug/kg	6.3 J	630	8.4 J	< 610 U	< 9.7 U	< 1400 U
Chloroform (Trichloromethane)	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
Cyclohexane	ug/kg	< 8.6 U	< 470 U	< 11 U	< 610 U	< 9.7 U	63 J
1,1-Dichloroethane	ug/kg	13	1500	120 J	200 J	< 4.9 U	1100
1,2-Dichloroethane	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
1,1-Dichloroethene	ug/kg	< 4.3 U	71 J	16	< 310 U	< 4.9 U	< 690 U
cis-1,2-Dichloroethene	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
trans-1,2-Dichloroethene	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
Methylene chloride	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
Ethylbenzene	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
Isopropyl benzene	ug/kg	< 4.3 U	< 240 U	< 5.4 U	< 310 U	< 4.9 U	< 690 U
Methyl acetate	ug/kg	< 8.6 U	< 470 U	< 11 U	< 610 U	< 9.7 U	< 1400 U
Methyl cyclohexane	ug/kg	< 8.6 U	< 470 U	< 11 U	< 610 U	< 9.7 U	150 J
Tetrachloroethene	ug/kg	< 4.3 U	< 240 U	22 J	1300	< 4.9 U	21000
Toluene	ug/kg	0.73 J	12 J	< 5.4 U	< 310 U	< 4.9 U	< 690 U
1,1,1-Trichloroethane	ug/kg	< 4.3 U	< 240 U	< 5.4 U	700	< 4.9 U	2100
Trichloroethene	ug/kg	< 4.3 U	< 240 U	2.3 J	< 310 U	< 4.9 U	210 J
Vinyl chloride	ug/kg	< 8.6 U	110 J	7.7 J	< 610 U	< 9.7 U	< 1400 U
Total Xylenes	ug/kg	< 8.6 U	32 J	< 11 U	< 610 U	< 9.7 U	150 J

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF15-04 BF1504S(26-28) 7/29/2003	BF15-04 BF1504S(6-8) 7/23/2003	BF15-05 BF1505S(0-2) 7/29/2003	BF15-05 BF1505S(10-12) 7/29/2003	BF15-05 BF1505S(12-13) 7/29/2003	BF15-05 BF1505S(30-32) 7/29/2003
Volatile Organics							
Acetone	ug/kg	< 23 U	< 1200 U	< 1000 U	< 960 U	< 900 U	4.3 J
Benzene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
Bromodichloromethane	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 23 U	< 1200 U	< 1000 U	380 J	< 900 U	< 23 U
Carbon disulfide	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
Carbon tetrachloride	ug/kg	< 5.8 U	< 300 UJ	< 250 U	< 240 U	< 230 U	< 5.7 U
Chloroethane	ug/kg	< 12 U	< 610 U	< 500 U	1500	1300	< 11 U
Chloroform (Trichloromethane)	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
Cyclohexane	ug/kg	< 12 U	< 610 U	< 500 U	< 480 U	< 450 U	< 11 U
1,1-Dichloroethane	ug/kg	< 5.8 U	510	200 J	1700	1000	< 5.7 U
1,2-Dichloroethane	ug/kg	< 5.8 R	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 R
1,1-Dichloroethene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
cis-1,2-Dichloroethene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
trans-1,2-Dichloroethene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
Methylene chloride	ug/kg	< 5.8 U	< 300 U	140 J	150 J	130 J	< 5.7 U
Ethylbenzene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
Isopropyl benzene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
Methyl acetate	ug/kg	< 12 U	270 J	< 500 U	210 J	< 450 U	< 11 U
Methyl cyclohexane	ug/kg	< 12 U	< 610 U	< 500 U	< 480 U	< 450 U	< 11 U
Tetrachloroethene	ug/kg	< 5.8 U	130 J	3500	< 240 U	< 230 U	< 5.7 U
Toluene	ug/kg	< 5.8 U	< 300 U	< 250 U	< 240 U	< 230 U	< 5.7 U
1,1,1-Trichloroethane	ug/kg	< 5.8 U	< 300 U	1400	43 J	< 230 U	< 5.7 U
Trichloroethene	ug/kg	< 5.8 U	46 J	48 J	< 240 U	< 230 U	< 5.7 U
Vinyl chloride	ug/kg	< 12 U	< 610 U	< 500 U	110 J	97 J	< 11 U
Total Xylenes	ug/kg	< 12 U	< 610 U	< 500 U	< 480 U	< 450 U	< 11 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF16-03 BF16-03-S(0-2)-121905 12/19/2005	BF16-03 BF16-03-S(12-14)-121905 12/19/2005	BF16-03 BF16-03-S(8-10)-121905 12/19/2005	BF16-04 BF16-04-S(0-2)-122005 12/20/2005	BF16-04 BF16-04-S(21-23)-122005 12/20/2005
Volatile Organics						
Acetone	ug/kg	220 J	250 J	220 J	150 J	170 J
Benzene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
Bromodichloromethane	ug/kg	< 99 U	< 95 U	< 91 U	< 95 U	< 94 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 750 U	< 710 U	< 680 U	< 710 U	< 710 U
Carbon disulfide	ug/kg	< 250 U	< 240 U	< 230 U	< 240 U	< 240 U
Carbon tetrachloride	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	20 J
Chloroethane	ug/kg	< 250 U	< 240 U	< 230 U	< 240 U	< 240 U
Chloroform (Trichloromethane)	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	46 J
Cyclohexane	ug/kg	< 1200 U	< 1100 U	< 1100 U	< 1100 U	< 1100 U
1,1-Dichloroethane	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	20 J
1,2-Dichloroethane	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
1,1-Dichloroethene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
cis-1,2-Dichloroethene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
trans-1,2-Dichloroethene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
Methylene chloride	ug/kg	< 250 UJ	< 240 UJ	< 230 UJ	< 240 UJ	< 240 UJ
Ethylbenzene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
Isopropyl benzene	ug/kg	< 250 U	< 240 U	< 230 U	< 240 U	< 240 U
Methyl acetate	ug/kg	78 J	70 J	73 J	66 J	< 1100 U
Methyl cyclohexane	ug/kg	7.2 J	< 1100 U	< 1100 U	< 1100 U	< 1100 U
Tetrachloroethene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
Toluene	ug/kg	< 99 U	< 95 U	< 91 U	< 95 U	< 94 U
1,1,1-Trichloroethane	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	26 J
Trichloroethene	ug/kg	< 50 U	< 47 U	< 45 U	< 47 U	< 47 U
Vinyl chloride	ug/kg	< 99 U	< 95 U	< 91 U	< 95 U	< 94 U
Total Xylenes	ug/kg	< 150 U	< 140 U	< 140 U	< 140 U	< 140 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF16-04 BF16-04-S(8-10)-122005 12/20/2005	BF16-05 BF16-05-S(1-3)-122005 12/20/2005	BF16-05 BF16-05-S(6-8)-122005 12/20/2005	BF16-06 BF16-06-S(0-2)-122205 12/22/2005	BF16-06 BF16-06-S(4-6)-122205 12/22/2005
Volatile Organics						
Acetone	ug/kg	180 J	< 2500 U	150 J	< 670 U	< 2300 U [<lt; 2600="" td="" u]<=""> </lt;>
Benzene	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Bromodichloromethane	ug/kg	< 90 U	< 340 U	< 91 U	< 89 U	< 310 U [<lt; 340="" td="" u]<=""> </lt;>
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 680 U	< 2500 U	< 680 U	< 670 U	< 2300 U [<lt; 2600="" td="" u]<=""> </lt;>
Carbon disulfide	ug/kg	< 230 U	< 840 U	< 230 U	< 220 U	< 770 U [<lt; 860="" td="" u]<=""> </lt;>
Carbon tetrachloride	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Chloroethane	ug/kg	< 230 U	< 840 U	< 230 U	< 220 U	< 770 U [<lt; 860="" td="" u]<=""> </lt;>
Chloroform (Trichloromethane)	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Cyclohexane	ug/kg	< 1100 U	51 J	< 1100 U	< 1100 U	< 3700 U [<lt; 4100="" td="" u]<=""> </lt;>
1,1-Dichloroethane	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
1,2-Dichloroethane	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
1,1-Dichloroethene	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
cis-1,2-Dichloroethene	ug/kg	< 45 U	< 170 U	110	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
trans-1,2-Dichloroethene	ug/kg	< 45 U	< 170 U	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Methylene chloride	ug/kg	< 230 UJ	< 840 UJ	< 230 UJ	< 220 UJ	< 770 UJ [<lt; 860="" td="" uj]<=""> </lt;>
Ethylbenzene	ug/kg	< 45 U	< 170 U	270	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Isopropyl benzene	ug/kg	< 230 U	< 840 U	280	< 220 U	< 770 U [<lt; 860="" td="" u]<=""> </lt;>
Methyl acetate	ug/kg	64 J	< 4000 U	71 J	< 1100 U	< 3700 U [<lt; 4100="" td="" u]<=""> </lt;>
Methyl cyclohexane	ug/kg	< 1100 U	180 J	120 J	< 1100 U	< 3700 U [<lt; 4100="" td="" u]<=""> </lt;>
Tetrachloroethene	ug/kg	< 45 U	15000	< 46 U	150	13000 [14000]
Toluene	ug/kg	< 90 U	62 J	20 J	< 89 U	< 310 U [<lt; 340="" td="" u]<=""> </lt;>
1,1,1-Trichloroethane	ug/kg	< 45 U	51 J	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Trichloroethene	ug/kg	< 45 U	290	< 46 U	< 44 U	< 150 U [<lt; 170="" td="" u]<=""> </lt;>
Vinyl chloride	ug/kg	< 90 U	< 340 U	< 91 U	< 89 U	< 310 U [<lt; 340="" td="" u]<=""> </lt;>
Total Xylenes	ug/kg	< 140 U	110 J	1100	< 130 U	< 460 U [<lt; 520="" td="" u]<=""> </lt;>

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF16-07 BF16-07-S(0-2)-122205FD 12/22/2005	BF16-07 BF16-07-S(14-16)-122205FD 12/22/2005	BF16-07 BF16-07-S(8-10)-122205FD 12/22/2005	BF16-08 BF16-08-S(21-23)-010406 1/4/2006
Volatile Organics					
Acetone	ug/kg	< 680 U	< 620 U	< 640 U	< 670 U
Benzene	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Bromodichloromethane	ug/kg	< 91 U	< 83 U	< 86 U	< 90 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 680 U	< 620 U	< 640 U	< 670 U
Carbon disulfide	ug/kg	< 230 U	< 210 U	< 210 U	< 220 U
Carbon tetrachloride	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Chloroethane	ug/kg	< 230 U	< 210 U	< 210 U	< 220 U
Chloroform (Trichloromethane)	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Cyclohexane	ug/kg	< 1100 U	< 990 U	< 1000 U	< 1100 U
1,1-Dichloroethane	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
1,2-Dichloroethane	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
1,1-Dichloroethene	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
cis-1,2-Dichloroethene	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
trans-1,2-Dichloroethene	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Methylene chloride	ug/kg	< 230 UJ	< 210 UJ	< 210 UJ	< 220 U
Ethylbenzene	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Isopropyl benzene	ug/kg	< 230 U	< 210 U	< 210 U	< 220 U
Methyl acetate	ug/kg	< 1100 U	< 990 U	< 1000 U	< 1100 U
Methyl cyclohexane	ug/kg	< 1100 U	< 990 U	< 1000 U	< 1100 U
Tetrachloroethene	ug/kg	12 J	40 J	50	420
Toluene	ug/kg	< 91 U	< 83 U	< 86 U	< 90 U
1,1,1-Trichloroethane	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Trichloroethene	ug/kg	< 46 U	< 41 U	< 43 U	< 45 U
Vinyl chloride	ug/kg	< 91 U	< 83 U	< 86 U	< 90 U
Total Xylenes	ug/kg	< 140 U	< 120 U	< 130 U	< 130 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	BF16-08 BF16-08-S(8-10)-010406 1/4/2006	BF16-09 BF16-09-S(18-20)-010406 1/4/2006	BF16-09 BF16-09-S(8-10)-010406 1/4/2006	MWF1 MWF1-S(0-2) 7/18/2001	MWF1 MWF1-S(24-26) 7/18/2001	MWF1 MWF1-S(8-10) 7/18/2001
Volatile Organics							
Acetone	ug/kg	< 590 U	< 740 U	< 670 U	< 19 UJ	< 23 UJ	< 22 UJ
Benzene	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
Bromodichloromethane	ug/kg	< 79 U	< 99 U	< 90 U	< 4.7 U	< 5.7 U	< 5.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 590 U	< 740 U	< 670 U	< 19 U	< 23 U	< 22 U
Carbon disulfide	ug/kg	< 200 U	< 250 U	< 220 U	< 4.7 U	< 5.7 U	< 5.4 U
Carbon tetrachloride	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
Chloroethane	ug/kg	< 200 U	< 250 U	< 220 U	< 9.4 U	< 11 U	< 11 U
Chloroform (Trichloromethane)	ug/kg	< 40 U	< 49 U	16 J	< 4.7 U	< 5.7 U	< 5.4 U
Cyclohexane	ug/kg	< 950 U	< 1200 U	< 1100 U	< 9.4 U	< 11 U	< 11 U
1,1-Dichloroethane	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
1,2-Dichloroethane	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
1,1-Dichloroethene	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
cis-1,2-Dichloroethene	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
trans-1,2-Dichloroethene	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
Methylene chloride	ug/kg	< 200 U	< 250 U	< 220 U	< 4.7 U	< 5.7 U	< 5.4 U
Ethylbenzene	ug/kg	< 40 U	< 49 U	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
Isopropyl benzene	ug/kg	< 200 U	< 250 U	< 220 U	< 4.7 U	< 5.7 U	< 5.4 U
Methyl acetate	ug/kg	< 950 U	< 1200 U	< 1100 U	< 9.4 U	< 11 U	< 11 U
Methyl cyclohexane	ug/kg	< 950 U	< 1200 U	< 1100 U	< 9.4 U	< 11 U	< 11 U
Tetrachloroethene	ug/kg	42	2100	490	< 4.7 U	1.4 J	< 5.4 U
Toluene	ug/kg	< 79 U	< 99 U	< 90 U	< 4.7 U	< 5.7 U	< 5.4 U
1,1,1-Trichloroethane	ug/kg	< 40 U	17 J	19 J	< 4.7 U	< 5.7 U	< 5.4 U
Trichloroethene	ug/kg	< 40 U	18 J	< 45 U	< 4.7 U	< 5.7 U	< 5.4 U
Vinyl chloride	ug/kg	< 79 U	< 99 U	< 90 U	< 9.4 U	< 11 U	< 11 U
Total Xylenes	ug/kg	< 120 U	< 150 U	< 130 U	< 9.4 U	< 11 U	< 11 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF12-01 BMW12-01(0-2) 8/7/2001	MWF12-01 BMW12-01(12-14) 8/7/2001	MWF12-01 BMW12-01(8-10) 8/7/2001	MWF12-01 BMW12-01-S(16-18) 8/7/2001	MWF12-02 BMW12-02-S(0-2) 8/14/2001	MWF12-02 BMW12-02-S(15-17) 8/14/2001
Volatile Organics							
Acetone	ug/kg	< 17 U	< 20 U	< 21 U	< 23 U	< 23 UJ	< 23 UJ
Benzene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Bromodichloromethane	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 17 U	< 20 U	< 21 U	< 23 U	< 23 U	< 23 U
Carbon disulfide	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Carbon tetrachloride	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Chloroethane	ug/kg	< 8.6 U	< 10 U	< 10 U	< 11 U	< 12 U	< 11 U
Chloroform (Trichloromethane)	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Cyclohexane	ug/kg	< 8.6 U	< 10 U	< 10 U	< 11 U	< 12 U	< 11 U
1,1-Dichloroethane	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
1,2-Dichloroethane	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
1,1-Dichloroethene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
cis-1,2-Dichloroethene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
trans-1,2-Dichloroethene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Methylene chloride	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 UJ	< 5.7 UJ
Ethylbenzene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Isopropyl benzene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Methyl acetate	ug/kg	< 8.6 U	< 10 U	< 10 U	< 11 U	< 12 U	< 11 U
Methyl cyclohexane	ug/kg	0.60 J	< 10 U	< 10 U	< 11 U	< 12 U	< 11 U
Tetrachloroethene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Toluene	ug/kg	1.1 J	0.64 J	1.6 J	0.93 J	2.2 J	2.3 J
1,1,1-Trichloroethane	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Trichloroethene	ug/kg	< 4.3 U	< 5.0 U	< 5.2 U	< 5.7 U	< 5.8 U	< 5.7 U
Vinyl chloride	ug/kg	< 8.6 U	< 10 U	< 10 U	< 11 U	< 12 U	< 11 U
Total Xylenes	ug/kg	< 8.6 U	< 10 U	< 10 U	< 11 U	< 12 U	< 11 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF12-02 BMW12-02-S(8-10) 8/14/2001	MWF15-01 BMW15-S(0-2)-N 10/3/2001	MWF15-01 BMW15-S(18-20)-N 10/3/2001	MWF15-01 BMW15-S(8-10)-N 10/3/2001	MWF16-01 MWF16-01-S-(0-2)-110304 11/3/2004
Volatile Organics						
Acetone	ug/kg	< 23 UJ	< 2.3 U	< 3.5 U	< 82 U	< 17 U
Benzene	ug/kg	< 5.7 U	< 0.72 U	< 1.1 U	40 J	< 4.3 U
Bromodichloromethane	ug/kg	< 5.7 U	< 1.3 U	< 2.0 U	< 11 U	< 4.3 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 23 U	3.9 J	7.7 J	< 89 U	< 17 U
Carbon disulfide	ug/kg	< 5.7 U	< 0.86 U	< 1.3 U	< 38 U	< 4.3 U
Carbon tetrachloride	ug/kg	< 5.7 U	< 1.1 U	< 1.7 U	< 11 U	< 4.3 U
Chloroethane	ug/kg	< 11 U	< 2.4 U	< 3.7 U	< 41 U	< 4.3 U
Chloroform (Trichloromethane)	ug/kg	< 5.7 U	< 0.90 U	< 1.4 U	< 11 U	< 4.3 U
Cyclohexane	ug/kg	< 11 U	< 1.1 U	< 1.7 U	110 J	< 8.7 U
1,1-Dichloroethane	ug/kg	< 5.7 U	< 0.64 U	< 0.97 U	< 15 U	< 4.3 U
1,2-Dichloroethane	ug/kg	< 5.7 U	< 0.80 U	< 1.2 U	< 12 U	< 4.3 U
1,1-Dichloroethene	ug/kg	< 5.7 U	< 1.3 U	< 2.0 U	< 19 U	< 4.3 U
cis-1,2-Dichloroethene	ug/kg	< 5.7 U	< 0.93 U	< 1.4 U	< 18 U	< 4.3 U
trans-1,2-Dichloroethene	ug/kg	< 5.7 U	< 0.80 U	< 1.2 U	< 20 U	< 4.3 U
Methylene chloride	ug/kg	< 5.7 UJ	< 1.4 U	< 2.2 U	96 J	< 4.3 U
Ethylbenzene	ug/kg	< 5.7 U	< 0.65 U	< 0.99 U	28 J	< 4.3 U
Isopropyl benzene	ug/kg	< 5.7 U	< 0.77 U	< 1.2 U	< 8.7 U	< 4.3 U
Methyl acetate	ug/kg	< 11 U	< 1.2 U	< 1.8 U	< 49 U	< 8.7 U
Methyl cyclohexane	ug/kg	< 11 U	< 0.65 U	< 0.99 U	240 J	< 8.7 U
Tetrachloroethene	ug/kg	< 5.7 U	1.7 J	17	1200	< 4.3 U
Toluene	ug/kg	2.1 J	1.7 J	3.7 J	180 J	< 4.3 U
1,1,1-Trichloroethane	ug/kg	< 5.7 U	< 1.0 U	< 1.5 U	66 J	10
Trichloroethene	ug/kg	< 5.7 U	< 0.84 U	< 1.3 U	43 J	< 4.3 U
Vinyl chloride	ug/kg	< 11 U	< 1.5 U	< 2.3 U	< 12 U	< 4.3 U
Total Xylenes	ug/kg	< 11 U	< 2.1 U	< 3.2 U	250 J	< 8.7 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF16-01 MWF16-01-S-(14-16)-110304 11/3/2004	MWF16-01 MWF16-01-S-(8-10)-110304 11/3/2004	MWF16-02 MWF16-02-S-(0-2)-110304 11/3/2004	MWF16-02 MWF16-02-S-(12.5-14.5)-110304 11/3/2004
Volatile Organics					
Acetone	ug/kg	< 25 U	< 23 U	< 19 U	< 24 U
Benzene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Bromodichloromethane	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 25 U	< 23 U	< 19 U	< 24 U
Carbon disulfide	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Carbon tetrachloride	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Chloroethane	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Chloroform (Trichloromethane)	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Cyclohexane	ug/kg	< 13 U	< 12 U	< 9.4 U	< 12 U
1,1-Dichloroethane	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
1,2-Dichloroethane	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
1,1-Dichloroethene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
cis-1,2-Dichloroethene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	0.85 J
trans-1,2-Dichloroethene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Methylene chloride	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Ethylbenzene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Isopropyl benzene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Methyl acetate	ug/kg	< 13 U	< 12 U	< 9.4 U	< 12 U
Methyl cyclohexane	ug/kg	< 13 U	< 12 U	< 9.4 U	< 12 U
Tetrachloroethene	ug/kg	3.0 J	5.0 J	11	6.3
Toluene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
1,1,1-Trichloroethane	ug/kg	< 6.3 U	1.2 J	1.1 J	< 6.0 U
Trichloroethene	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Vinyl chloride	ug/kg	< 6.3 U	< 5.8 U	< 4.7 U	< 6.0 U
Total Xylenes	ug/kg	< 13 U	< 12 U	< 9.4 U	< 12 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF16-02 MWF16-02-S-(8-10)-110304 11/3/2004	MWF16-03 MWF16-03-S(0-2)-110504 11/5/2004	MWF16-03 MWF16-03-S(21-23)-110504 11/5/2004	MWF16-03 MWF16-03-S(8-10)-110504 11/5/2004
Volatile Organics					
Acetone	ug/kg	< 21 U	< 19 U	6800 J	< 23 U
Benzene	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Bromodichloromethane	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 21 U	< 19 U	2100 J	< 23 U
Carbon disulfide	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Carbon tetrachloride	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Chloroethane	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Chloroform (Trichloromethane)	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Cyclohexane	ug/kg	< 11 U	< 9.6 U	< 15000 U	< 12 U
1,1-Dichloroethane	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
1,2-Dichloroethane	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
1,1-Dichloroethene	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
cis-1,2-Dichloroethene	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
trans-1,2-Dichloroethene	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Methylene chloride	ug/kg	< 5.3 U	< 4.8 U	3800 J	< 5.8 U
Ethylbenzene	ug/kg	< 5.3 U	< 4.8 U	43000	< 5.8 U
Isopropyl benzene	ug/kg	< 5.3 U	< 4.8 U	1100 J	< 5.8 U
Methyl acetate	ug/kg	< 11 U	< 9.6 U	< 15000 U	< 12 U
Methyl cyclohexane	ug/kg	< 11 U	< 9.6 U	2600 J	< 12 U
Tetrachloroethene	ug/kg	2.0 J	< 4.8 U	< 7700 U	9.8
Toluene	ug/kg	< 5.3 U	< 4.8 U	190000	< 5.8 U
1,1,1-Trichloroethane	ug/kg	0.87 J	< 4.8 U	< 7700 U	3.9 J
Trichloroethene	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Vinyl chloride	ug/kg	< 5.3 U	< 4.8 U	< 7700 U	< 5.8 U
Total Xylenes	ug/kg	< 11 U	< 9.6 U	290000	< 12 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF16-04 MWF16-04-S(0-2)-110404 11/4/2004	MWF16-04 MWF16-04-S(21-23)-110404 11/4/2004	MWF16-04 MWF16-04-S(8-10)-110404 11/4/2004	MWF16-05 MWF16-05-S(0-2)102904 10/29/2004
Volatile Organics					
Acetone	ug/kg	< 23 UJ	< 24 U	< 19 UJ	< 970 U
Benzene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Bromodichloromethane	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 23 UJ	< 24 U	< 19 UJ	< 970 U
Carbon disulfide	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Carbon tetrachloride	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Chloroethane	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Chloroform (Trichloromethane)	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Cyclohexane	ug/kg	< 11 U	< 12 U	< 9.6 U	< 490 U
1,1-Dichloroethane	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
1,2-Dichloroethane	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
1,1-Dichloroethene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
cis-1,2-Dichloroethene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
trans-1,2-Dichloroethene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Methylene chloride	ug/kg	< 5.6 U	< 6.2 U	< 4.8 U	< 240 U
Ethylbenzene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Isopropyl benzene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Methyl acetate	ug/kg	< 11 U	< 12 U	< 9.6 U	< 490 U
Methyl cyclohexane	ug/kg	< 11 U	< 12 U	< 9.6 U	< 490 U
Tetrachloroethene	ug/kg	12	22	42	1400
Toluene	ug/kg	< 5.6 U	0.94 J	< 4.8 U	< 240 U
1,1,1-Trichloroethane	ug/kg	< 5.6 U	1.2 J	< 4.8 U	< 240 U
Trichloroethene	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	52 J
Vinyl chloride	ug/kg	< 5.6 U	< 6.1 U	< 4.8 U	< 240 U
Total Xylenes	ug/kg	< 11 U	< 12 U	< 9.6 U	< 490 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF16-05 MWF16-05-S(22-24)102904 10/29/2004	MWF16-05 MWF16-05-S(8-10)102904 10/29/2004	MWF16-06 MWF16-06-S(0-2)-110104 11/1/2004	MWF16-06 MWF16-06-S(19-21)-110104 11/1/2004
Volatile Organics					
Acetone	ug/kg	< 1000 UJ	< 1100 U	< 2100 UJ [< 2100 UJ]	< 1100 UJ
Benzene	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Bromodichloromethane	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 1000 UJ	< 1100 U	< 2100 UJ [< 2100 UJ]	< 1100 UJ
Carbon disulfide	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Carbon tetrachloride	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	48 J
Chloroethane	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Chloroform (Trichloromethane)	ug/kg	< 260 UJ	< 280 U	210 J [200 J]	150 J
Cyclohexane	ug/kg	< 520 UJ	< 560 U	< 1100 UJ [< 1100 UJ]	< 540 UJ
1,1-Dichloroethane	ug/kg	< 260 UJ	< 280 U	2300 J [2200 J]	71 J
1,2-Dichloroethane	ug/kg	< 260 UJ	< 280 U	210 J [160 J]	< 270 UJ
1,1-Dichloroethene	ug/kg	< 260 UJ	< 280 U	< 530 UJ [63 J]	< 270 UJ
cis-1,2-Dichloroethene	ug/kg	< 260 UJ	31 J	2400 J [2200 J]	35 J
trans-1,2-Dichloroethene	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Methylene chloride	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Ethylbenzene	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Isopropyl benzene	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Methyl acetate	ug/kg	< 520 UJ	< 560 U	< 1100 UJ [< 1100 UJ]	< 540 UJ
Methyl cyclohexane	ug/kg	< 520 UJ	< 560 U	84 J [< 1100 UJ]	< 540 UJ
Tetrachloroethene	ug/kg	1200 J	5200	9700 J [14000 J]	290 J
Toluene	ug/kg	< 260 UJ	< 280 U	20 J [< 530 UJ]	< 270 UJ
1,1,1-Trichloroethane	ug/kg	< 260 UJ	< 280 U	5100 [5000 J]	370 J
Trichloroethene	ug/kg	< 260 UJ	120 J	930 J [940 J]	< 270 UJ
Vinyl chloride	ug/kg	< 260 UJ	< 280 U	< 530 UJ [< 530 UJ]	< 270 UJ
Total Xylenes	ug/kg	< 520 UJ	< 560 U	< 1100 UJ [< 1100 UJ]	< 540 UJ

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF16-06 MWF16-06-S(8-10)-110104 11/1/2004	MWF16-07 MWF16-07-S(0-2)102804 10/28/2004	MWF16-07 MWF16-07-S(18-20)102804 10/28/2004	MWF16-07 MWF16-07-S(8-10)102804 10/28/2004
Volatile Organics					
Acetone	ug/kg	< 870 U	< 19 U	< 19 U	< 20 U
Benzene	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Bromodichloromethane	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 870 U	< 19 U	< 19 U	< 20 U
Carbon disulfide	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Carbon tetrachloride	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Chloroethane	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Chloroform (Trichloromethane)	ug/kg	29 J	< 4.8 U	< 4.8 U	< 4.9 U
Cyclohexane	ug/kg	< 440 U	< 9.7 U	< 9.7 U	< 9.9 U
1,1-Dichloroethane	ug/kg	6100	< 4.8 U	< 4.8 U	< 4.9 U
1,2-Dichloroethane	ug/kg	58 J	< 4.8 U	< 4.8 U	< 4.9 U
1,1-Dichloroethene	ug/kg	1200	< 4.8 U	< 4.8 U	< 4.9 U
cis-1,2-Dichloroethene	ug/kg	2800	< 4.8 U	< 4.8 U	< 4.9 U
trans-1,2-Dichloroethene	ug/kg	59 J	< 4.8 U	< 4.8 U	< 4.9 U
Methylene chloride	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Ethylbenzene	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Isopropyl benzene	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Methyl acetate	ug/kg	< 440 U	< 9.7 U	< 9.7 U	< 9.9 U
Methyl cyclohexane	ug/kg	< 440 U	< 9.7 U	< 9.7 U	< 9.9 U
Tetrachloroethene	ug/kg	1800	< 4.8 U	< 4.8 U	< 4.9 U
Toluene	ug/kg	40 J	< 4.8 U	0.32 J	< 4.9 U
1,1,1-Trichloroethane	ug/kg	360	< 4.8 U	< 4.8 U	< 4.9 U
Trichloroethene	ug/kg	720	< 4.8 U	< 4.8 U	< 4.9 U
Vinyl chloride	ug/kg	< 220 U	< 4.8 U	< 4.8 U	< 4.9 U
Total Xylenes	ug/kg	< 440 U	< 9.7 U	< 9.7 U	< 9.9 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF16-20 MWF16-20-S(0-2)-122005 12/20/2005	MWF16-20 MWF16-20-S(17-19)-122005 12/20/2005	MWF16-20 MWF16-20-S(8-10)-122005 12/20/2005	MWF2 MWF2-S(0-2)062201 6/22/2001	MWF2 MWF2-S(2022)062201 6/22/2001
Volatile Organics						
Acetone	ug/kg	< 590 U	< 680 U	< 710 U	< 17 UJ	< 22 UJ
Benzene	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
Bromodichloromethane	ug/kg	< 79 U	< 90 U	< 95 U	< 4.3 U	< 5.5 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 590 U	< 680 U	< 710 U	< 17 UJ	< 22 UJ
Carbon disulfide	ug/kg	< 200 U	< 230 U	< 240 U	< 4.3 U	< 5.5 U
Carbon tetrachloride	ug/kg	< 39 U	27 J	< 47 U	< 4.3 U	< 5.5 U
Chloroethane	ug/kg	< 200 U	< 230 U	< 240 U	< 8.6 U	< 11 U
Chloroform (Trichloromethane)	ug/kg	< 39 U	76	< 47 U	< 4.3 U	< 5.5 U
Cyclohexane	ug/kg	< 950 U	< 1100 U	< 1100 U	< 8.6 U	< 11 U
1,1-Dichloroethane	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
1,2-Dichloroethane	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
1,1-Dichloroethene	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
cis-1,2-Dichloroethene	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
trans-1,2-Dichloroethene	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
Methylene chloride	ug/kg	< 200 UJ	< 230 UJ	< 240 UJ	< 4.3 U	< 5.5 U
Ethylbenzene	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
Isopropyl benzene	ug/kg	< 200 U	< 230 U	< 240 U	< 4.3 U	< 5.5 U
Methyl acetate	ug/kg	< 950 U	< 1100 U	< 1100 U	< 8.6 UJ	< 11 UJ
Methyl cyclohexane	ug/kg	< 950 U	< 1100 U	< 1100 U	< 8.6 U	< 11 U
Tetrachloroethene	ug/kg	350	49	< 47 U	< 4.3 U	< 5.5 U
Toluene	ug/kg	< 79 U	< 90 U	< 95 U	< 4.3 U	0.64 J
1,1,1-Trichloroethane	ug/kg	< 39 U	64	< 47 U	< 4.3 U	< 5.5 U
Trichloroethene	ug/kg	< 39 U	< 45 U	< 47 U	< 4.3 U	< 5.5 U
Vinyl chloride	ug/kg	< 79 U	< 90 U	< 95 U	< 8.6 U	< 11 U
Total Xylenes	ug/kg	< 120 U	< 140 U	< 140 U	< 8.6 U	< 11 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF2 MWF-2-S(810)062201 6/22/2001	MWF7-01 BMW7-01-S(0-2) 9/20/2001	MWF7-01 BMW7-01-S(20-22) 9/20/2001	MWF7-01 BMW7-01-S(8-10) 9/20/2001	MWF7-02 BMW7-02-S(0-2) 9/24/2001	MWF7-02 BMW7-02-S(18-20) 9/24/2001
Volatiles Organics							
Acetone	ug/kg	< 24 UJ	680 J	< 25 U	710 J	< 21 U	< 24 U
Benzene	ug/kg	< 6.0 U	160 J	< 6.3 U	130 J	< 5.2 U	< 6.0 U
Bromodichloromethane	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	1.7 J
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 24 UJ	230 J	< 25 U	210 J	< 21 U	< 24 U
Carbon disulfide	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	< 6.0 U
Carbon tetrachloride	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	< 6.0 U
Chloroethane	ug/kg	< 12 U	< 680 U	< 13 U	< 960 U	< 10 U	< 12 U
Chloroform (Trichloromethane)	ug/kg	< 6.0 U	57 J	< 6.3 U	53 J	< 5.2 U	6.3
Cyclohexane	ug/kg	< 12 U	2200	< 13 U	1600	< 10 U	< 12 U
1,1-Dichloroethane	ug/kg	< 6.0 U	< 340 U	1.9 J	< 480 U	< 5.2 U	6.0
1,2-Dichloroethane	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	< 6.0 U
1,1-Dichloroethene	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	9.1
cis-1,2-Dichloroethene	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	< 6.0 U
trans-1,2-Dichloroethene	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	< 6.0 U
Methylene chloride	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	< 6.0 U
Ethylbenzene	ug/kg	< 6.0 U	250 J	< 6.3 U	220 J	< 5.2 U	< 6.0 U
Isopropyl benzene	ug/kg	< 6.0 U	110 J	< 6.3 U	110 J	< 5.2 U	< 6.0 U
Methyl acetate	ug/kg	< 12 UJ	250 J	< 13 U	350 J	< 10 U	< 12 U
Methyl cyclohexane	ug/kg	< 12 U	4900	< 13 U	4100	< 10 U	< 12 U
Tetrachloroethene	ug/kg	< 6.0 U	< 340 U	15	490	2.8 J	47
Toluene	ug/kg	< 6.0 U	1500	2.4 J	1100	0.71 J	1.5 J
1,1,1-Trichloroethane	ug/kg	< 6.0 U	1800	18	1800	4.5 J	33
Trichloroethene	ug/kg	< 6.0 U	< 340 U	< 6.3 U	< 480 U	< 5.2 U	2.8 J
Vinyl chloride	ug/kg	< 12 U	< 680 U	< 13 U	< 960 U	< 10 U	< 12 U
Total Xylenes	ug/kg	< 12 U	3500	< 13 U	2800	< 10 U	< 12 U

Table 2
 Historic Soil Analytical Data
 RACER Trust Pontiac North Campus

Location ID: Date Collected: Sample Name:	Units	MWF7-02 BMW7-02-S(8-10) 9/24/2001	MWF7-03 MWF703S(11-13) 7/24/2003	MWF7-03 MWF703S(7-9) 7/24/2003	MWF8-01 BMW8-01-S(0-2)-N 9/19/2001	MWF8-01 BMW8-01-S(18-20)-N 9/19/2001	MWF8-01 BMW8-01-S(8-10)-N 9/19/2001
Volatiles Organics							
Acetone	ug/kg	< 990 U	12 J	19 J	< 2.5 U	< 2.6 U	9.5 J
Benzene	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.76 U	< 0.82 U	< 0.81 U
Bromodichloromethane	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 1.4 U	< 1.5 U	< 1.5 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	< 990 U	< 24 U	< 21 U	< 3.2 U	< 3.4 U	3.6 J
Carbon disulfide	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.91 U	< 0.98 U	< 0.98 U
Carbon tetrachloride	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 1.2 U	< 1.3 U	< 1.3 U
Chloroethane	ug/kg	< 500 U	< 12 U	< 10 U	< 2.6 U	< 2.8 U	< 2.8 U
Chloroform (Trichloromethane)	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.96 U	< 1.0 U	< 1.0 U
Cyclohexane	ug/kg	53 J	< 12 U	< 10 U	< 1.2 U	< 1.3 U	< 1.3 U
1,1-Dichloroethane	ug/kg	29 J	< 6.1 U	< 5.2 U	< 0.68 U	< 0.73 U	< 0.73 U
1,2-Dichloroethane	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.85 U	< 0.92 U	< 0.91 U
1,1-Dichloroethene	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 1.4 U	< 1.5 U	< 1.5 U
cis-1,2-Dichloroethene	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.98 U	< 1.1 U	< 1.1 U
trans-1,2-Dichloroethene	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.85 U	< 0.92 U	< 0.91 U
Methylene chloride	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 1.5 U	< 1.6 U	< 1.6 U
Ethylbenzene	ug/kg	14 J	< 6.1 U	< 5.2 U	< 0.69 U	< 0.74 U	< 0.74 U
Isopropyl benzene	ug/kg	< 250 U	< 6.1 U	< 5.2 U	< 0.82 U	< 0.88 U	< 0.88 U
Methyl acetate	ug/kg	< 500 U	< 12 U	< 10 U	< 1.3 U	< 1.4 U	< 1.4 U
Methyl cyclohexane	ug/kg	130 J	< 12 U	< 10 U	< 0.69 U	< 0.74 U	< 0.74 U
Tetrachloroethene	ug/kg	930	< 6.1 U	< 5.2 U	< 1.4 U	< 1.5 U	< 1.5 U
Toluene	ug/kg	< 250 U	0.60 J	0.38 J	2.0 J	1.5 J	5.0 J
1,1,1-Trichloroethane	ug/kg	440	< 6.1 U	< 5.2 U	< 1.1 U	< 1.2 U	< 1.2 U
Trichloroethene	ug/kg	55 J	< 6.1 U	< 5.2 U	< 0.89 U	< 0.95 U	< 0.95 U
Vinyl chloride	ug/kg	< 500 U	< 12 U	< 10 U	< 1.6 U	< 1.8 U	< 1.8 U
Total Xylenes	ug/kg	< 500 U	< 12 U	< 10 U	< 2.2 U	< 2.4 U	< 2.4 U

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