

RACER Trust

Building 44 Area Trench and Treatment System Pre-Design Investigation Summary Report

Buick City, Flint, Michigan

May 27, 2026

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Acronyms and Abbreviations

Arcadis	Arcadis of Michigan, LLC
amsl	above mean sea level
bgs	below ground surface
BV	bed volume
CaCO ₃	calcium carbonate
cm	centimeter
CSM	conceptual site model
DOT	U.S. Department of Transportation
EBCT	empty bed contact time
EGLE	Michigan Department of Environment, Great Lakes, and Energy
ft	foot / feet
ft ³	cubic feet
GAC	granular activated carbon
gpm	gallons per minute
gpm/ft ²	gallons per minute per square foot
GPR	ground penetrating radar
GSI	groundwater–surface water interface
HDPE	high-density polyethylene
HFPO-DA	hexafluoropropylene oxide dimer acid
HLR	hydraulic loading rate
IX	ion exchange
MASW	multi-channel analysis of surface waves
mL	milliliter
mL/min	milliliters per minute
NAPL	non-aqueous phase liquid
NE	not established
ng/L	nanograms per liter

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PDI	pre-design investigation
PFAS	per- and polyfluoroalkyl substances
PFHxS	perfluorohexanoic acid
PFNA	perfluorononanoic acid
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonic acid
RACER	Revitalizing Auto Communities Environmental Response
ROW	right-of-way
RSSCT	rapid small-scale column tests
Site	RACER Trust Buick City Site located in Flint, Michigan
SVOC	semi-volatile organic compound
VOC	volatile organic compound
Xylem	Xylem Water Solutions

1 Introduction

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, Arcadis of Michigan, LLC (Arcadis) has prepared this report summarizing pre-design investigation activities conducted at the RACER Buick City (Site) in Flint, Michigan. The pre-design activities were completed in accordance with the revised February 19, 2026 memorandum titled *Building 44 Pre-Design Investigation Work Plan* (Work Plan). The activities were performed to support design, bidding, contractor selection, and installation of the proposed interim measure of a groundwater collection trench and groundwater treatment system to be installed for management of groundwater in the vicinity of the former Building 44 area. The layout of the Building 44 area is provided as **Figure 1**.

The objective of the proposed interim measure is to eliminate, to extent practical, infiltration of Site related PFAS impacted groundwater into nearby storm sewers (specifically stormwater infrastructure that leads to Outfalls 011, 010, and 013), nearby sanitary sewers, and stop further migration from the Hamilton Ave source area toward the Flint River. Another positive result of the remedy is expected to be lowering the groundwater level on-site thereby reducing contact with shallow impacted soils.

Within this report, a summary of the project background and a summary conceptual model for the site is presented, followed by discussion of the pre-design activities conducted and conclusions. The activities performed are as follows:

- **Task 1:** Vertical Delineation. Investigation to evaluate the potential for deeper transmissive units (sand and gravel) in the vicinity of the Building 44 source area below or within the glacial till.
- **Task 2:** Geophysical Evaluation. Geophysical investigation to assess the extent of subsurface concrete that may impact trench construction.
- **Task 3:** Treatability testing: Column tests to assess performance of treatment media options and inform design of the groundwater treatment system.

1.1 Background and Conceptual Site Model

Soil and groundwater sampling conducted in the Building 44 area has identified elevated concentrations of PFAS in soil and groundwater. The most recent groundwater analytical results are presented on **Figure 2**. PFAS compounds exceeding EGLE Part 201 groundwater-surface water interface (GSI) criteria in the Building 44 area include perfluorooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), perfluorohexanoic acid (PFHxS), and perfluorononanoic acid (PFNA). The primary constituent of concern and indicator compound in this area is PFOS because this compound exceeds the GSI criteria by the greatest factor and the exceedances are the most widespread.

Groundwater from the Building 44 area flows south-southeast across Hamilton Ave and across the abandoned rail line. The core of the PFAS plume appears to migrate southeast across Hamilton Ave, with concentrations decreasing rapidly due in part to interception by the sewer infrastructure, particularly the storm sewer tied to Outfall 11. The area of highest soil and groundwater concentrations north of Hamilton Ave, east of Industrial Ave, and west of the abandoned rail line is considered the PFAS source area.

This area formerly contained buildings associated with automotive operations, including an office and administration building (Building 07), a transmission plant (Building 01), and Factory 86 buildings associated with final automobile assembly and painting operations (Buildings 04 and 44) (**Figure 1**). Based on observations from drill cores and geophysical surveys, building foundations and/or subsurface structures in portions of the area are common with depths ranging between 10 and 16 feet below ground surface (bgs), with deeper concrete observed in some locations. Following building demolition, the floor of subsurface cavities were likely fractured and the cavity filled with demolition debris and/or soil. This backfill creates local areas of higher permeability, while the potential for concrete walls, floors, and foundations can be barriers to groundwater flow. The effect is a heterogenous collection of fill (both high and low permeability) mixed with native deposits consisting of glaciofluvial and glacial till sediments.

Native materials include alternating glaciofluvial and glacial till deposits, with glaciofluvial and anthropogenic fill dominant to approximately 10-15 feet bgs. Glacial till with lenses of alluvium is observed up to approximately 25 feet bgs, below which a dense, relatively dry, glacial till is predominant. The shallow sand and fill are typically medium grained or medium to coarse grained and contain very little fines. Hydraulic conductivity derived from slug testing and low-flow testing ranges from 1 to 55 feet per day (ft/day) with a mean of 5 ft/day for the shallow zone. Calculated groundwater velocities for the shallow zone range from 0.2 to 3.7 ft/day with a mean of 0.5 ft/day (Arcadis, 2026). Below 10 to 15 feet bgs the glaciofluvial deposits are interbedded with the shallower till and include a combination of thin sand zones and zones of silty sand and/or clay dominant soils. The hydraulic conductivity for the deeper zone ranges from 0.1 to 5.2 ft/day with a mean of 1.0 ft/day. The calculated groundwater velocity for the deep zone ranges from 0.02 to 1.8 ft/day with a mean of 0.12 ft/day. The glacial till below 20 feet bgs is typically described as a stiff clay/silt containing varying amounts of coarse-grained materials. This unit is considered a mass storage zone with minimal transport potential.

East of the Building 44 area, approaching the Flint River (i.e., former Buildings 84, 28, 17 (**Figure 1**), the shallow fill and alluvium can be thicker. Deeper fluvial sediments are encountered at depths up to 50 ft bgs (680 ft amsl) at deeper borings (e.g., RFI-84-04, RFI-84-03) associated with the Flint River depositional system. Shallow clays and fill are still interbedded shallow, and a deeper till is present beneath the fluvial valley.

Storm sewers and sanitary sewers are below the water table in the Building 44 area. Groundwater leaks into the sewers through seams, joints and breaks in the pipes, and through gaps in the manhole structures. To mitigate leakage, laterals extending from the Site have been plugged and disconnected from the storm and sanitary sewer mains within Hamilton Ave and select manholes onsite have been filled with concrete. The modifications include fully disconnecting the upstream portion of the Outfall 010 sewer main so the sewer does not start until east of the railroad tracks, outside of the PFAS source area. In addition, plugging of relict sanitary sewers within Hamilton Ave has reduced site related PFAS concentrations in the downstream sanitary line.

Plugging and bulkheading of sewers has been effective at reducing groundwater and PFAS discharge to on-site sewer systems but have resulted in the water table rising on-site due to reduced groundwater flow away from the area. The higher water table within the Hamilton Ave. right-of-way (ROW) gave rise to increased infiltration of PFAS impacted water to the sewer mains. Groundwater continues to infiltrate into the Hamilton Ave storm sewer above GSI criteria and eventually discharges to the Flint River at Outfall 011. In addition, PFAS impacted groundwater also appears to impact storm sewer mains associated with Outfall 010, east of the Building 44 area along Hamilton Ave, and storm mains within Industrial Avenue associated with Outfall 013, west of the Building 44 area. See Figure 1 for Outfall locations.

The collection trench will be constructed to capture source area groundwater within the fill and shallow sand and deeper glaciofluvial units, extending into the glacial till to a depth ranging from 20 to 25 feet bgs. The objective of the proposed interim measure is to eliminate, to extent practical, infiltration of Site related PFAS impacted

groundwater into nearby storm sewers (specifically stormwater infrastructure that leads to Outfalls 011, 010, and 013), nearby sanitary sewers, and stop further migration from the Hamilton Ave source area toward the Flint River. Another positive result of the remedy is expected to be lowering the groundwater level on-site thereby reducing contact with shallow impacted soils.

2 Vertical Delineation

In accordance with the Work Plan, two borings were advanced up- and downgradient of the Building 44 PFAS source area. The primary objective of the deep borings was to assess the potential for a laterally continuous transmissive zone (sandy or gravelly soils) deeper than the top of the glacial till (i.e., >20-25 feet bgs), which is the proposed depth of the collection trench. Deeper transmissive zones could potentially transmit PFAS impacted groundwater beneath the proposed trench and downgradient from the Building 44 source area. The boring locations for SB-04-150 and SB-04-151 are shown in **Figure 3** and the boring logs are available in **Appendix A**.

The Work Plan stipulated that a third boring would be advanced if a consistent deeper transmissive zone was identified in both new borings, with deep monitoring wells to be installed at each of the three boring locations if the transmissive zone was identified at the third boring. The new monitoring wells would allow for monitoring of groundwater quality and evaluation of the deeper groundwater flow direction.

The two borings were each advanced to 50 feet bgs. The total depths correspond to approximately 678 feet above mean sea level (amsl) at the downgradient boring SB-04-150, and 688 feet amsl at the upgradient boring SB-04-151. The depth of the collection trench is currently anticipated to extend to approximately 705 feet amsl. A graphic relating the relative elevations of the collection trench to the lithologic observations is provided as **Figure 4**.

At the downgradient boring location (SB-04-150) the top of the till was encountered below the shallow fill material at approximately 18 feet bgs (711 feet amsl). Sand units were encountered below the top of the till; the first at a depth between 25 and 30 feet bgs (698 to 703 feet amsl), and a second thin unit at approximately 39 feet bgs (689 feet amsl). Upgradient, at SB-04-151, the glacial till was encountered at a depth of approximately 15 feet bgs (723 feet amsl) and a deeper sand unit was encountered between 25 and 30 feet below grade at an elevation within the range of the proposed extraction trench. No other sand units were encountered below the top of the till at SB-04-151. Based on discussion with EGLE, it was agreed that a consistent sand unit was not present below the till and the downgradient deeper sand units could be further evaluated, if warranted, as part of a performance monitoring well installation following, or concurrent with, the installation of the extraction trench. Because a consistent sand unit was not encountered below the till a third boring was not completed, and no monitoring wells were installed as part of this scope of work.

3 Geophysics Evaluation

The geophysics evaluation was conducted to assess the distribution of subsurface foundations and other obstructions to support construction planning associated with the proposed Building 44 groundwater collection trench. As described in the Work Plan, one-pass trenching was considered as a potential method for trench installation. However, concrete obstructions would require removal via pre-trenching, which increases the cost of construction. The geophysics evaluation provided additional resolution on the extents and depths of subsurface concrete to support the evaluation of construction methodologies for the trench including one-pass trenching (including pre-trenching), and traditional trenching methods such as using bioslurry and trench wall shoring.

An earlier geophysics investigation was conducted from August 31 through September 2, 2021. The recent investigation was conducted from November 18 through 22, 2025. Seismic shear-wave imaging was utilized in 2021, and a combination of shear-wave imaging and low frequency ground penetrating radar (GPR) was used in 2025. The findings of the 2021 investigation were incorporated into the planning for the 2025 investigation and the data from both phases are used for the current evaluation.

3.1 Seismic Shear-Wave Imaging

Seismic shear-wave imaging was utilized to characterize shallow stratigraphy and detect possible subsurface obstructions beneath the Site during the 2021 and 2025 mobilizations. For this project, active Multi-Channel Analysis of Surface Waves (MASW) datasets were collected, with acquisition parameters designed specifically to obtain high resolution shear wave data of to approximately 25 feet bgs. To accomplish this, the MASW method utilized the dispersive property of manually generated surface waves from sledgehammer impacts at regular intervals down the profile line. Due to the widespread surficial concrete at the site and related challenges with embedding geophones into the ground surface, a landstreamer was used in lieu of conventional planted geophones. The landstreamer consists of an array of geophones connected to weighted plates and towed along the ground surface to each data collection location. This approach enables efficient data acquisition in areas where direct ground penetration is not feasible or cost-effective. A detailed description of the MASW method is provided in **Appendix B**.

Sixteen (16) seismic lines were developed along the profile alignments shown on **Figure 5**, including six lines during the 2021 investigation and ten lines during the 2025 investigation. Lines A through O ranged from 99 to 130 feet long with a shot spacing of 3 feet. Line P, at 850 feet long, was completed last to represent a potential collection trench alignment based on the preceding data collected. Due to the much greater length and partial redundancy of Line P, the shot spacing was increased to 10 feet. Additional features are included in the figures for reference, including the GPR transects, former buildings, test pits, and soil borings. Soil borings within the survey area are depicted and labelled by the maximum depth of concrete encountered. The collection parameters for each seismic line are summarized in **Appendix B** (Table 1).

3.2 Ground Penetrating Radar Imaging

Low frequency, high resolution GPR imaging was utilized as a secondary technique during the second mobilization to characterize shallow stratigraphy and detect zones of possible subsurface obstructions. Eighty-three (83) GPR profiles were collected within the survey area along the profile alignments shown in yellow on **Figure 5**. Use of this newer GPR technology resulted in radar profiles imaging approximately the upper 20 to 25 feet of the subsurface. A detailed description of the GPR method is provided in **Appendix B**.

3.3 Geophysics Results and Interpretations

Geophysics imagery is provided in **Appendix B**. Imagery includes the full suite of seismic results (**Appendix B** Figures 1-17A) and two characteristic GPR profiles (**Appendix B** Figures 18 and 19). Due to the number of GPR lines, imagery is not provided for the full GPR dataset. Instead, sample GPR profiles are compared to co-located and co-linear MASW profiles. The first GPR-MASW profile set (**Appendix B**, Figure 18) demonstrates the presence of linear anomalies that appear to be related to historical concrete structures (represented as a zone of increased stiffness), and the other profile set (**Appendix B**, Figure 19) demonstrates the absence of linear anomalies.

3.4 Confirmation Borings

Ten (10) confirmation borings were advanced to validate the geophysics results and to support subsequent trench design and construction planning. The confirmation boring locations are shown on **Figure 3** and the boring logs are provided as **Appendix A**.

The interpreted extent of concrete below 4 feet bgs (“deep concrete”) is depicted in **Figure 6**. **Figure 6** shows a generalized extent of deep concrete based primarily on soil borings, as supplemented with the geophysics data. Based on **Figure 6**, the areas most likely to contain concrete at deeper intervals are along the east-west potential trench alignment, primarily around former Building 07.

Concrete is also displayed on cross-sections prepared for the east-west and north-south potential trench alignments included as **Figures 7a** and **7b**. Cross sections also include interpreted extent of anthropogenic fill and depth to glacial till. The interpreted extents of deep concrete and depth to glacial till are based largely on soil boring observations, whereas the extent of anthropogenic fill is interpreted based on a combination of soil boring observations and zones of increased stiffness from the MASW results.

Based on the soil boring and geophysical data, concrete features identified beneath former Building 7 appear to have an irregular and fragmented subsurface distribution, rather than forming continuous slabs. Only one of the four confirmation borings completed in the Building 07 footprint encountered concrete (SB-04-155); however, other historical borings completed within the Building 07 footprint (SB-04-18, SB-04-71) did observe concrete (**Figure 7A**). This further supports the sporadic nature of concrete distribution and fill. Based on the results, zones of increased stiffness, as indicated by the MASW, do not always correspond to intact buried concrete slabs. Instead, these zones may reflect a combination of discontinuous concrete, compacted soil where slabs have been removed, or zones of dense glacial till. The nature of the concrete distribution may also be related to partial removal of slabs during the demolition or pieces of concrete were incorporated into the backfill material used to fill the building cavity. The approximate trench alignment to the west and east of Building 07 appears to be relatively free of deep concrete, and concrete was generally not observed associated with the potential north-south trench alignment.

3.5 Conclusions

The results of the geophysics investigations and confirmation borings were reviewed in combination with the results of past soil boring and test pit investigations to further develop the subsurface conditions model for the Building 44 area. Pertinent findings include the distribution of subsurface concrete, extent of anthropogenic fill, and native stratigraphic controls on mass transport including the depth the glacial till confining unit and presence of more permeable deeper interbedded sandy sediments.

Based on the results summarized above, most of the deep concrete along the proposed trench alignment appears to be associated with former Building 07, located north of Hamilton Ave. Concrete within the Building 07 area is encountered at up to 16 feet bgs. Additionally, smaller regions of concrete are observed to the north and northeast of Building 07, and also in association with Former Buildings 40 and 44 further north of the proposed alignment. The approximate trench alignment to the west and east of Building 07 appears to be relatively free of deep concrete, and concrete was not observed associated with the potential north-south trench alignment.

The extents of anthropogenic fill and depth to glacial till are largely consistent with previous observations. The anthropogenic fill represents a zone of higher conductivity and, due to the thickness of the higher conductivity units, exhibits greater mass transport potential than the underlying native materials. As depicted on the cross-sections, the fill typically extends to depths between 6 and 10 feet bgs along the alignments, except beneath the

former Building 07 footprint, where it extends to between 15 and 20 feet bgs. The depth to the glacial till varies between approximately 20 and 26 feet bgs along the potential trench alignments.

The results suggest the trench is constructable and will be effective in collecting groundwater to meet the objectives. No continuous sandy units were observed in the deep borings, so plume bypass beneath the collection trench is not expected.

Note that the geophysics results are subject to several inherent limitations. Heterogeneous fill materials and inconsistent surface cover, such as varying pavement or debris, can affect the clarity and continuity of both seismic and GPR profiles. The use of a landstreamer system, rather than direct ground-coupled geophones, may reduce the vertical resolution, impacting the detection of smaller or discontinuous concrete features in the subsurface. Additionally, strong reflections from utilities and other subsurface structures may complicate the interpretation of geophysical data. Despite these factors, the results are effectively used in conjunction with nearby soil borings and test pits to calibrate and validate the geophysical findings, providing additional resolution of subsurface conditions between the available soil borings.

4 Treatability Evaluation

Rapid small-scale column tests (RSSCTs) were performed to evaluate the performance of granular activated carbon (GAC) and ion exchange (IX) media for removal of site contaminants of concern (primarily PFAS) from Site groundwater.

4.1 Groundwater Collection for Bench Scale Testing

Groundwater was collected and sampled from four monitoring wells, MW-04-151(15-20), MW-04-151(4-9), SB-04-49(13-18), and SB-04-46(4-9), from December 8, 2025 to December 11, 2025. Locations of the monitoring wells are shown on **Figure 8** with the screened section indicated in feet below ground surface (feet bgs) in parentheses. Shallow (screened with total depth less than 10 feet bgs) and deep (screened with total depth greater than 10 feet bgs) monitoring wells were selected from near the center of each of the two legs of the trench to provide spatial representation of the future water to be extracted. The wells were also selected so that, when blended, the influent water for the treatability evaluation would represent the higher end of the PFAS concentration range that may be extracted during trench operation.

The monitoring wells were sampled from cleanest to dirtiest for the analytical suite indicated in **Table 4-1** using low flow sampling procedures. The analytical suite includes contaminants of concern (PFAS and co-contaminants), general chemistry, and water quality characteristics (e.g., competing ions, foulants) that directly affect GAC and IX performance. The low-flow sampling was performed prior to treatability water collection to establish geochemical equilibrium and mitigate volatile organic compound (VOC) volatilization. Following low-flow sampling for the analytical suite in **Table 4-1**, the water from the wells was pumped into 5-gallon HDPE mixing pails with half-gallon measurements using a submersible pump. The measured water was then transferred into the drum with a drum pump to minimize VOC volatilization.

A total of 30 gallons of water was collected from the four well intervals. The water was collected into one 30-gallon HDPE drum, apportioned in accordance with **Table 4-2**. The wells were selected to represent the approximate groundwater concentrations anticipated from the shallow and deep zones along each trench segment. The ratios of water to be collected were developed based on the estimated groundwater flux rates for the operating collection trench system, with approximately 75% of the flow from the shallow zone with 25% from the deep zone.

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Laboratory samples were shipped to ALS Environmental Laboratories for analysis, and the drum was shipped to Xylem Water Solutions (Xylem; formally known as Evoqua) in Bellefonte, Pennsylvania for bench-scale RSSCT testing in accordance with standard chain-of-custody requirements, including DOT labeling and shipping requirements.

Table 4-1 Analytical Suite

Group	Analytes	Purpose / Notes
General Chemistry	Field: pH, temperature, oxidation-reduction potential, conductivity, turbidity Laboratory: total dissolved solids	Overall water quality context; scaling/fouling indicators
VOCs	EPA Method 8260	Identify volatile co-contaminants
PFAS	EPA Method 537 Mod or ASTM 7979	Primary contaminants of concern; treatment design basis
SVOCs	EPA Method 8270	Identify semi-volatile co-contaminants
Metals (total & dissolved)	Iron, manganese, calcium, magnesium, sodium, potassium (EPA Method 6020/6010)	Fe/Mn fouling; Ca/Mg hardness; Na/K ionic strength
Competing Anions	Sulfate, chloride, alkalinity (as CaCO ₃), fluoride	Compete for IX resin exchange sites; reduce capacity
Silica	Reactive silica	Potential foulant for IX/GAC; pretreatment trigger
Hardness	As CaCO ₃	Scaling tendency; informs pre-treatment
TOC/DOC	Total Organic Carbon, Dissolved Organic Carbon	Compete for GAC and IX resin adsorption sites; shorten bed life
Oil & Grease	EPA Method 1664	Fouling potential for IX/GAC
Other Indicators	Arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc (EPA Method 6020) Mercury (EPA Method 245.1)	Sanitary sewer pretreatment requirements

Table 4-2 Water Collection Volumes

Drum	Representative Area	Monitoring Well	Volume Collected
(1) 30-gallon HDPE drum	Eastern Collection Trench, Deep Zone	MW-04-151(15-20)	3.5 gallons
	Eastern Collection Trench, Shallow Zone	MW-04-151(4-9)	11.5 gallons
	Southern Collection Trench, Deep Zone	SB-04-49(13-18)	3.5 gallons
	Southern Collection Trench, Shallow Zone	SB-04-46(4-9)	11.5 gallons

Analytical results for the four wells are shown in **Table 1** and laboratory reports are included in **Appendix C**. A combined influent concentration was calculated based on the percentage contribution from each of the wells. Since some degree of volatilization may occur during transport of the drum from the field to the lab, the drum water was sampled for the **Table 4-1** analytical suite again at the start of the RSSCT on January 20, 2026. The calculated field baseline influent was compared to the drum water used as the RSSCT influent with the following observations:

- PFAS concentrations for the calculated influent (calculated based on the percentage contribution from each of the wells) was similar to the drum water used for the RSSCT influent.
- The low-level VOCs (13.8 µg/L total detected VOCs) was non-detect after shipment of the drum to the lab.
- TOC levels decreased from 134 mg/L (calculated from field samples) to 15 mg/L in the drum water used for the RSSCT influent.
- Iron levels decreased from 1.29 mg/L (calculated from field samples) to 0.0352 mg/L in the drum water used for the RSSCT influent.

4.2 Bench Scale Testing

Bench-scale testing was conducted using RSSCTs to provide timely results that can be scaled to full-scale design. Both RSSCTs and conventional pilot columns are recognized methods for evaluating GAC and IX performance. The RSSCT approach was selected to accelerate testing by reducing media particle size and adjusting flow conditions to mimic full-scale mass transfer behavior under assumed operating conditions. Xylem's UltraCarb® 1240LD (GAC) and APR-2 (IX resin) were selected for testing.

RSSCTs are useful during pre-design evaluations because they require relatively small water volumes (tens of gallons rather than hundreds to thousands) and provide quick turnaround for comparing media types (weeks rather than months). This supports evaluation of treatment media, O&M cost estimates, and full scale design parameters in a relatively short time frame.

Table 4-3 summarizes general full scale operating conditions used solely for RSSCT scaling purposes along with the corresponding bench scale test parameters.

Table 4-3 Design Parameters

General	Units	GAC	IX Resin
Full-Scale Design Parameters			
Mesh size	none	12 x 40	16 x 40
Vessel diameter	ft	4	3
Volume of media per vessel	ft ³	68	30
Media bed depth	ft	5.4	4.2
Flowrate	gpm	20	20
Hydraulic loading rate	gpm/ft ²	1.6	2.8
Empty bed contact time	min	25.5	11.2
Bench-Scale Design			
Mesh Size	none	170 x 200	120 x 170
Column diameter	cm	0.476	0.476
Volume of media per column	mL	1.42	0.713
Media bed depth	cm	8.0	4.0
Flowrate	mL/min	7.4	2.0
Empty bed contact time	min	0.19	0.36

cm = centimeter; ft = feet; ft³ = cubic feet; gpm = gallons per minute; gpm/ft² = gallons per minute per square foot; min = minute; mL/min = milliliter per minute

Xylem received the 30-gallon HDPE drum of Site water on December 12, 2025. The drum was transferred to stainless steel pressure vessel and stored in refrigeration until Xylem was able to start the test on January 20, 2026. Prior to running through the column, Site water was filtered through a 0.45-micron filter to prevent solids entrainment in the media which can lead to excessive pressure within the columns.

4.3 Results

RSSCTs were conducted to evaluate the performance of UltraCarb 1240LD GAC and APR-2 IX resin for the treatment of PFAS-impacted groundwater. The results provide estimates of bed volumes (BV) treated prior to compound breakthrough above regulatory thresholds (i.e., City of Flint Sanitary Sewer Discharge Limits – herein after Discharge Limits), allow projection of operating intervals under full-scale design conditions, and provide insight into full-scale design parameters. The RSSCT Report provided by Xylem is included in **Appendix D**, of this report includes a more detailed documentation of the results such as breakthrough curves, mass transfer, and analytical data. The following section summarizes the results.

The PFAS data were compared to the Discharge Limits, provided in **Table 4-4**

4.3.1 Influent PFAS Concentrations

Influent PFAS concentrations were characterized using samples collected prior to and during operation of the RSSCT system. A sample of groundwater was collected prior to filtration (“Raw” on **Table 4-4**), and two samples were collected after the 0.45-micron filter (IN-01 and IN-02 on **Table 4-4**) during the RSSCT testing period. IN-01 was the influent sample collected at the start of the column test and IN-02 is the final influent sample, collected at the end of the column test. **Table 4-4** provides a summary of the influent concentrations of those PFAS compounds compared to Discharge Limits.

Table 4-4 RSSCT Influent PFAS Concentrations

PFAS	Raw	IN-01	IN-02	Discharge Limits
HFPO-DA	<1.22	<11.5	<11.5	370
PFBS	440	405	414	420
PFHxS	13,500	12,800	17,200	51
PFOS	39,600	2,220	16,600	16
PFHxA	1,700	2,450	2,370	400,000
PFOA	1,150	1,570	1,720	8
PFNA	113	107	113	6

Notes:

All concentrations are in nanograms per liter

Bold = compound detected above reporting limit

< = compound concentration is less than reporting limit

Comparison of the raw groundwater sample and the filtered influent samples indicates variability in measured concentrations for several PFAS compounds. The filtration step removed a portion of the long-chain perfluorosulfonic acids, such as PFOS, resulting in lower concentrations in the filtered influent samples relative to the raw water sample. The second filtered influent sample (IN-02), collected at the end of testing, exhibited higher concentrations for several compounds compared to the initial filtered sample (IN-01), which may reflect the pre-filters diminishing capacity to remove certain PFAS compounds over time.

The observed variability in influent concentrations is relevant for interpretation of the RSSCT results because breakthrough curves and normalized effluent concentrations are calculated relative to the measured influent values. Variability in influent concentrations can influence the apparent timing of breakthrough for certain compounds, particularly when influent concentrations change during the course of testing. For this reason, influent concentrations measured during the RSSCT were used to normalize the effluent concentration data for evaluation of media performance. That is, the effluent concentration of each PFAS compound was divided by the average of the influent concentration when calculating 50% breakthrough as presented in Section 4.3.2.

4.3.2 Estimated Bed Volumes Treated Under Site-Specific Chemistry

Treatment capacity of the media were assessed for two cases: 1) until 50% concentration breakthrough, and 2) until Discharge Limits were exceeded.

The number of bed volumes to 50 percent breakthrough were calculated using normalized effluent concentrations relative to influent concentrations measured during the RSSCT. These values represent the approximate equilibrium loading limits for each compound under the tested groundwater chemistry. While operational limits are often established below this threshold, a 50% breakthrough is routinely used as a reference point for evaluating resin performance across different constituents. Consequently, the 50% breakthrough was assessed for all

detected PFAS compounds, not solely those meeting Discharge Limits, to demonstrate various scenarios regarding PFAS-related capacity. Bed volumes treated to 50 percent breakthrough for detected PFAS compounds are summarized in **Table 4-5** below.

Table 4-5 BVs to 50% Breakthrough

PFAS	GAC	IX Resin
	BVs to 50% Breakthrough	
PFBA	855 - 1772	3,449 - 9,465
PFPeA	1,772	3,449 - 9,465
PFHxA	3,699	14,719 - 20,295
PFHpA	3699 - 7189	30,435
PFOA	7,189	>42,703
PFNA	9,684	>42,703
PFBS	3,699	>42,703
PFPeS	7,189	>42,703
PFHxS	7,189	>42,703
PFHpS	>19,725	>42,703
PFOS	>19,725	>42,703
PFBSA	3,699	9,465 - 14,719
PFHxSA	7,189 - 9,684	42,703
5:3 FTCA	>3,699*	0 - 3,449

Notes:

> = greater than

* = 50% breakthrough could not be defined due to elevated reporting limits

For the GAC media, as generally expected, shorter-chain perfluorocarboxylic acids exhibited earlier breakthrough relative to longer-chain compounds. PFBA and PFPeA reached 50 percent breakthrough between approximately 855 and 1,772 BV. Longer-chain compounds including PFOS and PFHpS did not reach the 50 percent breakthrough threshold within the test duration. For the IX resin, several PFAS compounds did not reach 50 percent breakthrough during the test period, which ended at 42,703 BV.

For those PFAS compounds with Discharge Limits less than their detected influent concentrations (i.e., PFBS, PFHxS, PFOS, PFOA, and PFNA), the following table provides the estimated number of BVs prior to breakthrough above their respective Discharge Limit. **Table 4-6** summarizes the number of bed volumes processed until the effluent of the column exceeded Discharge Limits.

Table 4-6 BVs to Breakthrough Above Discharge Limits

PFAS Compound	GAC	IX Resin
	BVs to > Discharge Limit	
PFBS	9,684	>42,703
PFHxS	1,772	>42,703
PFOS*	2,776	>42,703
PFOA	1,772	20,295
PFNA*	3,699	>42,703

*Reporting limits for these PFAS compounds were higher than Discharge Limits

4.3.3 Comparative Performance of GAC and Ion Exchange

The RSSCT results show differences in the treatment capacity of the tested media under the evaluated groundwater chemistry. Breakthrough trends observed in the RSSCT follow expected adsorption behavior in which longer-chain PFAS compounds and perfluorosulfonic acids exhibit later breakthrough relative to shorter-chain perfluorocarboxylic acids of similar chain length. The GAC media exhibited earlier breakthrough for all PFAS compounds with Discharge Limits, relative to IX.

4.3.4 Media Exhaustion Rates and Projected Changeout Frequencies

Media changeout frequency is dependent on the influent flow rate, media's performance, and the operational endpoint selected. Groundwater modeling efforts are currently underway to evaluate the range of potential influent flow rates to inform the full-scale design. Current understanding is that steady-state flow rates into the treatment system are expected to be in the range of 15 to 20 gpm. In order to provide insight on potential change out frequencies, media exhaustion rates were evaluated for PFAS compounds with Discharge Limits at a steady-state flow rate of 20 gpm through vessels sized as summarized in Table 4-3 (approximately 57 BV per day). This evaluation is for screening purposes only to ensure GAC and IX Resin can be relied upon to meet the Discharge Limits at reasonable change out frequencies. These should not be considered final full-scale design parameters.

For the GAC column, PFHxS and PFOA were the first compounds to exceed their Discharge Limit at approximately 1,772 BV (Table 4-7). Based on the assumed full-scale operating flow rate of 20 gpm, the approximate timeframe for the GAC media to exceed Discharge Limits is approximately 31 days.

For the IX resin column, PFOA was the only compound to approach the Discharge Limit, with breakthrough occurring at approximately 20,295 BV. The test concluded after 42,703 BV without reaching the Discharge Limits for any of the other PFAS with limits. Note that the reporting limits for PFNA and PFOS were slightly higher than their Discharge Limit. Specifically, for PFNA the reporting limit was 8.68 ng/L versus the Discharge Limit of 6 and for PFOS the reporting limit was 8.98 ng/L versus a Discharge Limit of 8 ng/L. Based on the assumed full-scale operating flow rate of 20 gpm through vessels sized as summarized in Table 4-3 (approximately 128 BV per day), approximate timeframe for the IX media to exceed Discharge Limits is approximately 158 days.

While RSSCT results provide estimates of treatment performance based on scaled column testing, RSSCT systems often show earlier initial breakthrough relative to pilot or full-scale systems due to the smaller particle sizes used during testing. Additionally, in a full-scale application, groundwater will be pre-treated prior to GAC and IX treatment. Therefore, it is expected that these breakthrough estimates are conservative.

Geochemistry parameters are provided in Table 1. In general, the chemistry of the water appears to be amenable for PFAS treatment with both GAC and IX. Hardness, alkalinity, TOC, and manganese were detected at elevated concentrations. Elevated concentrations of hardness, alkalinity, iron, manganese, and TOC have the potential to cause reductions in PFAS treatment capacity because they compete for sorption capacity within the media and/or can result in fouling of media requiring pre-mature media change out (i.e. in this case, change out before actual breakthrough of PFAS occurs). No apparent treatment issues were observed during the RSSCT. However, pre-treatment methods addressing iron, manganese, hardness, and alkalinity will be included in the full-scale design.

4.3.5 Media Selection

Due to the IX resin's higher PFAS capacity and longer operational timeline until changeout, it is recommended that IX resin be carried forward as the primary PFAS treatment media for the full-scale design.

To extend IX resin bed life, GAC is recommended prior to IX to provide pre-treatment for non-target groundwater constituents such as TOC. Pre-treatment of TOC with GAC will be important in the full-scale system because:

- Data suggests the TOC in the influent water to the RSSCT was lower than what might be expected in the full-scale application, and
- TOC can reduce the capacity of IX resin to remove PFAS by adsorbing to the IX resin surface and, in some cases, compete for ion exchange sites.

The RSSCT focused on PFAS removal by GAC. It is important to note that in the full scale system, GAC would be implemented as a method for pre-treatment to extend the life of the IX Resin and not to treat PFAS to below their Discharge Limit. Applying GAC as a pre-treatment method allows removal of some of the PFAS load as well as organics onto a more cost-effective media, improving water quality and protecting downstream IX resin from premature fouling and reduced efficiency.

4.3.6 Design-Relevant Parameters for Full-Scale Implementation

Two of the most critical engineering parameters for informing the full-scale design of adsorptive-based media are empty bed contact time (EBCT) and hydraulic loading requirements (HLR). The following section describes these parameters, and how the results of the RSSCT will inform the full-scale design using GAC as pre-treatment, and IX as the primary PFAS treatment media.

The volume of adsorptive media required for a given water treatment system is a function of influent concentrations, contaminant type, treatment objectives, and the required EBCT to effectively remove the targeted contaminants. The EBCT is calculated by dividing the volume of treatment medium by the volumetric flow rate. Too low of an EBCT and PFAS compounds may not be effectively removed from water and too high of an EBCT may lead to excessive capital costs (i.e., larger than necessary vessels and treatment media). For PFAS treatment using IX the minimum manufacturer recommended EBCT requirement is 2 minutes. Given the elevated PFAS concentrations, the EBCT tested during the RSSCTs for IX was approximately 11 minutes. The results of the testing showed that an 11 minute EBCT is sufficient to remove PFAS with IX and will be used to inform the full-scale design.

HLR is a measure of the flow rate divided by the cross-sectional area of the pressure vessel housing the adsorptive media, with units expressed in gpm/ft². This engineering parameter varies as a function of the size of the media, with larger particle requiring lower HLR values and smaller particle requiring higher HLR values. Too low of an HLR can result in channeling of water through the media, whereby water does not flow uniformly across the cross-sectional surface of the media bed, resulting in expedited breakthrough and excessive operational costs. Too high of an HLR can result in excessive pressure drop conditions, and in some cases, can cause the media to become deformed or damaged. For IX, the manufacturer recommended HLR range is 6-18 gpm/ft². For the RSSCT, IX had an HLR of 2.8 gpm/ft² and was operated in an upflow (ie, bottom up) configuration to ensure no air would be entrained within the column. The results show that IX can remove PFAS at lower HLR when operated in an upflow configuration, however, in the full-scale design the flow configuration will be evaluated for both upflow and downflow (ie, top down). If a downflow configuration is found to be more desirable from a hydraulics perspective, the IX HLR will be increased to between 6-18 gpm/ft² to ensure uniform flow conditions. It should be noted that the flow configuration (ie, upflow versus downflow) does not impact the removal mechanism or kinetics of PFAS removal.

Understanding potential pre-treatment needs is important for the full-scale design. As noted, non-target constituents that have the potential to reduce treatment capacity for PFAS and/or create operational issues (i.e. fouling) were identified as part of the RSSCT. While elevated concentrations of these non-target constituents had no apparent impact on the RSSCT, pre-treatment for these constituents in addition to GAC will be considered during the full-scale design.

4.3.7 Conclusions

As discussed in the Work Plan, careful consideration was given to the selection of vertical wells for the collection of water for the RSSCT. The vertical wells selected and mix ratios were specifically designed to provide a conservative but realistic mix of groundwater from across the alignment of the future groundwater collection trench, based on the current Site conceptual model. Even with this careful consideration, the biggest uncertainty associated with the full-scale design is the actual concentration of PFAS and other non-target constituents from the trench once constructed. Pilot testing was considered, however, it would not be able to reduce this uncertainty since any short-term field pilot testing would be run with water collected from vertical wells.

Overall, the RSSCT results provided sufficient information to:

- Confirm robust performance of the GAC and IX resin to reduce PFAS concentrations to below City of Flint Discharge Limits at a reasonable change out frequency
- Identify GAC as a robust pre-treatment method that can be used to extend the life of the IX resin by reducing the PFAS load. It is also expected that GAC will remove organics onto a more cost-effective media and reduce the potential for fouling of the IX resin by TOC
- Demonstrate IX resin is the preferred PFAS treatment media
- Define appropriate EBCT and HLR design ranges for IX resin treatment of PFAS
- Identify non-target COCs that require pre-treatment considerations

Therefore, the recommended path forward with respect to the water treatment component of the proposed interim measure is to proceed with the full-scale design without further RSSCT or field pilot testing.

5 Path Forward

The information obtained from the PDI work has been shared with EGLE during regularly scheduled project progress calls and is described in more detail in this report. The PDI work has provided adequate information to move forward with the full-scale design of the proposed interim measure. Specifically, the data collected related to geophysics and soil borings completed will support the buildability assessment and design of the collection trench depth and alignment. The RSSCT data will support the design of the groundwater treatment system. An Interim Measure Work Plan (IM WP) will be developed and submitted to EGLE to document the basis of design and the full-scale design for the collection trench and groundwater treatment system. The IM WP is targeted for submittal to EGLE in summer of 2026.

6 References

Arcadis. 2026. RACER Buick City Building 44 Tracer Test. February 3.

Table

Table 1
RSSCT Influent Analytical Data
RACER Trust
Buick City
Flint, Michigan

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Location ID (screened ft bgs):	Units	MW-04-151(15-20)	MW-04-151(4-9)	SB-04-46(4-9)	SB-04-49(13-18)	Calculated Influent	RSSCT Influent
% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
Anions							
Bromide	mg/L	0.152 J	0.0830 J	0.123 J	0.103 J	0.109	0.128 J
Chloride	mg/L	27.0	10.7	11.7	10.5	13.0	17.9
Fluoride	mg/L	0.184	0.104	0.325	0.276	0.218	0.147
Sulfate	mg/L	58.1	23.6	30.0	4.94	27.9	29.8
General Chemistry							
Silica, Dissolved	mg/L	19.0	16.7	35.0	34.6	26.1	21.8
Alkalinity, Bicarbonate	mg/L	532	477	349	334	418	405
Alkalinity, Carbonate	mg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
Calcium carbonate	mg/L	532	477	349	334	418	405
Hardness, carbonate	mg/L	200	420	380	300	365	340
Hydroxide Alkalinity	mg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
Phenolphthalein Alkalinity	mg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
Total dissolved solids (TDS)	mg/L	677	440	313	340	407	617
Total suspended solids (TSS)	mg/L	4.60	9.70	1.22	21.1	7.2	1.20 J
Metals							
Arsenic	mg/L	0.00587	0.00126	0.00214	0.000561 J	0.00205	0.000992 J
Arsenic (dissolved)	mg/L	0.00281	0.000486 J	0.000675 J	0.000939 J	0.00088	0.000927 J
Barium	mg/L	0.0885	0.0836	0.0663	0.0724	0.0762	0.0837
Barium (dissolved)	mg/L	0.0828 B	0.0653 B	0.0733	0.0602 B	0.0698	0.0791
Cadmium	mg/L	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199
Cadmium (dissolved)	mg/L	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199
Calcium	mg/L	57.7	140	109	68.1	110.1	103
Calcium (dissolved)	mg/L	56.5	66.5	92.7	98.3	79.1	99.8
Chromium	mg/L	< 0.001000	< 0.001000	< 0.001000	< 0.001000 B	< 0.001000	< 0.001000
Chromium Total (dissolved)	mg/L	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000
Copper	mg/L	< 0.001000	0.000660 J	< 0.001000	< 0.001000 B	0.000561	0.00246
Copper (dissolved)	mg/L	< 0.001000	0.000733 J	0.000774 J	0.000866 J	0.000737	0.00135
Iron	mg/L	1.47	1.13	1.35	1.46	1.29	0.0352
Lead	mg/L	< 0.001000	< 0.001000	< 0.001000	0.000455 J	0.000495	< 0.001000
Lead (dissolved)	mg/L	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000
Magnesium	mg/L	12.3	25.7	19.7	25.7	21.8	21.7
Magnesium (dissolved)	mg/L	12.7	25.6	23.9	20.3	22.8	21.2
Manganese	mg/L	0.0230	2.21	0.747	0.138	1.152	0.820

Table 1
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RACER Trust
Buick City
Flint, Michigan

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Location ID (screened ft bgs):	Units	MW-04-151(15-20)	MW-04-151(4-9)	SB-04-46(4-9)	SB-04-49(13-18)	Calculated Influent	RSSCT Influent
% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
Manganese (dissolved)	mg/L	0.0199	0.123	0.362	0.427	0.238	0.774
Mercury	mg/L	< 0.000195 S	< 0.000195 S	< 0.000195 S	< 0.000195 S	< 0.000195	< 0.000195
Potassium	mg/L	9.76	13.9	21.5	23.6	17.5	18.3
Potassium (dissolved)	mg/L	9.92	23.0	13.8	20.6	17.7	17.3
Selenium	mg/L	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000
Selenium (dissolved)	mg/L	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000	< 0.001000
Silver	mg/L	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199	0.000304
Silver (dissolved)	mg/L	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199	< 0.000199
Sodium	mg/L	228	52.6	27.4	43.7	62.4	72.9
Sodium (dissolved)	mg/L	237 B	44.3 B	51.9	28.2 B	67.8	70.6
Zinc	mg/L	< 0.01000	< 0.01000	< 0.01000	< 0.01000	< 0.01000	< 0.001000
Zinc (dissolved)	mg/L	< 0.01000	< 0.01000	< 0.01000	< 0.01000	< 0.01000	< 0.001000
PFAS							
11CI-PF3OUdS (F-53B Minor)	ng/L	< 5.21	< 5.12	< 5.13	< 5.12	< 5.15	< 5.22 S
4:2 FTS	ng/L	< 5.21	< 5.12	< 5.13	< 5.12	< 5.15	< 5.22
6:2 FTS	ng/L	2.57 J	< 5.12	< 5.13	3.21 J	2.64	< 5.22
8:2 FTS	ng/L	< 5.21	< 5.12	< 5.13	< 5.12	< 5.15	< 5.22
9CI-PF3ONS (F-53B Major)	ng/L	< 5.21	< 5.12	< 5.13	< 5.12	< 5.15	< 5.22 S
ADONA	ng/L	< 5.21	< 5.12	< 5.13	< 5.12	< 5.15	< 5.22 S
FHpPA (7:3 FTCA)	ng/L	< 5.21	< 5.12	< 5.13	< 5.12	< 5.15	< 5.22 S
FPePA (5:3 FTCA)	ng/L	22.2	7.04	22.8	84.4	23.9	27.9
FPrPA (3:3 FTCA)	ng/L	< 5.21 S	< 5.12 S	< 5.13 S	4.72 JS	2.82	< 5.22
HFPO-DA (GenX)	ng/L	< 5.21	< 5.12	< 5.13	1.62 J	2.46	< 5.22
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ng/L	< 5.21	< 5.12	1.87 J	1.87 J	2.22	2.04 J
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ng/L	< 5.21	< 5.12	2.00 J	6.04	2.76	1.68 J
Perfluorobutanesulfonic acid (PFBS)	ng/L	521	14.7 S	46.9 S	731	170	440
Perfluorobutanoic acid (PFBA)	ng/L	114	24.9	52.5	420	92	142
Perfluorodecanesulfonic acid (PFDS)	ng/L	< 5.21	< 5.12	7.50	11.6	5.51	4.88 JS
Perfluorodecanoic acid (PFDA)	ng/L	< 5.21	< 5.12	76.0	26.6	33.52	35.3
Perfluoroheptanesulfonic Acid (PFHpS)	ng/L	337	8.49	223	5630	785	945
Perfluoroheptanoic acid (PFHpA)	ng/L	279	50.6	165	588	184	342
Perfluorohexanesulfonic acid (PFHxS)	ng/L	7480	383	1610	65500	9278	13500
Perfluorohexanoic acid (PFHxA)	ng/L	893	77.5	455	6580	1076	1700
Perfluorononanesulfonic acid (PFNS)	ng/L	13.6	< 5.12	237	461 J	147	344

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% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
Perfluorononanoic acid (PFNA)	ng/L	9.18	112	145	141	116	113 S
Perfluorooctane Sulfonamide (FOSA)	ng/L	< 5.21	< 5.12	22.7	131	25.3	19.9
Perfluorooctane sulfonic acid (PFOS)	ng/L	8630	193	17400	248000	36684	39600
Perfluorooctanoic acid (PFOA)	ng/L	763	129	410	4950	873	1150
Perfluoropentanesulfonic acid (PFPeS)	ng/L	825	21.8	106	2690	459	898
Perfluoropentanoic acid (PFPeA)	ng/L	222 S	41.0 S	157 S	851	201	365
Perfluoroundecanoic acid (PFUnA)	ng/L	< 5.21	< 5.12	3.03 J	< 5.12	2.75	1.29 J
PFBSA	ng/L	95.1	5.36	63.3	654	114	186
PFECHS	ng/L	37.7	2.66 J	15.3	176 J	31.8	161
PFHxSA	ng/L	576	4.43 J	2980	46900	6683	5080
SVOCs							
1,2,4,5-Tetrachlorobenzene	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00 S
1,4-Dioxane	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00
1-Methylnaphthalene	µg/L	< 0.107	< 0.104	< 0.102	0.0990 J	0.0573	0.110 S
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2,3,4,6-Tetrachlorophenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2,4,5-Trichlorophenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2,4,6-Trichlorophenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2,4-Dichlorophenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2,4-Dimethylphenol	µg/L	0.490 J	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2,4-Dinitrophenol	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00 S
2,4-Dinitrotoluene	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.600 JS
2,6-Dinitrotoluene	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.580 JS
2-Chloronaphthalene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.1000 JS
2-Chlorophenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2-Methylnaphthalene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.110 S
2-Methylphenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00
2-Nitroaniline	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
2-Nitrophenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
3&4-Methylphenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00
3,3'-Dichlorobenzidine	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00 S
3-Nitroaniline	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
4,6-Dinitro-2-methylphenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.610 JS
4-Bromophenyl phenyl ether	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S

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% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
4-Chloro-3-methylphenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
4-Chloroaniline	µg/L	< 1.07 S	< 1.04 S	< 1.02 S	< 1.00 S	< 1.03 S	< 1.00
4-Chlorophenyl phenyl ether	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
4-Nitroaniline	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.410 JS
4-Nitrophenol	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00
Acenaphthene	µg/L	< 0.107	< 0.104	< 0.102	0.148	0.0630	0.120 S
Acenaphthylene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 1.03	0.130 S
Acetophenone	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Anthracene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 1.03	0.300 S
Atrazine	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.430 JS
Benzaldehyde	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Benzo(a)anthracene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.370 S
Benzo(a)pyrene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.420 S
Benzo(b)fluoranthene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.410 S
Benzo(g,h,i)perylene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.420 S
Benzo(k)fluoranthene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.360 S
Biphenyl (1,1-Biphenyl)	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
bis(2-Chloroethoxy)methane	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
bis(2-Chloroethyl)ether	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.810 JS
Butyl benzylphthalate (BBP)	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.790 JS
Caprolactam	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00
Carbazole	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Chrysene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.380 S
Dibenz(a,h)anthracene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.410 S
Dibenzofuran	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Diethyl phthalate	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Dimethyl phthalate	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Di-n-butylphthalate (DBP)	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.620 JS
Di-n-octyl phthalate (DnOP)	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	0.780 JS
Fluoranthene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.420 S
Fluorene	µg/L	< 0.107	< 0.104	< 0.102	0.109	0.0584	0.230 S
Hexachlorobenzene	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Hexachlorobutadiene	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S

Table 1
RSSCT Influent Analytical Data
RACER Trust
Buick City
Flint, Michigan

DRAFT



Location ID (screened ft bgs):	Units	MW-04-151(15-20)	MW-04-151(4-9)	SB-04-46(4-9)	SB-04-49(13-18)	Calculated Influent	RSSCT Influent
% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
Hexachlorocyclopentadiene	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 1.00 S
Hexachloroethane	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 5.00 S
Indeno(1,2,3-cd)pyrene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.430 S
Isophorone	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00 S
Methylphenol (cresol)	µg/L	< 2.13	< 2.08	< 2.04	< 2.00	< 2.06	< 2.00
Naphthalene	µg/L	< 0.107	< 0.104	< 0.102	0.188	0.068	< 0.100 S
Nitrobenzene	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
N-Nitrosodi-n-propylamine	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
N-Nitrosodiphenylamine	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00 S
Pentachlorophenol	µg/L	< 5.33	< 5.19	< 5.11	< 5.00	< 5.16	< 5.00 S
Phenanthrene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.300 S
Phenol	µg/L	< 1.07	< 1.04	< 1.02	< 1.00	< 1.03	< 1.00
Pyrene	µg/L	< 0.107	< 0.104	< 0.102	< 0.100	< 0.103	0.370 S
Pyridine	µg/L	< 10.7	< 10.4	< 10.2	< 10.0	< 10.3	< 10.0
TOC							
Dissolved organic carbon (DOC)	mg/L	55.4 HS	43.9 H	34.9 H	31.8 H	40.4	6.10 H
Total organic carbon (TOC)	mg/L	185	149	112	106	134	15.0
TPH							
Oil and grease	mg/L	3.46 J	3.46 J	< 4.81	< 4.90	2.94	6.92
VOCs							
1,1,1-Trichloroethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1,2-Trichloroethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1-Dichloroethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1-Dichloroethene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2,3-Trichlorobenzene	µg/L	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
1,2,3-Trichloropropane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2,4-Trichlorobenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2,4-Trimethylbenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dibromoethane (Ethylene dibromide)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichloroethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichloroethene (total)	µg/L	4.06	< 2.00	< 2.00	< 2.00	1.36	< 2.00

Table 1
RSSCT Influent Analytical Data
RACER Trust
Buick City
Flint, Michigan

DRAFT



Location ID (screened ft bgs):	Units	MW-04-151(15-20)	MW-04-151(4-9)	SB-04-46(4-9)	SB-04-49(13-18)	Calculated Influent	RSSCT Influent
% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
1,2-Dichloropropane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3,5-Trimethylbenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichloropropene	µg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
1,4-Dichlorobenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
2-Hexanone	µg/L	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acetone	µg/L	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Benzene	µg/L	< 1.00	< 1.00	< 1.00	15.2	2.22	< 1.00
Bromodichloromethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bromoform	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bromomethane (Methyl bromide)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Carbon disulfide	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Carbon tetrachloride	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Chlorobenzene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Chlorobromomethane	µg/L	< 1.00 S	< 1.00 S	< 1.00 S	< 1.00 S	< 1.00	< 1.00
Chloroethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Chloroform (Trichloromethane)	µg/L	< 1.00 S	< 1.00 S	< 1.00 S	< 1.00 S	< 1.00	< 1.00
Chloromethane (Methyl chloride)	µg/L	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
cis-1,2-Dichloroethene	µg/L	4.06 S	< 1.00 S	< 1.00 S	< 1.00 S	0.92	< 1.00
cis-1,3-Dichloropropene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Cyclohexane	µg/L	< 2.00	< 2.00	< 2.00	2.54	1.18	< 2.00
Dibromochloromethane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dichlorodifluoromethane (CFC-12)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Ethylbenzene	µg/L	< 1.00	< 1.00	< 1.00	5.16	1.04	< 1.00
Isopropyl benzene	µg/L	< 1.00	< 1.00	< 1.00	43.3	5.5	< 1.00
m&p-Xylene	µg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
Methyl acetate	µg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00
Methyl cyclohexane	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Methyl tert butyl ether (MTBE)	µg/L	1.11	< 1.00	< 1.00	< 1.00	0.571	< 1.00
Methylene chloride	µg/L	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
o-Xylene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Styrene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

Table 1
RSSCT Influent Analytical Data
RACER Trust
Buick City
Flint, Michigan

DRAFT



Location ID (screened ft bgs):	Units	MW-04-151(15-20)	MW-04-151(4-9)	SB-04-46(4-9)	SB-04-49(13-18)	Calculated Influent	RSSCT Influent
% Contribution:		12%	38%	38%	12%	--	--
Date Collected:		12/8/2025	12/9/2025	12/9/2025	12/9/2025	12/9/2025	1/20/2026
Tetrachloroethene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Toluene	µg/L	< 1.00	< 1.00	< 1.00	0.800 J	0.535	< 1.00
trans-1,2-Dichloroethene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
trans-1,3-Dichloropropene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Trichloroethene	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Trichlorofluoromethane (CFC-11)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Trifluorotrichloroethane (Freon 113)	µg/L	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Vinyl chloride	µg/L	0.540 J	< 1.00	< 1.00	< 1.00	0.505	< 1.00
Xylene (total)	µg/L	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00

Notes:

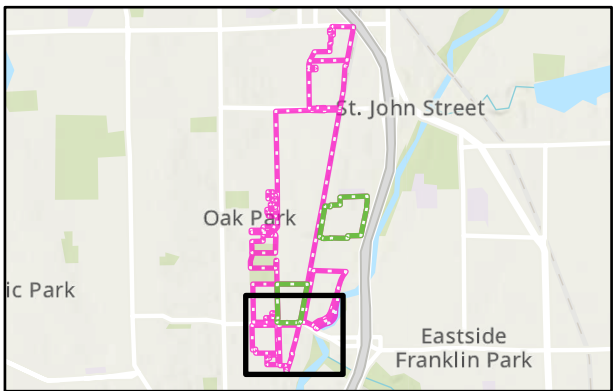
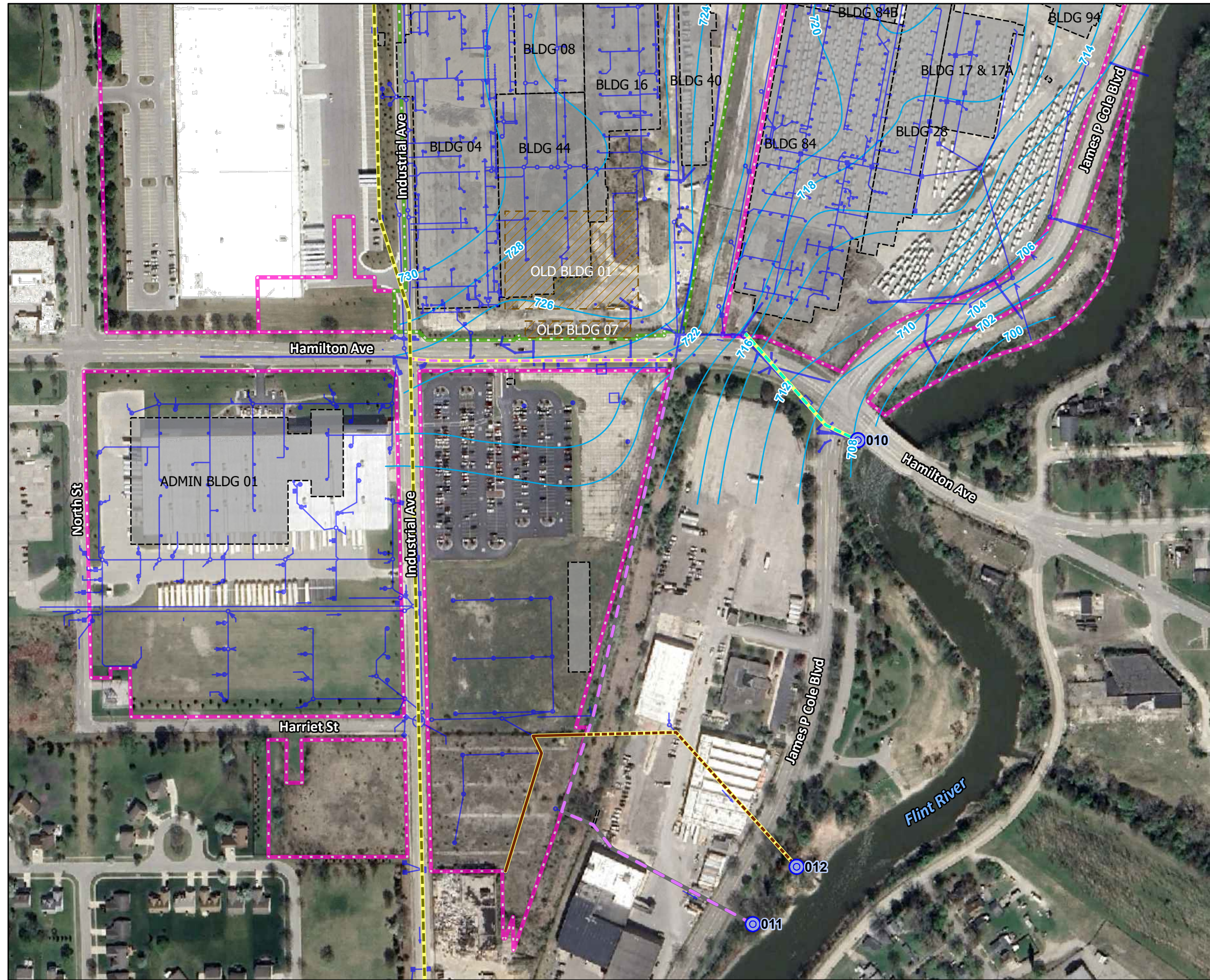
1. < denotes less than laboratory reporting limits.
2. The reporting limit (RL) or method reporting limit (MRL) is used for reporting non-detect values for all compounds.
3. Bold represents data where detections were noted.
4. Oil and Grase analyzed via EPA Method 1664.
5. PFAS analyzed via EPA Method 537 Mod.
6. Hardness analyzed via SM 2340 C-2021.
7. Total and Dissolved Metals analyzed via EPA Method 6020B.
8. Mercury analyzed via EPA Method 245.1.
9. VOCs analyzed via EPA Method 6020B.
10. SVOCs analyzed via EPA Method 8270E.
11. Dissolved Organic Carbon analyzed via EPA Method 9060A.
12. Alkalinity analyzed via SM 2320 B-2021.
13. Anions analyzed via EPA Method 9056A.
14. TDS analyzed via SM 2540 C-2020.
15. Silica analyzed via SM 4500-SiO₂ C-2011.
16. TOC analyzed via EPA 9060A.
17. Total Suspended Solids analyzed via SM 2540 D-2015.

Acronyms and Abbreviations:

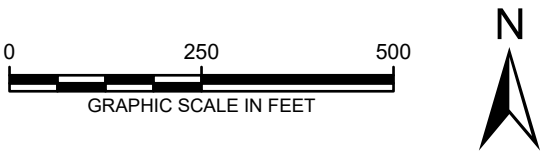
-- = not applicable
B = analyte detected in the associated method blank above the reporting limit
bgs = below ground surface
H = analyzed outside of holding time
ID = identification
J = estimated value
µg/L = microgram per liter
mg/L = milligrams per liter
ng/L = nanograms per liter
S = spike recovery outside laboratory control limits

Figures

Path: T:\ENVRACER_BuckCity_ProxFigures\PD\ Memo apr\Fig1_Site Overview Map Last Saved By: mgj01044 4/17/2026

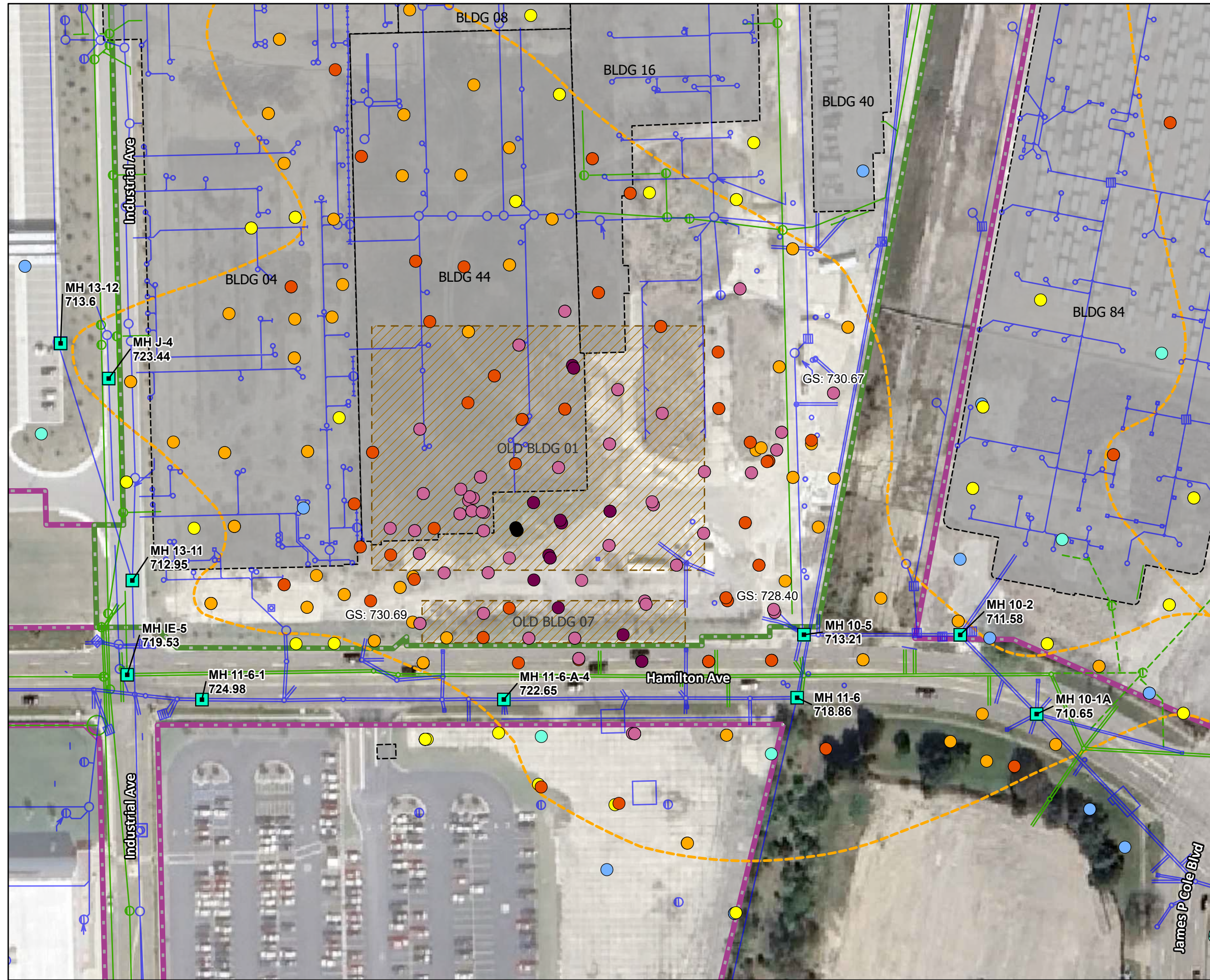


- LEGEND**
- Current RACER-owned Properties
 - Former RACER-owned Properties
 - Former Building Footprints
 - Former Building Footprints (Historical)
 - Potentiometric Surface Contour, October 2022 (ft. amsl)
 - Storm Sewer
- Storm Sewer Main**
- 010, below water table
 - 011, below water table
 - 011, insufficient elevation data
 - 012, above water table
 - 012, below water table
 - 013, below water table
 - Storm Outfall



RACER TRUST BUICK CITY FLINT, MI	
SITE OVERVIEW MAP	
ARCADIS	FIGURE 1

Path: T:\ENV\RACER_BuickCity_ProxFigures\PD\ Memo apr\Fig2_Analytical Map Last Saved By: ngl01044 4/17/2026



LEGEND

- Current RACER-owned Properties
- Former RACER-owned Properties
- Former Building Footprints
- Former Building Footprints (Historical)
- Sanitary Sewer
- Sanitary Sewer - Abandoned
- Storm Sewer

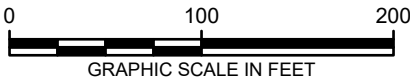
Most Recent PFOS Concentration in Groundwater

- Greater than 100000x SL
- Between 10000x SL and 100000x SL
- Between 1000x SL and 10000x SL
- Between 100x SL and 1000x SL
- Between 10x SL and 100x SL
- Between SL and 10x SL
- Detection less than SL
- Non-detect (RL > SL)
- Non-detect (RL ≤ SL)
- PFAS Groundwater Plume > 10x SL
- Manhole

Location Identifier
MH 10-2
711.58
Invert Elevation (ft amsl)*
GS: 730.67
Ground Surface Elevation (ft amsl)

- Notes:
- Symbol color represents the SL exceedance for PFOS from the most recent groundwater samples at the location.
 - SL of PFOS in groundwater and sewers is 12 ng/L, based on Michigan Part 201 Groundwater-Surface Water Interface Criteria.
 - * When more than one pipe is present in the structure, the elevation shown is the deepest.

Acronyms:
GS = ground surface
PFAS = per- and polyfluoroalkyl substances
PFOS = perfluorooctane sulfonic acid
RL = reporting limit
SL = screening level
ng/L = nanograms per liter
ft amsl = feet above mean sea level, NAVD 88
x = times
> = greater than
≤ = less than or equal to



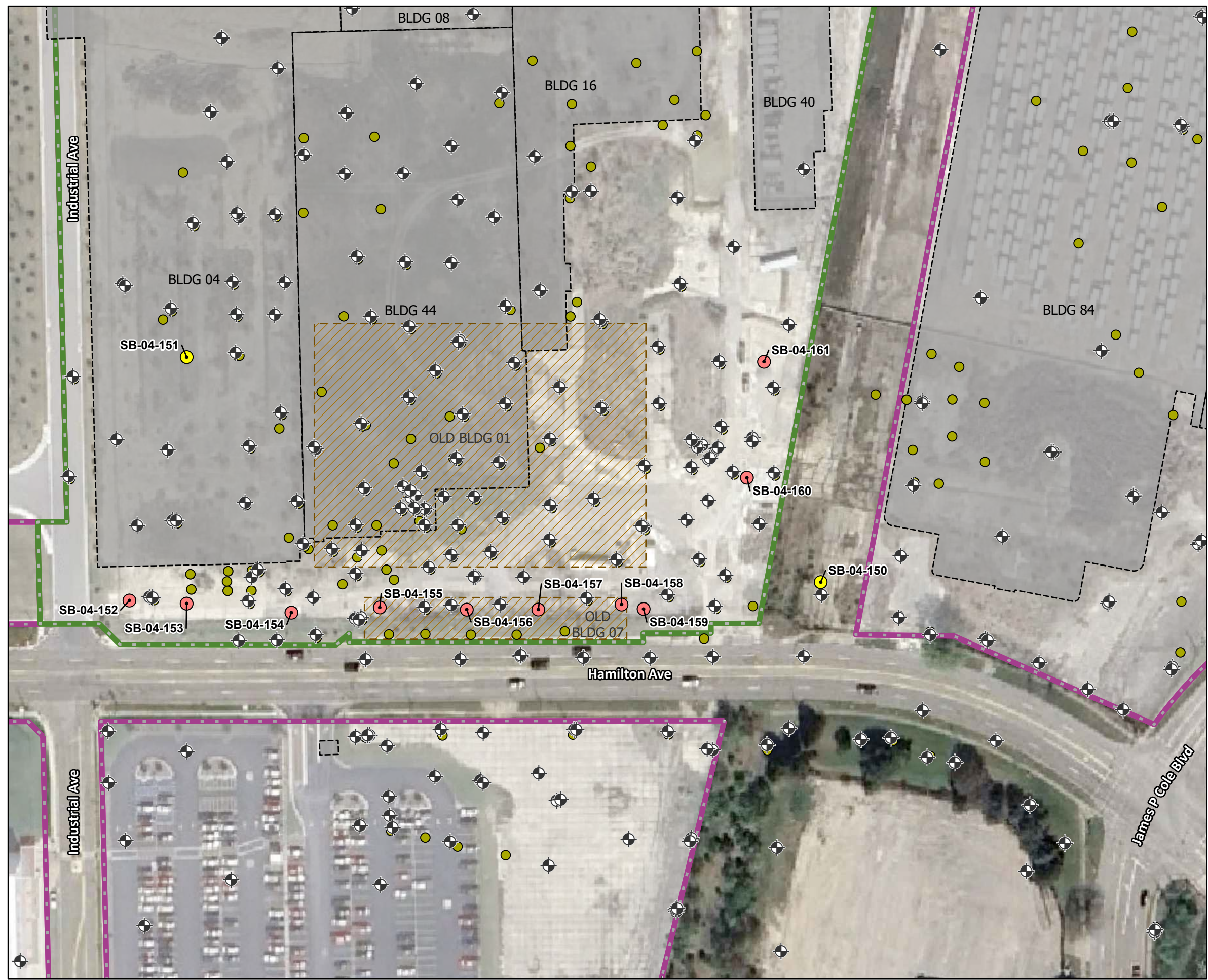
RACER TRUST BUICK CITY
FLINT, MI

PFAS GROUNDWATER ANALYTICAL MAP



FIGURE
2

Path: T:\ENVRACER_BuckCity_ProxFigures\PD\ Memo aprx\Fig3_Boring Location Map Last Saved By: mg01044 4/17/2026



LEGEND

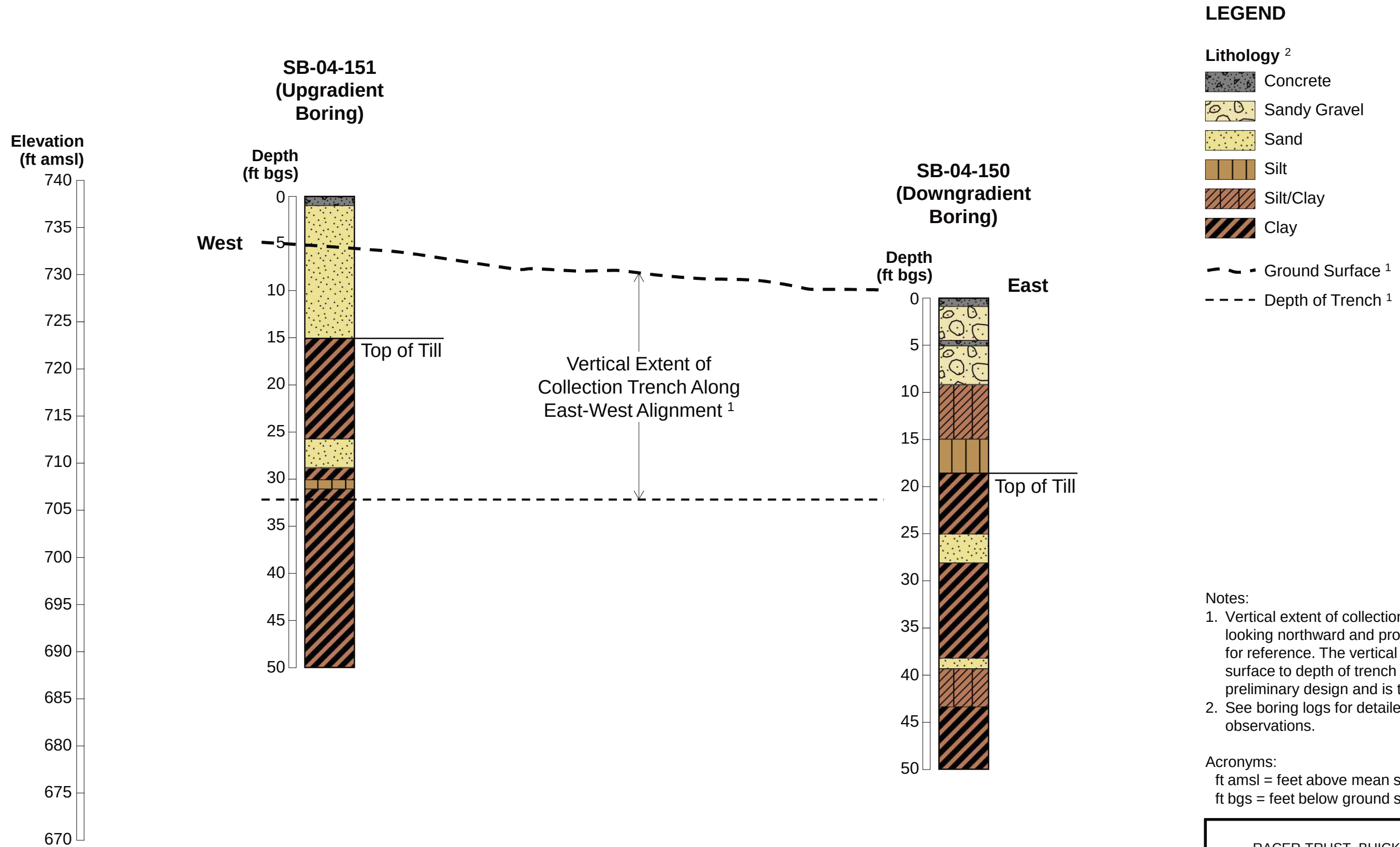
- Current RACER-owned Properties
- Former RACER-owned Properties
- Former Building Footprints
- Former Building Footprints (Historical)
- Geophysics Confirmation Soil Boring
- Vertical Delineation Soil Boring
- Other Soil Boring
- Existing Well

0 100 200
GRAPHIC SCALE IN FEET

RACER TRUST BUICK CITY
FLINT, MI

SOIL BORING LOCATION MAP

FIGURE
3

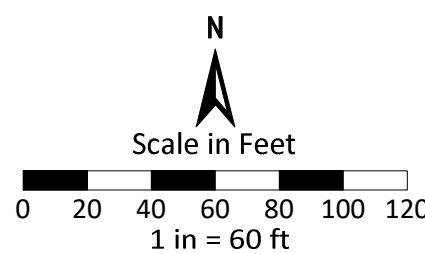
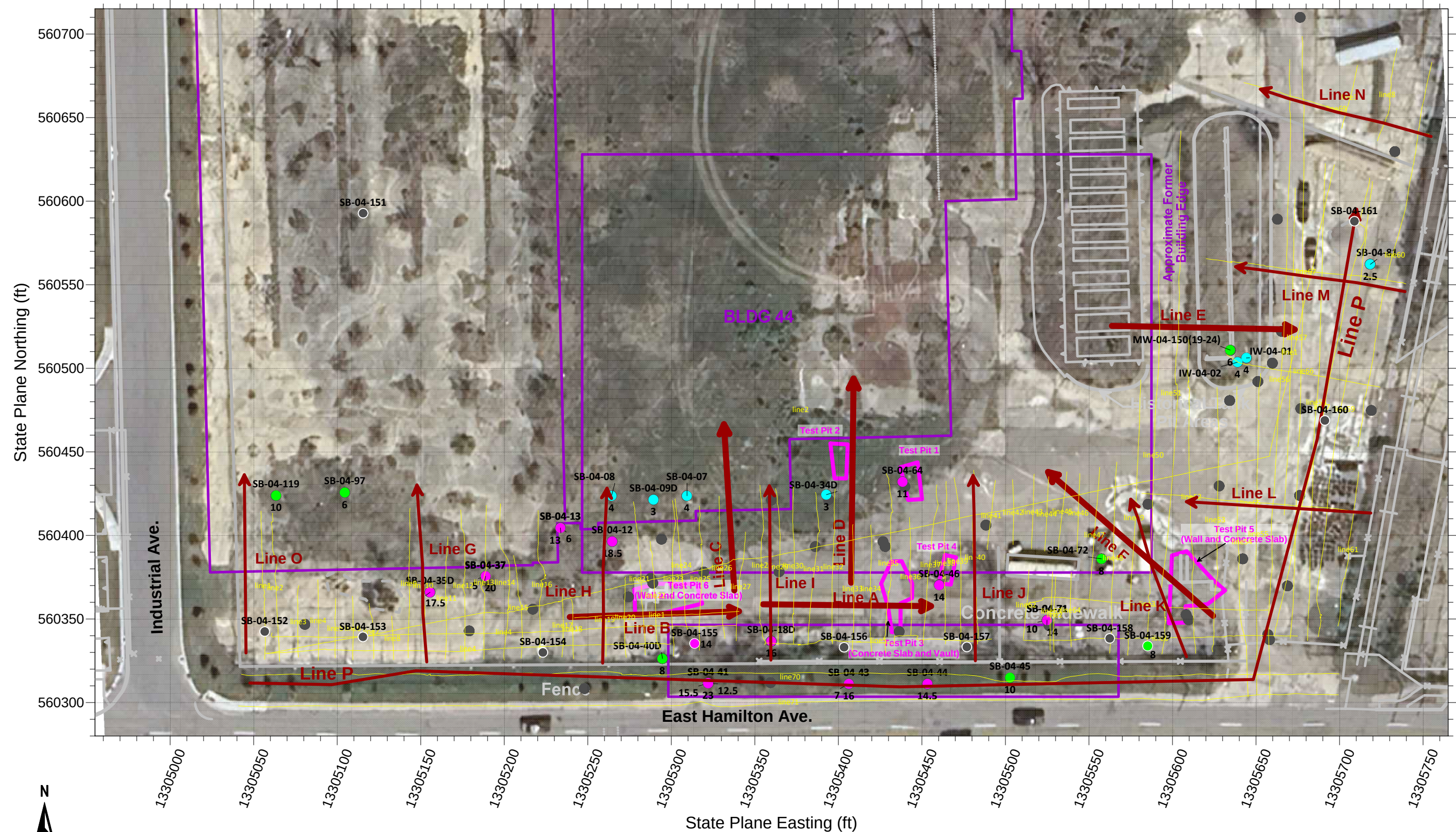


RACER TRUST, BUICK CITY, FLINT, MI

**VERTICAL DELINEATION BORING
LITHOLOGY ELEVATIONS**



FIGURE
4



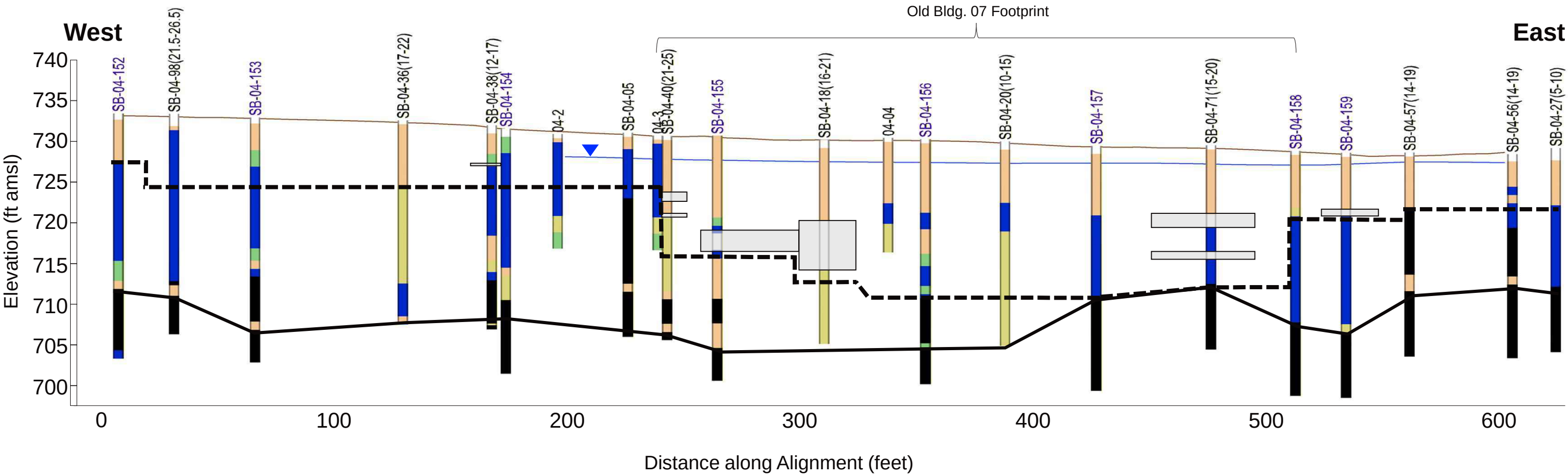
- Boring/MW (No Conc.)
- SB-04-08 Boring/MW (Conc. < 4')
- SB-04-97 Boring/MW (Conc. > 4' < 10')
- SB-04-37 Boring/MW (Conc. > 10')
- Test Pit Location
- Former Site Building
- MASW Profile Line (Thick = 2021, Thin = 2025)
- GPR Profile Line

Michigan South State Plane Coordinates, NAD83 Datum, International Feet

**Note - 2025 confirmation borings are outlined in white



Trench Alignment – East-West Transect



LEGEND

- Extent of Fill
- Top of Glacial Till
- Subsurface Concrete
- Water Table (July 2023)

Soil Boring Observations

	Sand/Gravel
	Sand with Fines
	Silt
	Clay with Silt/Sand/Gravel
	Glacial Till (very stiff, hard)
	Concrete

- Notes:
- 1. Borings projected up to 15 feet onto alignment.
 - 2. Purple IDs represent confirmation soil borings. Black IDs represent historical soil borings.

Acronyms:
ft amsl = feet above mean sea level

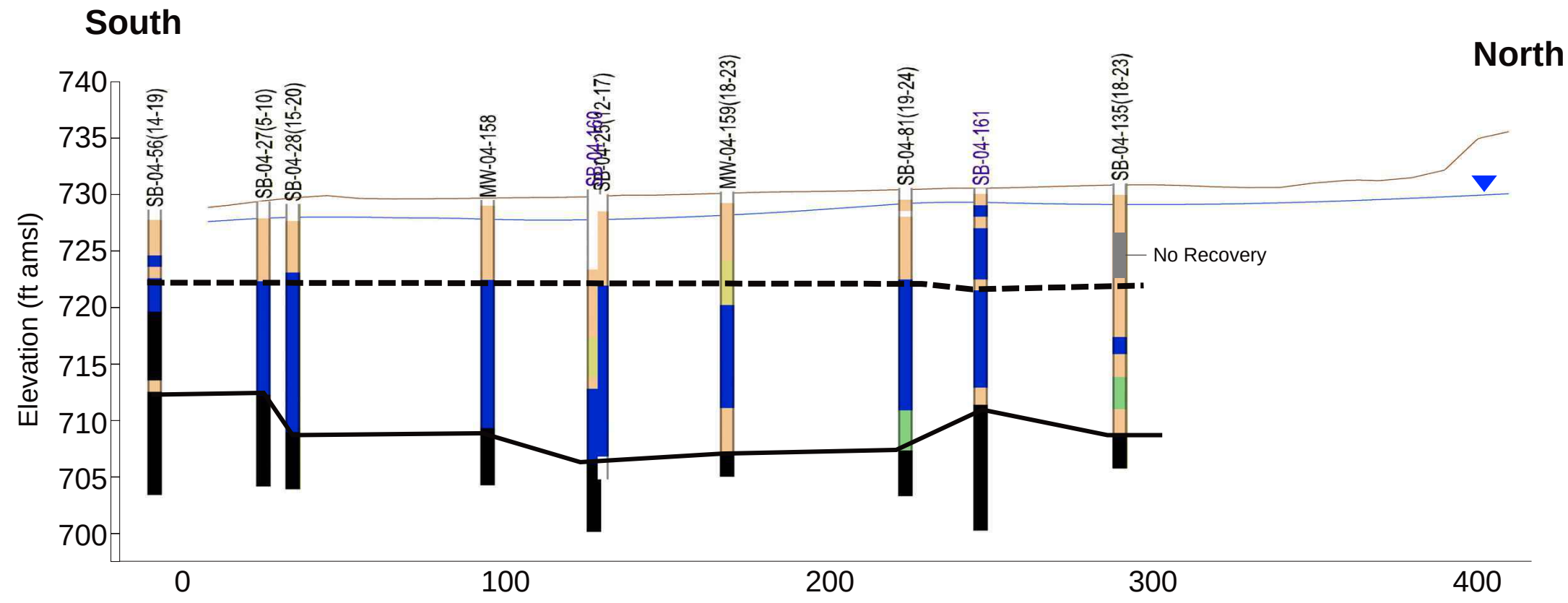
RACER TRUST, BUICK CITY, FLINT, MI

CROSS SECTION – TRENCH
ALIGNMENT 1 (WESTERN SEGMENT)

ARCADIS

FIGURE
7a

Trench Alignment – North-South Transect



LEGEND

- Extent of Fill
- Top of Glacial Till
- Subsurface Concrete
- ▼ Water Table (July 2023)

Soil Boring Observations

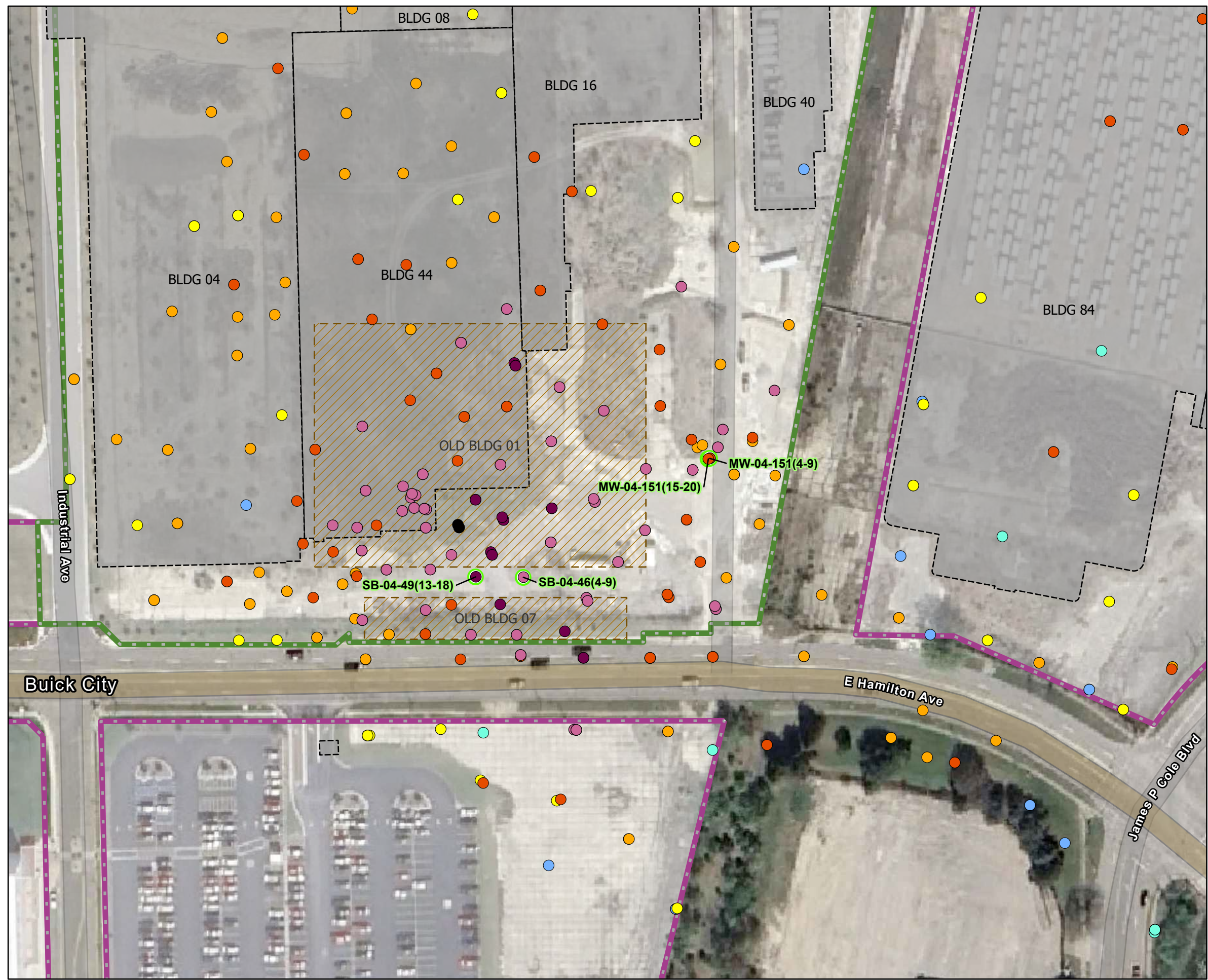
	Sand/Gravel
	Sand with Fines
	Silt
	Clay with Silt/Sand/Gravel
	Glacial Till (very stiff, hard)
	Concrete

- Notes:
- Borings projected up to 15 feet onto alignment.
 - Purple IDs represent confirmation soil borings. Black IDs represent historical soil borings.
 - SB-04-160 (12' east of alignment): Concrete is crumbled.
 - SB-04-25 (5' west of alignment): Concrete at 23' to depth at 25 bgs.

Acronyms:
ft amsl = feet above mean sea level

RACER TRUST, BUICK CITY, FLINT, MI	
CROSS SECTION – TRENCH ALIGNMENT 2 (EASTERN SEGMENT)	
ARCADIS	FIGURE 7b

Path: T:\ENVRACER_BuickCity_ProxFigures\PDI_Memo.aprx\Fig4_Bench Scale Test Sampling Locations Last Saved By: jchen 3/4/2026



LEGEND

Current RACER-owned Properties

Former RACER-owned Properties

Former Building Footprints

Former Building Footprints (Even Older)

Bench Scale Test Sampling Location

Most Recent PFOS Concentration in Groundwater

Greater than 100000x SL

Between 10000x SL and 100000x SL

Between 1000x SL and 10000x SL

Between 100x SL and 1000x SL

Between 10x SL and 100x SL

Between SL and 10x SL

Detection less than SL

Non-detect (RL > SL)

Non-detect (RL ≤ SL)

Notes:

1. Symbol color represents the most recent SL exceedance of PFOS from groundwater samples at the location.
2. PFOS SL is 12 ng/L, based on Michigan Part 201 Groundwater-Surface Water Interface Criteria.

Acronyms:
PFOS = perfluorooctane sulfonate
RL = reporting limit
SL = screening level
x = times
ng/L = nanograms per liter
> = greater than
≤ = less than or equal to

GRAPHIC SCALE IN FEET

N

RACER TRUST BUICK CITY
FLINT, MI

**BENCH SCALE TEST
SAMPLING LOCATIONS**

FIGURE

8

Appendix A

Boring Logs



Boring No.: SB-04-150

Soil Boring and Construction Log

Sheet: 1 of 3

Client Name: RACER

Date Started: 11-24-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 11-24-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 50.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.5 ft) CONCRETE.		
2			4	0.0			(0.5-1.0 ft): SAND, fine to coarse, subangular to subround; little small pebbles to small cobbles, angular to subround; poorly sorted; dry to moist; dark grayish brown (10YR 4/2). FILL. (1.0-4.5 ft): PEBBLES, medium to large COBBLES, angular to subround; some fine to coarse sand, subangular to subround; little silt; poorly sorted; moist; 10YR 2/2 - very dark brown (10YR 2/2). FILL. Note: Iron oxide staining. NOTE: Note: wet at ~2.0 ft bgs.		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
3									
4									
5							(4.5-5.0 ft) CONCRETE.		
6							(5.0-9.0 ft): GRANULES to large COBBLES, subangular to subround; and SAND, fine to very coarse, subangular to subround; little silt; poorly sorted; dry to moist; gray (10YR 5/1).		
7			6						
8									
9									
10				0.0			(9.0-15.0 ft): CLAY; some silt, high plasticity, slow dilatancy; trace granules, subangular to subround; stiff; moist to wet; gray (10YR 5/1).		
11									
12									
13									
14									
15			10				(15.0-18.5 ft): SILT, slow dilatancy; some very fine to coarse sand, subangular to subround, trace small pebbles to large cobbles, subangular to subround; medium stiff, poorly sorted, moist, gray (10YR 5/1). NOTE: Large cobble at ~16.5 ft bgs		
16									
17				0.0					
18									
19							(18.5-25.0 ft): CLAY, high plasticity; trace small to medium pebbles, subangular to subround; stiff; dry to moist; gray (10YR 5/1).		(2.0-50.0 ft bgs) Tremie grouted with bentonite and cement mixture.
20									

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: Kaden

Sampling Dimensions (ft): 5

Helper:

First Encountered Water (ft bgs): 9.50

Drill Rig: Sonic

Static Water Level (ft bgs): 9.5 ft bgs

Remarks:

Top of Casing Elev: NA

Surface Elev: 727.61

North Coord: 13305767.14

East Coord: 560362.34



Boring No.: SB-04-150

Soil Boring and Construction Log

Sheet: 2 of 3

Client Name: RACER

Date Started: 11-24-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 11-24-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 50.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21							(18.5-25.0 ft): CLAY, high plasticity; trace small to medium pebbles, subangular to subround; stiff; dry to moist; gray (10YR 5/1).		
22				0.0					
23									
24									
25			10				(25.0-28.0 ft): SAND, fine to medium, subangular to subround; trace granules, subangular to subround; soft; well sorted; moist; gray (10YR 5/1).		
26									
27									
28							(28.0-38.0 ft): CLAY, high plasticity; trace small to medium pebbles, subangular to subround; very stiff; dry; grayish brown (10YR 5/2).		
29									
30				0.0					
31									
32									
33									
34									
35			10						
36									
37									
38									
39				0.0			(38.0-39.0 ft): SAND, fine to medium, subangular to subround; soft; well sorted; moist; gray (10YR 5/1).		
40							(39.0-43.0 ft): SILT; and CLAY, high plasticity, slow dilatancy; little small pebbles to large cobbles, subangular to subround; medium stiff; dry to moist; gray (10YR 5/1).		
41			10						
42									

(2.0-50.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks:

SOIL BORING AND CONSTRUCTION LOG C:\USERS\HUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/25



Boring No.: SB-04-150

Soil Boring and Construction Log

Sheet: 3 of 3

Client Name: RACER Date Started: 11-24-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 11-24-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 50.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
43				0.0			(43.0-45.0 ft): CLAY, high plasticity; little small pebbles to large cobbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
44									
45							(45.0-50.0 ft): CLAY, high plasticity; little small pebbles to large cobbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
46			10						
47				0.0					
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									

50 ft. bgs End of Boring

(2.0-50.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-151

Soil Boring and Construction Log

Sheet: 1 of 3

Client Name: RACER

Date Started: 11-25-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 11-25-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 50.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.5 ft) CONCRETE.		
2				0.0			(0.5-4.0 ft): SAND, very fine to medium, subangular to subround; trace small to medium pebbles, subangular to subround; trace clay; soft, well sorted; dry to moist; dark grayish brown (10YR 4/2).		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
3									
4							(4.0-6.0 ft): SAND, very fine to fine; trace clay; soft, well sorted; dry to moist; black (10YR 2/1).		
5			10	0.3					
6				0.2			(6.0-8.0 ft): SAND, very fine to medium, subangular to subround; little silt; little clay; soft, well sorted; dry to moist; dark yellowish brown (10YR 3/6).		
7				0.3					
8							(8.0-10.0 ft): SAND, very fine to fine; little silt; little clay, no to low plasticity; soft; well sorted; dry to moist; light brownish gray (10YR 6/2).		
9				0.0					
10							(10.0-13.5 ft): SAND, very fine to medium, subangular to subround; little silt; little clay; soft; no to low plasticity; well sorted; moist to wet; pale brown (10YR 6/3).		
11									
12									
13									
14							(13.5-14.5 ft): SAND, very fine to coarse, subangular to subround; trace granules, subangular to subround; trace clay; poorly sorted, wet; brownish yellow (10YR 6/6).		
15			10	0.0			(14.5-15.0 ft): SAND, fine to medium, subangular to subround; trace granules, subangular to subround; soft; well sorted; wet; pale brown (10YR 6/3).		
16							(15.0-20.0 ft): CLAY, high plasticity; trace granules, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		(2.0-50.0 ft bgs) Tremie grouted with bentonite and cement mixture.
17									
18									
19									
20									

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: Kaden

Sampling Dimensions (ft): 5

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 738.10

North Coord: 13305115.49

East Coord: 560593.72



Boring No.: SB-04-151

Soil Boring and Construction Log

Sheet: 2 of 3

Client Name: RACER

Date Started: 11-25-2025

Logger: Jeremy Myers

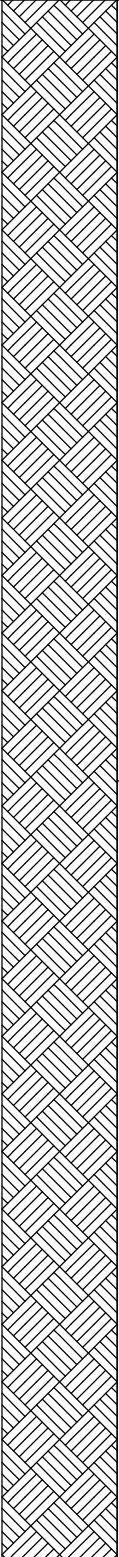
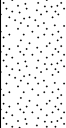
Project Number: 30275629

Date Completed: 11-25-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 50.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21			10	0.0			(20.0-25.5 ft): CLAY, high plasticity; trace granules, subangular to subround; very stiff; dry to moist; gray (10YR 5/1). NOTE: Stiffness change to medium stiff from 23 to 23.5 ft bgs, then back to very stiff.		
22									
23									
24									
25									
26			10	0.0			(25.5-26.5 ft): SAND, medium to very coarse, subangular to subround; little granules to medium pebbles, subangular to subround; poorly sorted, wet; gray (10YR 5/1).		
27							(26.5-28.5 ft): SAND, very fine to fine; little silt; little clay, no plasticity; soft; well sorted; wet; gray (10YR 5/1).		
28									
29							(28.5-30.0 ft): CLAY, high plasticity; little granules to medium pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
30							(30.0-31.0 ft): SILT; little clay, medium plasticity, slow dilatancy; little very fine to fine sand; medium stiff; moist; gray (10YR 5/1).		
31			10	0.0			(31.0-32.0 ft): CLAY, high plasticity; trace small to medium pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		(2.0-50.0 ft bgs) Tremie grouted with bentonite and cement mixture.
32							(32.0-33.0 ft): CLAY, high plasticity; trace very fine to fine sand; very stiff; dry to moist; gray (10YR 5/1).		
33							(33.0-40.0 ft): CLAY, high plasticity; trace small to medium pebbles, subangular to subround; very stiff; dry to moist; greenish gray (10Y 5/1).		
34									
35									
36			10	0.0					
37									
38									
39									
40									
41			10	0.0			(40.0-43.0 ft): CLAY, high plasticity; little small pebbles to large cobbles, subangular to round; very stiff; dry to moist; gray (10YR 5/1).		
42									

Remarks:

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-151

Soil Boring and Construction Log

Sheet: 3 of 3

Client Name: RACER Date Started: 11-25-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 11-25-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 50.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
43									
44							(43.0-50.0 ft): CLAY, high plasticity; trace small to large pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
45									
46			10	0.0					
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
63									
64									

50 ft. bgs End of Boring

(2.0-50.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-152

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-03-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 12-03-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.75 ft) CONCRETE.		
2							(0.75-3.0 ft): SAND, very fine to coarse, subangular to subround; little clay; little silt, medium plasticity; poorly sorted; moist; dark brown (10YR 3/3).		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
3							(3.0-6.0 ft): SAND, very fine to medium, subangular to subround; soft, well sorted; wet; light yellowish brown (10YR 6/4).		
4			8	0.0					
5									
6									
7							(6.0-8.0 ft): CLAY, high plasticity; trace small to medium pebbles, subangular to subround; medium stiff; dry to moist; gray (10YR 5/1).		
8									
9							(8.0-15.0 ft): CLAY, high plasticity; trace small to large pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
10									
11			7	0.0					(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.
12									
13									
14									
15									
16							(15.0-16.0 ft): CLAY; little silt, low to medium plasticity; little very fine sand, trace small to large pebbles, subangular to subround; medium stiff; moist; gray (10YR 5/1).		
17			3	0.0			(16.0-18.0 ft): CLAY; trace silt, high plasticity; trace small to large pebbles, subangular to subround; trace very fine to fine sand; medium stiff; moist; gray (10YR 5/1).		
18									
19									
20			10	0.0			(18.0-20.5 ft): SILT, slow dilatancy; little very fine to fine sand; medium stiff; wet; gray (10YR 5/1).		

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: Kaden

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): 3.00

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 733.44

North Coord: 13305056.60

East Coord: 560343.42



Boring No.: SB-04-152

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-03-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 12-03-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21							(20.5-21.5 ft): SAND, medium to very coarse, subangular to subround; little small to very large pebbles, subangular to subround; poorly sorted; wet; gray (10YR 5/1).		
22							(21.5-29.0 ft): CLAY, high plasticity; trace small to large pebbles, subangular to subround; trace very fine to medium sand, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
23									
24			10						
25				0.0					
26									
27									
28									
29			2						
30							(29.0-30.0 ft): SILT; and CLAY, low to medium plasticity, no dilatancy; little very fine to fine sand; medium stiff; dry to moist; gray (5YR 5/1).		
31							30 ft. bgs End of Boring		
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-153

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-02-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 12-02-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.75 ft) CONCRETE.		
2							(0.75-4.0 ft): SAND, very fine to medium, subangular to subround; trace granules, subangular to subround; soft; well sorted; moist; yellowish brown (10YR 5/6). FILL.		
3							NOTE: Wet at 3.0 ft bgs.		
4			8	0.0			(4.0-6.0 ft): SILT, slow dilatancy; some very fine to fine sand; medium stiff; wet; yellowish brown (10YR 5/6). FILL.		
5									
6							(6.0-7.0 ft): CLAY, high plasticity; little granules to large pebbles, subangular to subround; stiff; moist; gray (10YR 5/1). FILL.		
7							(7.0-8.0 ft): CLAY, high plasticity; little granules to large pebbles, subangular to subround; stiff; moist; gray (10YR 5/1). FILL.		
8							NOTE: Very fine to coarse, as well as small to large pebbles of concrete mixed in with clay.		
9							(8.0-12.0 ft): CLAY, high plasticity; trace granules, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
10									
11									
12			8	0.0			(12.0-14.0 ft): CLAY, high plasticity; trace granules, subangular to subround; medium stiff; moist; gray (10YR 5/1).		
13									
14							(14.0-16.0 ft): CLAY, high plasticity; trace granules, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
15									
16									
17							(16.0-17.5 ft): SILT, slow dilatancy; some very fine to fine sand, trace granules, subangular to subround; soft; moist to wet; gray (10YR 5/1).		
18			9	0.0			(17.5-18.5 ft): SAND, very fine to medium, subangular to subround; trace small to large pebbles, subangular to subround; soft; well sorted; moist to wet; gray (10YR 5/1).		
19							(18.5-19.5 ft): CLAY, high plasticity; little very fine to medium sand, subangular to subround, trace small to large pebbles, subangular to subround; stiff; dry to moist;		
20									

(0.0-2.0 ft bgs)
Backfilled with bentonite chip.(2.0-30.0 ft bgs)
Tremie grouted with bentonite and cement mixture.

Drilling Co.: Cascade

Driller: Kaden

Helper:

Drill Rig: Sonic

Remarks:

Drilling Method: Sonic Drilling (SD)

Sampling Dimensions (ft): 5

First Encountered Water (ft bgs): No water encountered

Static Water Level (ft bgs): No post-drill static water level recorded.

Top of Casing Elev: NA

Surface Elev: 732.96

North Coord: 13305115.41

East Coord: 560340.22

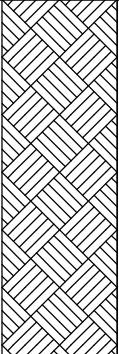
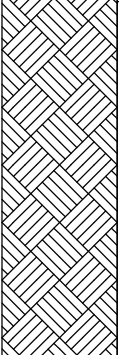


Boring No.: SB-04-153

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-02-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 12-02-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21			9	0.0			gray (10YR 5/1). (19.5-25.0 ft): CLAY, high plasticity; trace small to large pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
22									
23									
24									
25			5	0.0			(25.0-26.0 ft): GRANULES to very large PEBBLES, subangular to subround; and SAND, medium to very coarse, subangular to subround; poorly sorted; wet; gray (10YR 5/1).		
26									
27							(26.0-30.0 ft): CLAY, high plasticity; trace small to large pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
28									
29									
30									

30 ft. bgs End of Boring

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-154

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-03-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 12-03-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.5 ft) ASPHALT.		
2							(0.5-1.0 ft) CONCRETE.		
3							(1.0-3.0 ft): SILT; little clay, slow dilatancy; little very fine sand; trace small to medium pebbles, subangular to subround; medium stiff; moist to wet; 10YR 3/1 - very dark gray (10YR 3/1). Moderate odor. NOTE: Gasoline odor.		
4			8	0.0			(3.0-6.5 ft): CLAY; little silt, high plasticity; little very fine to medium sand, subangular to subround, trace small to medium pebbles, subangular to subround; medium stiff; moist to wet; light brownish gray (10YR 6/2).		
5									
6									
7							(6.5-8.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand; trace small to large pebbles, subangular to subround; stiff; dry to moist; gray (10YR 5/1).		
8									
9				3.8			(8.0-12.0 ft): CLAY; little silt, high plasticity; little very fine sand; little granules to small pebbles, subround; very stiff; dry; grayish brown (10YR 5/2).		
10				1.8					
11				4.6					
12				6.9					
13			10	17.0			(12.0-17.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand; little small to medium pebbles, subround; very stiff; dry; grayish brown (10YR 5/2). Strong odor, no staining. NOTE: Gasoline odor.		
14				33.4					
15				3.9					
16				5.6					
17				5.8					
18				5.3			(17.0-18.0 ft): SAND, very fine to medium, subround; little clay, high plasticity; little granules, subround; soft; poorly sorted; moist to wet; grayish brown (10YR 5/2).		
19			6	0.0			(18.0-21.0 ft): SAND, fine to medium, subround; and SILT, rapid dilatancy; little granules, subround; very soft; poorly sorted; wet, grayish brown (10YR 5/2).		
20									

(0.0-2.0 ft bgs)
Backfilled with bentonite chip.

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Drilling Co.: Cascade

Driller: Kaden

Helper:

Drill Rig: Sonic

Remarks:

Drilling Method: Sonic Drilling (SD)

Sampling Dimensions (ft): 10

First Encountered Water (ft bgs): 3.00

Static Water Level (ft bgs): No post-drill static water level recorded.

Top of Casing Elev: NA

Surface Elev: 731.60

North Coord: 13305223.15

East Coord: 560330.93



Boring No.: SB-04-154

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-03-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 12-03-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21									
22			6	0.0			(21.0-30.0 ft): CLAY; little silt, high plasticity; little small pebbles to large cobbles, subround; little fine sand; very stiff; dry; grayish brown (10YR 5/2).		
23									
24									
25									
26									
27				0.0					
28									
29									
30									

30 ft. bgs End of Boring

(2.0-30.0 ft
bgs) Tremie
grouted with
bentonite and
cement
mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-155

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-04-2025

Logger: Jeremy Myers

Project Number: 30275629

Date Completed: 12-04-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1			1.75				(0.0-1.0 ft): SAND, very fine to medium, subangular to subround; little clay; little silt, no to low plasticity; trace granules, subangular to subround; soft; poorly sorted; dry to moist; very dark grayish brown (10YR 3/2). FILL.		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
2							(1.0-9.0 ft): SAND, very fine to medium, subangular to subround; little medium pebbles to large cobbles; subround; soft; well sorted; moist; very dark brown (10YR 2/2). FILL.		
3									
4				0.0					
5			6						
6									
7									
8									
9									
10							(9.0-10.0 ft): SAND, medium to very coarse, subangular to subround; some granules to medium pebbles, subangular to subround; little silt; poorly sorted; wet; very dark gray (10YR 3/1). FILL.		
11			6	0.0			(10.0-11.0 ft): SILT; little clay, medium plasticity; little very fine to fine sand; trace granules, subangular to subround; medium stiff; slow dilatancy; wet; dark gray (10YR 4/1). FILL.		
12							(11.0-12.0 ft): CLAY, medium plasticity; little small to large cobbles, subangular to subround; little very fine sand; medium stiff; dry to moist; gray (10YR 5/1). FILL.		
13							(12.0-14.0 ft) CONCRETE.		
14							(14.0-15.0 ft): CLAY, no to low plasticity; some very fine to medium sand, subangular to subround; little small to large pebbles, subangular to subround; medium stiff; moist; gray (10YR 5/1).		
15									
16			4	0.0			(15.0-19.0 ft): SAND, very fine to medium, subangular to subround; little clay, no to low plasticity; trace small to medium pebbles, subangular to subround; medium stiff; poorly sorted; moist; gray (10YR 5/1).		
17									
18									
19			4	0.0					
20							(19.0-20.0 ft): SAND, very fine to fine; soft; well sorted; wet; gray (10YR 5/1).		

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: Kaden

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 730.73

North Coord: 13305313.97

East Coord: 560336.29



Boring No.: SB-04-155

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-04-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 12-04-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21			4	0.0			(20.0-23.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand; trace small to large pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
22									
23							(23.0-26.0 ft): SAND, medium to very coarse, subangular to subround; some granules to small pebbles, subangular to subround; little clay; poorly sorted; wet; grayish brown (10YR 5/2).		
24			8	0.0			(26.0-30.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand, trace small to large pebbles, subangular to subround; very stiff; dry to moist, grayish brown (10YR 5/2).		(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.
25									
26									
27									
28									
29									
30									

30 ft. bgs End of Boring

Remarks:

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-156

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-05-2025

Logger: Jeremy Myers

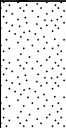
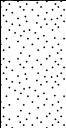
Project Number: 30275629

Date Completed: 12-05-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.5 ft) ASPHALT.		
2							(0.5-1.5 ft): PEBBLES, small to medium, angular to subround; some medium to coarse sand, subangular to subround; little clay; poorly sorted; moist; light brownish gray (10YR 6/2).		
3							(1.5-9.0 ft): SAND, very fine to fine; trace small to medium pebbles, subangular to subround; soft; well sorted; moist; very dark brown (10YR 2/2).		
4			8	0.0					
5									
6									
7									
8									
9									
10							(9.0-11.0 ft): CLAY; trace silt, medium plasticity; little very fine to fine sand; trace small to medium pebbles, subangular to subround; stiff; moist; gray (10YR 5/1).		
11									
12							(11.0-14.0 ft): SAND, fine to medium, subangular to subround; trace small pebbles, subangular to round; soft; well sorted; wet; black (10YR 2/1).		
13			10	0.0					
14									
15							(14.0-15.5 ft): SILT; little clay, slow dilatancy; little very fine to fine sand; trace granules, angular to round; stiff; moist to wet; gray (10YR 5/1).		
16							(15.5-18.0 ft): CLAY, high plasticity; little granules to medium pebbles, subangular to subround; trace very fine sand; medium stiff; dry to moist; gray (10YR 5/1).		
17									
18									
19			5	0.0			(18.0-19.0 ft): SILT, rapid dilatancy; some very fine to fine sand; trace small pebbles, subangular to subround; soft; rapid dilatancy; wet; gray (10YR 5/1).		
20							(19.0-19.5 ft): CLAY; and SILT, no to low plasticity, slow dilatancy; little fine sand; trace		

(0.0-2.0 ft bgs)
Backfilled with bentonite chip.

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: Kaden

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 730.31

North Coord: 13305403.40

East Coord: 560334.04



Boring No.: SB-04-156

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-05-2025 Logger: Jeremy Myers
Project Number: 30275629 Date Completed: 12-05-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21			5	0.0			small to large pebbles, angular to round; stiff; dry to moist; 10YR 5/1 - gray (10YR 5/1). (19.5-25.0 ft): CLAY; little silt, high plasticity; little fine sand; trace small to large pebbles, angular to round; very stiff; dry to moist; gray (10YR 5/1).		
22									
23									
24			7	0.0			(25.0-25.5 ft): SILT, rapid dilatancy; some fine to medium sand, subangular to subround; trace granules, angular to round; soft; wet; gray (10YR 5/1). (25.5-30.0 ft): CLAY; little silt, high plasticity; little very fine sand; trace small to large pebbles, subangular to subround; very stiff; dry to moist; gray (10YR 5/1).		
25									
26									
27									
28									
29									
30									

30 ft. bgs End of Boring

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-157

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-08-2025

Logger: Kaylee DeRoo

Project Number: 30275629

Date Completed: 12-08-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-1.0 ft) CONCRETE.		
2							(1.0-7.0 ft): SAND, fine to medium, subround; little silt, no dilatancy; very soft; well sorted; dry; dark brown (10YR 3/3). Slight odor.		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
3									
4			8	0.0					
5									
6									
7									
8							(7.0-8.5 ft): GRANULES to large COBBLES, subround; some fine to medium sand, subround; some silt, rapid dilatancy; poorly sorted; wet; dark brown (10YR 3/3).		
9							(8.5-10.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand; medium stiff; well sorted; moist to wet; grayish brown (10YR 5/2).		
10									
11							(10.0-16.0 ft): CLAY; little silt, high plasticity; some very fine to medium sand, subround; little granules to small pebbles, subround; medium stiff; poorly sorted; dry to moist; grayish brown (10YR 5/2).		(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.
12									
13			10	0.0					
14									
15									
16									
17							(16.0-18.5 ft): CLAY; little silt, high plasticity, some very fine to medium sand, subround; little granules to small pebbles, subround; very soft; well sorted; wet; grayish brown (10YR 5/2).		
18									
19									
20			5	0.0			(18.5-20.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand; trace granules, subround; very stiff; poorly sorted; dry to moist; grayish brown (10YR 5/2).		

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: NA

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 729.49

North Coord: 13305476.89

East Coord: 560334.14



Boring No.: SB-04-157

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-08-2025 Logger: Kaylee DeRoo
Project Number: 30275629 Date Completed: 12-08-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21			5	0.0			(20.0-23.0 ft): CLAY; little silt, high plasticity; little very fine to medium sand, subround, little granules to medium pebbles, subround; very stiff; dry; grayish brown (10YR 5/2).		
22									
23							(23.0-30.0 ft): CLAY; little silt, high plasticity; little very fine to medium sand, subround; little granules to medium pebbles, subround; very stiff; dry; grayish brown (10YR 5/2).		
24									
25				0.0					
26									
27									
28									
29									
30									

30 ft. bgs End of Boring

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks:

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-158

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-08-2025

Logger: Kaylee DeRoo

Project Number: 30275629

Date Completed: 12-08-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.5 ft) ASPHALT.		
2							(0.5-7.0 ft): SAND, fine to medium, round; little silt; medium dense; well sorted; dry; dark brown (10YR 3/3).		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
3									
4			8	0.0					
5									
6									
7									
8							(7.0-8.0 ft): GRANULES to large COBBLES, subangular; some clay, high plasticity; poorly sorted; wet; grayish brown (10YR 5/2).		
9							(8.0-16.0 ft): CLAY; some silt, high plasticity; little very fine sand; little granules, subround; medium stiff; no dilatancy; dry; grayish brown (10YR 5/2).		
10									
11									
12									
13			10	0.0					
14									
15									
16									
17							(16.0-18.0 ft): CLAY; little silt, high plasticity; some very fine to medium sand, subround; little granules to medium pebbles, subround; medium stiff; dry; grayish brown (10YR 5/2).		
18									
19							(18.0-19.0 ft): CLAY; little silt, high plasticity; some very fine to medium sand, subround; little granules to medium pebbles, subround; medium stiff; wet; grayish brown (10YR 5/2).		
20			12	0.0					(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: NA

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 728.87

North Coord: 13305562.47

East Coord: 560339.28



Boring No.: SB-04-158

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-08-2025 Logger: Kaylee DeRoo
Project Number: 30275629 Date Completed: 12-08-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
21							(19.0-21.0 ft): CLAY; some silt, high plasticity, little granules, subround; little very fine to fine sand; medium stiff; no dilatancy; dry to moist; grayish brown (10YR 5/2).		
22							(21.0-30.0 ft): CLAY; little silt, high plasticity, little granules to large cobbles, subround; little very fine to fine sand; very stiff; dry; grayish brown (10YR 5/2).		
23									
24									
25			12	0.0					
26									
27									
28									
29									
30									

30 ft. bgs End of Boring

(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-159

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-08-2025

Logger: Kaylee DeRoo

Project Number: 30275629

Date Completed: 12-09-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1							(0.0-0.5 ft) CONCRETE.		
2							(0.5-7.0 ft): SAND, very fine to medium, subround; little silt; very soft; well sorted; dry to moist; dark brown (10YR 3/3). FILL.		(0.0-2.0 ft bgs) Backfilled with bentonite chip.
3									
4			8	0.0					
5									
6									
7							(7.0-7.8 ft) CONCRETE.		
8							(7.8-12.0 ft): CLAY; some silt, high plasticity; little granules to large cobbles, subround; little very fine to fine sand; medium stiff; no dilatancy; dry to moist; grayish brown (10YR 5/2).		
9									
10									
11									
12									
13			10				(12.0-18.0 ft): CLAY; little silt, high plasticity; some very fine to medium sand, subround; little small to medium pebbles, subround; medium stiff; dry to moist; grayish brown (10YR 5/2).		
14									
15									
16									
17									
18									
19			6				(18.0-21.0 ft): CLAY; some silt, high plasticity; little very fine to fine sand; little granules, subround; very stiff; no dilatancy; dry to moist; grayish brown (10YR 5/2).		
20									

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: NA

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 728.64

North Coord: 13305585.14

East Coord: 560334.77

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Soil Boring and Construction Log

Client Name: RACER

Date Started: 12-08-2025

Logger: Kaylee DeRoo

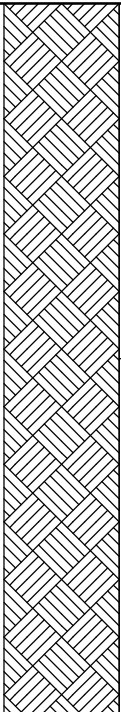
Project Number: 30275629

Date Completed: 12-09-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details		
21			6							(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.	
22							(21.0-22.0 ft): SAND, very fine to medium, subround; some silt, little granules, no dilatancy; subround; very soft; well sorted; dry to moist; grayish brown (10YR 5/2).				
23			6				(22.0-30.0 ft): CLAY; little silt, high plasticity; little very fine to fine sand; little granules; subangular; very stiff; dry; grayish brown (10YR 5/2).				
24											
25											
26											
27											
28											
29											
30											
30 ft. bgs End of Boring											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											

Remarks:

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-160

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-09-2025

Logger: Kaylee DeRoo

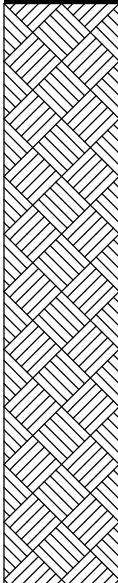
Project Number: 30275629

Date Completed: 12-09-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details	
1			3.5				(0.0-7.0 ft) CONCRETE. NOTE: Concrete coated in red clay, high plasticity; dry; red (2.5 YR 5/6). Clay observed from 3-7' bgs.			(0.0-2.0 ft bgs) Backfilled with bentonite chip.
2										
3										
4										
5			3							
6										
7										
8										
9			10				(7.0-8.0 ft): PEBBLES, small to medium pebbles, subround; little very fine to medium sand, subround; little silt; poorly sorted; wet; grayish brown (10YR 5/2).	(12-12.5 ft) Hard, seemingly concrete material encountered		
10							(8.0-13.0 ft): GRANULES to medium PEBBLES, angular to subangular; some medium to very coarse sand, subangular; little silt; poorly sorted; moist to wet; grayish brown (10YR 5/2).			
11										
12										
13			1				(13.0-16.5 ft): GRANULES to medium PEBBLES, subangular; some clay, high plasticity; little medium to very coarse sand; subangular; poorly sorted; moist to wet; grayish brown (10YR 5/2).			
14										
15										
16										
17			12				(16.5-17.5 ft): GRANULES to medium PEBBLES, subangular; little coarse to very coarse sand, subangular; poorly sorted; moist to wet; grayish brown (10YR 5/2).			
18							(17.5-18.0 ft): CLAY; and SILT, high plasticity, slow dilatancy; little very fine to fine sand; soft; moist to wet; grayish brown (10YR 5/2).			
19							(18.0-24.0 ft): CLAY; some silt, high plasticity; little very fine to fine sand, little granules, subangular; medium stiff; no			
20										

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: NA

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 730.25

North Coord: 13305691.27

East Coord: 560469.71



Boring No.: SB-04-160

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-09-2025 Logger: Kaylee DeRoo
Project Number: 30275629 Date Completed: 12-09-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details	
21							dilatancy; moist, grayish brown (10YR 5/2). (18.0-24.0 ft): CLAY; some silt, high plasticity; little very fine to fine sand, little granules, subangular; medium stiff; no dilatancy; moist, grayish brown (10YR 5/2).			
22										
23										
24										
25			12				(24.0-30.0 ft): CLAY; little silt, high plasticity; little very fine to medium sand, subround; little granules, subangular; stiff; dry; grayish brown (10YR 5/2).			(2.0-30.0 ft bgs) Tremmie grouted with bentonite and cement mixture.
26										
27										
28										
29										
30										

30 ft. bgs End of Boring

31
32
33
34
35
36
37
38
39
40
41
42

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26



Boring No.: SB-04-161

Soil Boring and Construction Log

Sheet: 1 of 2

Client Name: RACER

Date Started: 12-10-2025

Logger: Kaylee DeRoo

Project Number: 30275629

Date Completed: 12-10-2025

Reviewer: M. Humphrey

Project Name: Buick City

Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details
1			8				(0.0-0.5 ft) CONCRETE.		 (0.0-2.0 ft bgs) Backfilled with bentonite chip.
2							(0.5-1.5 ft): SAND, very fine to medium, subround; little silt; little granules, subround; very soft; well sorted; dry to moist; black (10YR 2/1).		
3							(1.5-2.5 ft): CLAY; little silt, high plasticity; little very fine to medium sand, subround; little granules, subround; soft; dry to moist; dark grayish brown (10YR 4/2).		 (2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.
4							(2.5-3.5 ft): SAND, very fine to medium, subround; little silt; trace granules, subround; soft; well sorted; dry to moist; yellowish brown (10YR 5/8).		
5							(3.5-4.0 ft): SILT; and CLAY, high plasticity, no dilatancy; little very fine to fine sand; very soft; dry to moist; black (10YR 2/1).		
6							(4.0-8.0 ft): CLAY; some silt, high plasticity, no dilatancy; little granules to large cobbles, subangular; little very fine to fine sand; soft; moist; dark grayish brown (10YR 4/2).		
7									
8									
9							(8.0-9.0 ft): SAND, very fine to coarse, subround; little silt, little clay, high plasticity; little granules, subround; poorly sorted; moist to wet; dark grayish brown (10YR 4/2).		
10							(9.0-16.0 ft): CLAY; little silt, high plasticity; little granules to medium pebbles, subangular; little very fine to fine sand; stiff; dry; dark grayish brown (10YR 4/2).		
11									
12									
13									
14									
15									
16									
17							(16.0-17.5 ft): CLAY; little silt, high plasticity; some very fine to medium sand, subround; trace granules, subangular; medium stiff; dry to moist; dark grayish brown (10YR 4/2).		
18							(17.5-19.0 ft): GRANULES to large COBBLES, subangular; little coarse to very coarse sand, subangular; little silt; little clay, no plasticity; poorly sorted; moist; dark grayish brown (10YR 4/2).		
19									
20									

Drilling Co.: Cascade

Drilling Method: Sonic Drilling (SD)

Driller: NA

Sampling Dimensions (ft): 10

Helper:

First Encountered Water (ft bgs): No water encountered

Drill Rig: Sonic

Static Water Level (ft bgs): No post-drill static water level recorded.

Remarks:

Top of Casing Elev: NA

Surface Elev: 730.36

North Coord: 13305708.91

East Coord: 560588.88



Boring No.: SB-04-161

Soil Boring and Construction Log

Sheet: 2 of 2

Client Name: RACER Date Started: 12-10-2025 Logger: Kaylee DeRoo
Project Number: 30275629 Date Completed: 12-10-2025 Reviewer: M. Humphrey
Project Name: Buick City Total Depth: 30.0 ft bgs

Depth (feet)	Soil Sample ID	Water Sample ID	Rec. (ft)	Screening (ppm)	Blow Counts	Graphic	Description	Drilling Fluid and Notes	Construction Details	
21							(19.0-30.0 ft): CLAY; little silt; high plasticity; some very fine to medium sand, subround; little granules to small pebbles, subangular; medium stiff; dry to moist; dark grayish brown (10YR 4/2).			(2.0-30.0 ft bgs) Tremie grouted with bentonite and cement mixture.
22										
23										
24										
25										
26										
27										
28										
29										
30										

30 ft. bgs End of Boring

Remarks: _____

SOIL BORING AND CONSTRUCTION LOG C:\USERS\MHUMPHREY\ONE DRIVE - ARCADIS\DESKTOP\NEW BUICK CITY LOGS\2025 LOGS\FIELD\NOW STANDARD - GINT FILES\BUICK CITY NOVEMBER 2025 TASK 3700 LOGS.GPJ GINT DATA TEMPLATE.GDT 2/5/26

Appendix B

Description of the MASW and GPR Methods

Appendix B – Description of the MASW and GPR Methods

MASW Method

The instrumentation used in this seismic survey consists of three pieces of field equipment: a seismic source (sledgehammer), a seismic receiver (i.e., a geophone on land or hydrophone on water), and a timing and recording device known as a seismograph. A typical seismic survey consists of firmly planting a line of geophones in the ground, each on a steel stake, at an even spacing along a straight line. However, due to Site constraints (abundance of surface pavement), ground penetrations were undesirable for this project, so the geophones were alternatively connected to a weighted cable called a land streamer. In this setup, each geophone is connected every 3 feet along the line to a weighted steel plate. These weighted plates allow for the geophones to couple to the ground surface, allowing the seismic waves to be recorded without the need to penetrate the ground surface, albeit not as effectively as when planted directly in the ground. For active surveys (such as MASW) a seismic impulse, usually called a “shot,” is generated at time-zero, then the seismograph records the geophones’ response over time as the seismic wave travels through the subsurface and back up to the geophones.

Seismic Data Acquisition

A *Geode* 24-channel seismograph manufactured by *Geometrics* was used to control the seismic data acquisition process and store the data. The *Geode* is a standard digital recording seismograph specifically designed for engineering seismic surveys. Up to 24 geophone inputs are stored in digital memory per profile line segment, allowing the seismic wave traces to be inspected and modified before they are recorded to a field laptop hard drive for subsequent processing. The geophone receivers used in this survey were 4.5-hertz (Hz) vertical geophones, connected to the seismograph by a landstreamer cable with a geophone separation of 3 feet, for a total array length of 69 feet. For this survey, MASW datasets were collected every 3 feet along the profile line (or “shot” location), with the exception of the longest alignment – Line P – where data was collected every 10 feet along the profile. At each shot location, up to 5 active shots are collected and stacked together to increase the signal-to-noise ratio of each record. A 10-pound sledgehammer located 10 feet behind the geophone array was used as the active percussive energy source. A *Hemisphere* global positioning system (GPS) receiver equipped with satellite-based, real-time differential correction (OmniSTAR VBS subscription service with sub-meter accuracy) was used to track the position of the all profile lines collected.

The collection parameters for each seismic line at this site are summarized in **Table 1** below.

Table 1: Seismic Profile Line Summary					
Line	Orientation	Number of Shot Locations	Shot Spacing	Geophone Spacing	Total Line Length
A	W-E	34	3 ft	3 ft	99 ft
B	W-E	35	3 ft	3 ft	102 ft
C	S-N	35	3 ft	3 ft	102 ft
D	S-N	42	3 ft	3 ft	123 ft

Table 1: Seismic Profile Line Summary					
E	W-E	38	3 ft	3 ft	111 ft
F	SE-NW	45	3 ft	3 ft	132 ft
G	S-N	30	3 ft	3 ft	112.5 ft
H	S-N	30	3 ft	3 ft	112.5 ft
I	S-N	30	3 ft	3 ft	112.5 ft
J	S-N	30	3 ft	3 ft	112.5 ft
K	SE-NW	30	3 ft	3 ft	112.5 ft
L	E-W	30	3 ft	3 ft	112.5 ft
M	E-W	30	3 ft	3 ft	112.5 ft
N	E-W	30	3 ft	3 ft	112.5 ft
O	S-N	30	3 ft	3 ft	112.5 ft
P	W-E; SW-NE	81	10 ft	3 ft	850 ft

Seismic Data Processing

Upon collection of the seismic profile lines, the shear-wave data were downloaded to a personal computer for processing using the software package *Surface Plus v. 10.3*, by *Geogiga*, to model the shear wave velocity profiles of each shot location along each profile line. MASW processing involves four main steps:

- Seismic Trace Separation,
- Velocity Spectral Analysis,
- Rayleigh Phase Velocity Dispersion Picking, and
- Shear-Wave Velocity Modeling.

The *Seismic Trace Separation* process typically involves cutting the complete 24-channel MASW records into multi-trace (dependent upon the desired depth of penetration) records. However, as a maximum resolution was desired for this project, the seismic records remained intact and all 24 geophones were used in the velocity spectral analysis for each shot location.

The *Velocity Spectral Analysis* takes a record of multiple seismograms (with amplitudes relative to distance and time) and converts it to amplitudes relative to the inverse of the apparent primary wave velocity p and an intercept time τ . The distinctive slope of dispersive surface waves can be easily differentiated from other arrivals such as air waves or body waves that cannot have such a slope.

The *Rayleigh-Phase Velocity Dispersion Picking* gives the ability to pick and interpret dispersion curves directly from the slowness-frequency (p - f) images of spectral radio. Picking is done along a “lowest-velocity envelope” bounding the energy appearing in the p - f image.

The *Shear Velocity Modeling* interactively inverse-models the mode dispersion data picked from the p-f images by iterating on phase velocities at each frequency. MASW can reveal velocity reversals with depth (which is not possible with other techniques, such as seismic refraction), thus allowing for lower velocity features such as low velocity zones of fill materials (or even large voids) to be detected within a higher velocity native or undisturbed soil.

For this project, the seismic results are presented in cross-sectional form as **Figures 2** through **17B**.

GPR Method

To identify areas of historical ground disturbance, view the subsurface soil conditions within these areas, as well as to confirm the results of the MASW data, supplementary imaging was performed using high resolution, low frequency GPR. Ideally, GPR can yield information about horizontal layering, limits of excavations, and the approximate depth and position of discrete objects such as remnants of historical structures and slabs. The graphical outputs depicting the GPR data, such as those included in this report, illustrate the composite effect of how the environment, both above and below ground, react to the radar pulses radiated by the GPR system. Radar waves recorded by the receiver include those radiated directly from the transmitter, refracted along horizontal boundaries, reflected from objects both below and above ground, or reflected from naturally occurring features, and also extraneous radar waves from other sources. Subsurface reflections are often associated with changes in soil type and conditions, such as bedding, cementation, moisture and clay content, voids, fractures, and intrusions, as well as man-made objects such as utilities, areas of waste and fill materials, and concrete structures. Additionally, it should be noted that the general penetration of GPR data is dependent on the electrical properties of the soil. In general, the less conductive the soil/fill materials encountered in a given area are, the deeper the penetration. Conversely, the more conductive the soil/fill materials encountered are, the shallower the penetration. In this way, the penetration depth of GPR data can assist in differentiating between areas of differing soil/fill types. For this project, the depth of GPR penetration was between 20 and 25 feet.

GPR Data Acquisition

The GPR system used to collect the data for this project was a Sensors & Software Utility Cart equipped with a digital video logger (DVL) and a Noggin Ultra 100 MHz antenna. For a given soil type, the depth of penetration is typically dependent on the frequency of the antenna. While a higher frequency antenna will provide better lateral and vertical resolution, the signal from the higher frequency antenna is attenuated much quicker than that of a lower frequency. As such, a lower frequency antenna is designed to achieve deeper penetration. For this survey, a newer Ultra 100 MHz antenna was utilized. This system is designed with a much higher sampling rate than typical GPR systems, allowing for the stacking of thousands of GPR traces per lateral position versus the dozens that a traditional system will allow. The additional sampling rates and stacking allow for even deeper penetration than a standard 100 MHz antenna. A total of 83 GPR transects were collected across the Site (see **Figure 1**) and the positions of all lines were captured with the Hemisphere DGPS unit. In addition, the GPR has a built-in odometer which encodes the distance the cart was pushed.

GPR Data Processing

GPR processing performed after the field work was completed using EKKO_Project_5 software, which is the companion software for the GPR equipment. The processing performed consisted of: 1) correcting for line orientation and positioning; 2) dewow (data normalization); 3) subtraction of average trace; 4) application of an SEC gain function to bring out wanted signal; and 5) determination of GPR signal velocity using hyperbolic fitting. Two sample GPR profiles (*Profiles 1* and *65*) are presented as **Figures 18** and **19**. By comparing these profiles to the associated co-linear with a MASW profiles, one can see the presence (or lack thereof) of linear anomalies that could possibly be related to historical concrete structures.

Results

As described in Section 1 of the main report text, native materials include alternating glaciofluvial and glacial till deposits, with glaciofluvial and anthropogenic fill dominant to approximately 10-15 ft bgs. Glacial till with lenses of alluvium is observed up to approximately 25 feet bgs, below which a dense, relatively dry glacial till is predominant. Evidence of building foundations are common, with depths typically ranging between 10 and 16 feet below ground surface (bgs) and deeper concrete observed in some locations. Given these documented geologic conditions, the corresponding general range of shear-wave velocities for the expected materials encountered beneath the Site are summarized in **Table 2** below.

Table 2: Estimated Ranges of Shear Wave Velocities ^{1,2}	
Type of Geologic Material	S-Wave Velocity (feet per second)
Unsaturated Sand	330 – 1,650
Saturated Sand	975 – 2,950
Clay	1,300 – 3,300
Solid Concrete	~ 6,000

¹ Butler, D., *Near Surface Geophysics, SEG, Investigations in Geophysics No. 13, 2005, pp.46-60.*

² Bourbie, T., Coussy, O., and Zinszner, B. *Acoustics of Porous Media, Gulf Publishing Co., 1987*

It should be noted that while the ranges of seismic velocity values can overlap between various geologic materials and even within a given lithology due to variations in competency, density, cementation, clay content, and moisture content, the range of values presented in **Table 2** provide a general framework for interpreting the seismic data sets to characterize the subsurface geology beneath the Site. It should also be noted that in general, within a given lithology, lower shear-wave velocities tend to correlate with softer/weaker materials such as fill materials or previously disturbed soils, while higher shear-wave velocities correlate to stiffer/stronger materials such as undisturbed soils. As indicated by **Table 2**, solid sections of concrete, which is known to be present in the subsurface at the Site, has the highest expected S-Wave velocity.

Similarly to the shear-wave profiles, GPR profiles collected over fill materials and previously disturbed soils tend to appear more erratic, with more reflections and anomalies due to debris and structural remnants than those profiles collected over undisturbed (or minimally disturbed) sections of the Site.

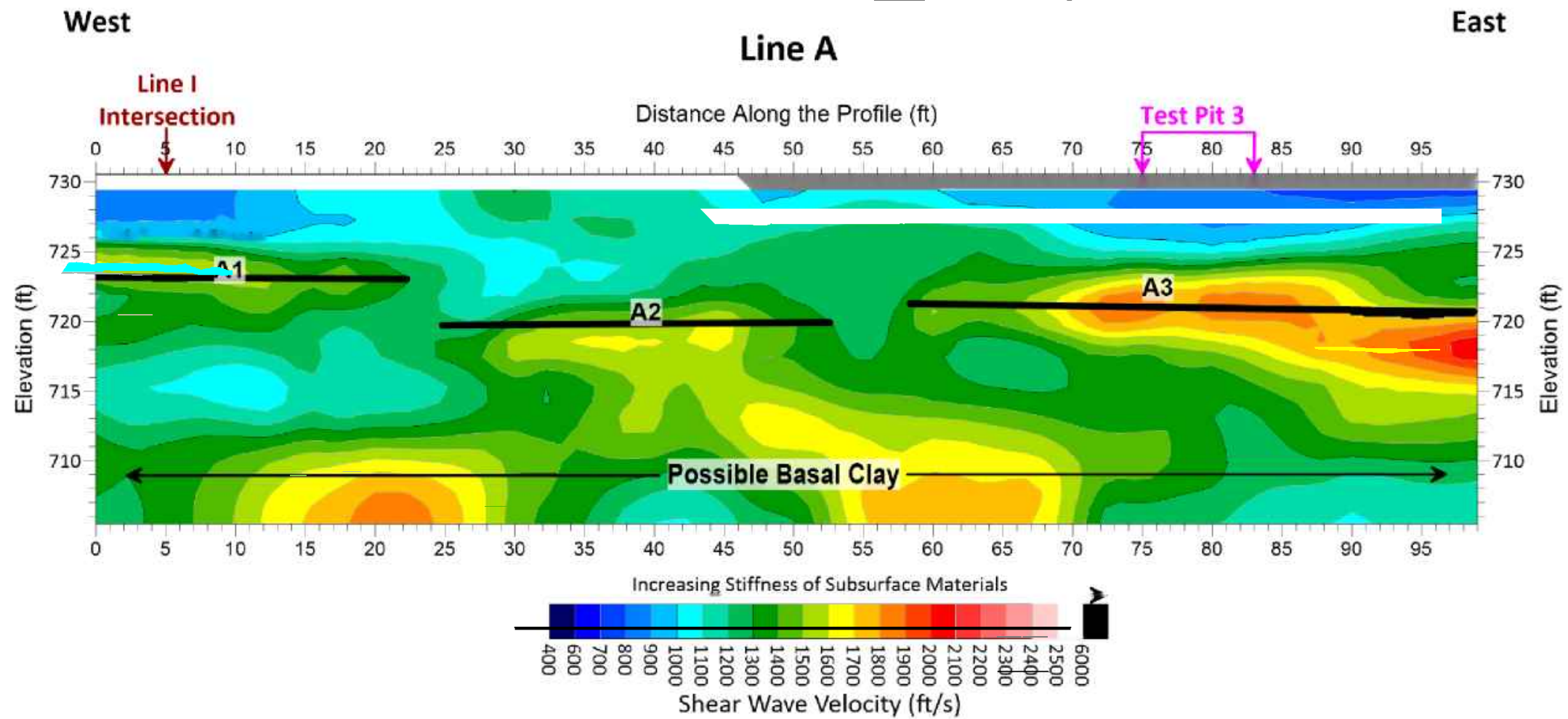
Based on the combined geologic interpretation of the soil borings, test pits, seismic and GPR profiles, several observations can be made:

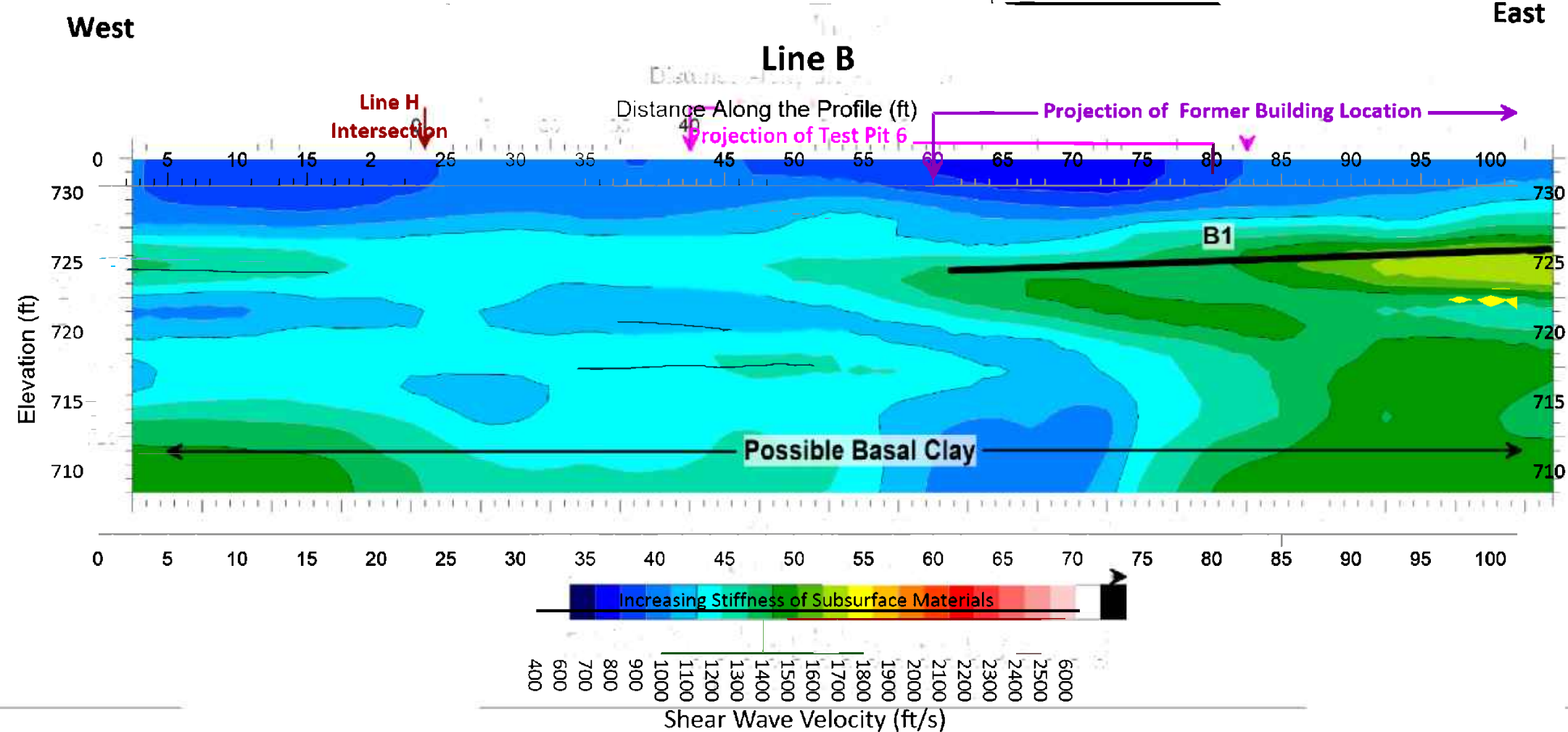
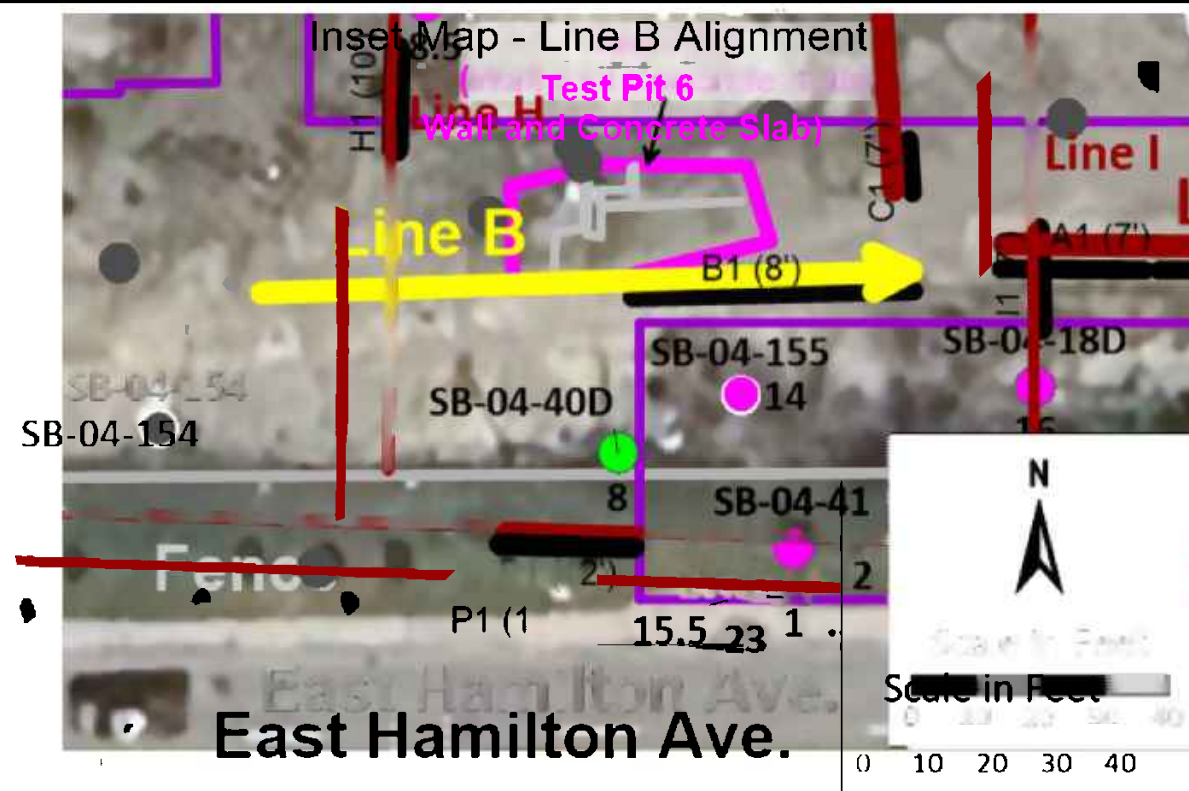
- The range of shear-wave velocities modelled in the cross-sections range from approximately 400 to 2,500 feet per second (ft/s). While these values are largely consistent with the expected subsurface materials present beneath the Site as detailed in **Table 2**, they are on the low end of the range of values. This is likely related to how the seismic data was collected (using a landstreamer) due to existing Site conditions.
- Given the expected subsurface materials described above, the anticipated corresponding geophysical responses in the cross-sections would consist of, from the surface downward: low velocity dry sand/fill materials(blue in color); gradually transitioning down to moderate velocity sand/fill materials and clay (green in color) as porewater saturation and amount of clay increases; overlying a moderate to high velocity layer of basal clay at the base of the cross-section. Zones of elevated seismic velocities detected in the sand/fill above the basal clay layer are likely attributed to localized zones of increased soil compaction from historical Site activities/buildings, concrete obstructions, or clay lenses. It should be noted that the stronger the anomaly (higher the velocity), the greater the probability of concrete being present.
- The majority of the zones of elevated shear-wave velocities in the 8 – 18 ft bgs depth range are interpreted to possible remnants of historical slabs and other concrete obstructions, or as noted above, zones of increased soil compaction/sub-base materials related to historical Site features or operations. This interpretation is based on the correlation of several seismic profiles with previous test pit locations (*Line A across Test Pit 3 – Figure 2, Line B across Test Pit 6 – Figure 3, and Line F across Test Pit 5 – Figure 7*); and soil borings (*Lines G, H, and P – Figures 8, 9, 17A, and 17B*) where these obstructions were physically encountered.
- The elevated seismic velocities encountered in the vicinity of known concrete obstructions are notably lower than that of actual solid concrete (approximately 6,000 ft/s). As noted above, this may be related to the type of seismic acquisition used, but it also is likely due to the vertical resolution of the MASW technique at this depth interval for this survey (approximately 1.5 to 2 feet). As such, the modelling of the shear-wave data is likely averaging the high velocity concrete obstruction with the lower velocity background soil, yielding a moderate velocity anomaly.
- The lowest seismic velocities encountered on each profile (less than 600 ft/s, dark blue in color, and indicative of the softest soils) generally appear to correlate with shallow sections of the Site where disturbed soils due to historical site activities (buildings, utilities, etc.) may be expected.
- With the exceptions of *Lines E, L, M, and N (Figures 6, 13 – 15*, all located on the eastern portion of the Site) anomalous zones of elevated seismic velocities were detected on all the profile lines. These features were all detected in expected portions of the survey area, such as in the vicinity of historical buildings, or in test pit locations where such features were previously observed.
- The GPR data mostly correlated with the MASW data, indicating the presence of flat reflectors at similar depths observed within the MASW profiles, also within the vicinity of historical buildings, soil borings, or in test pit locations where such features were previously observed.

Limitations

This report includes a limited set of data within the project Site. The conclusions drawn from this investigation are considered reliable; however, there may exist localized variations in the subsurface conditions that have not been completely defined at this time.

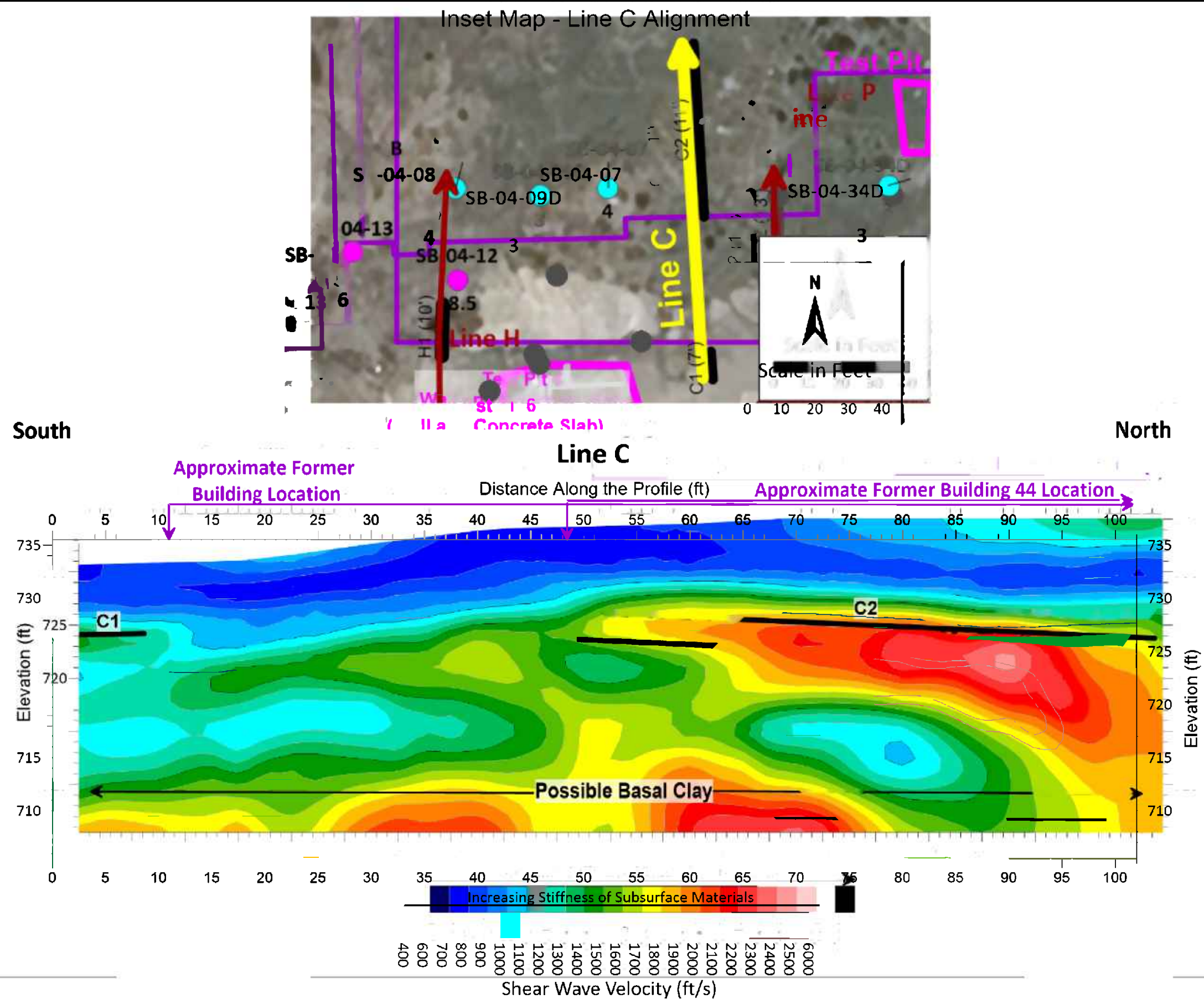
Inset Map - Line A Alignment





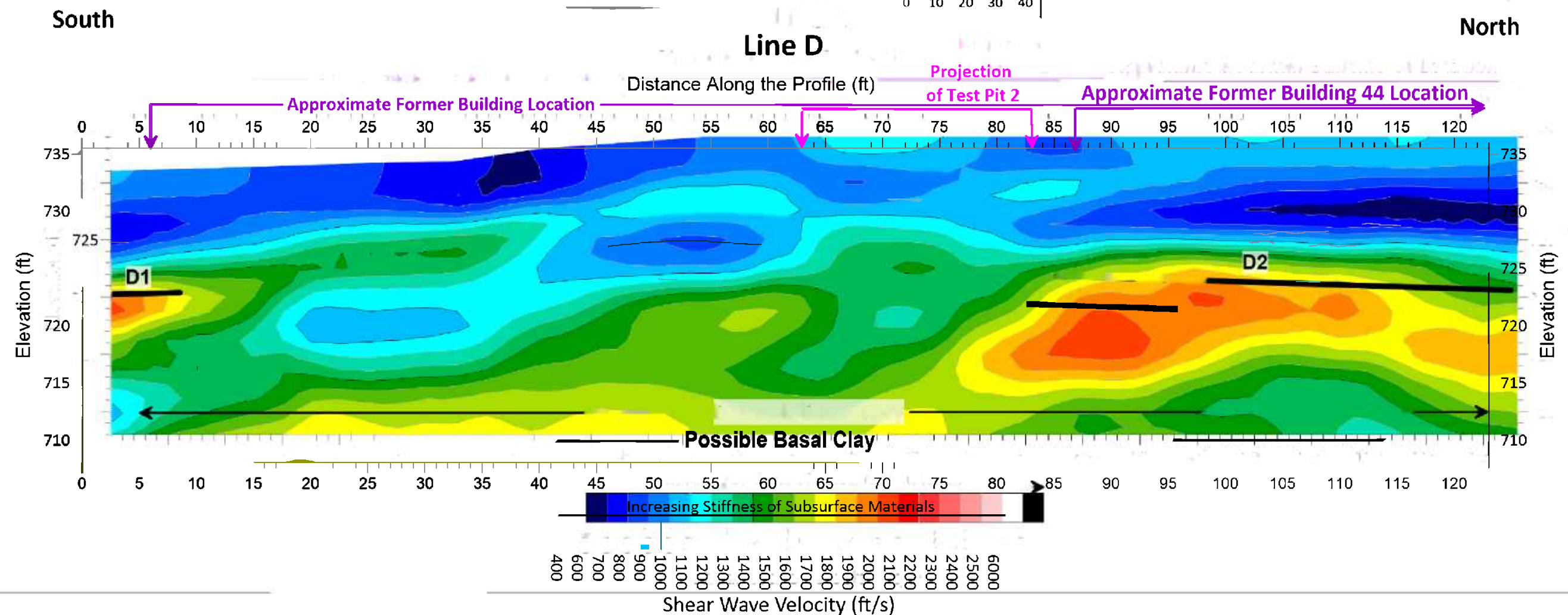
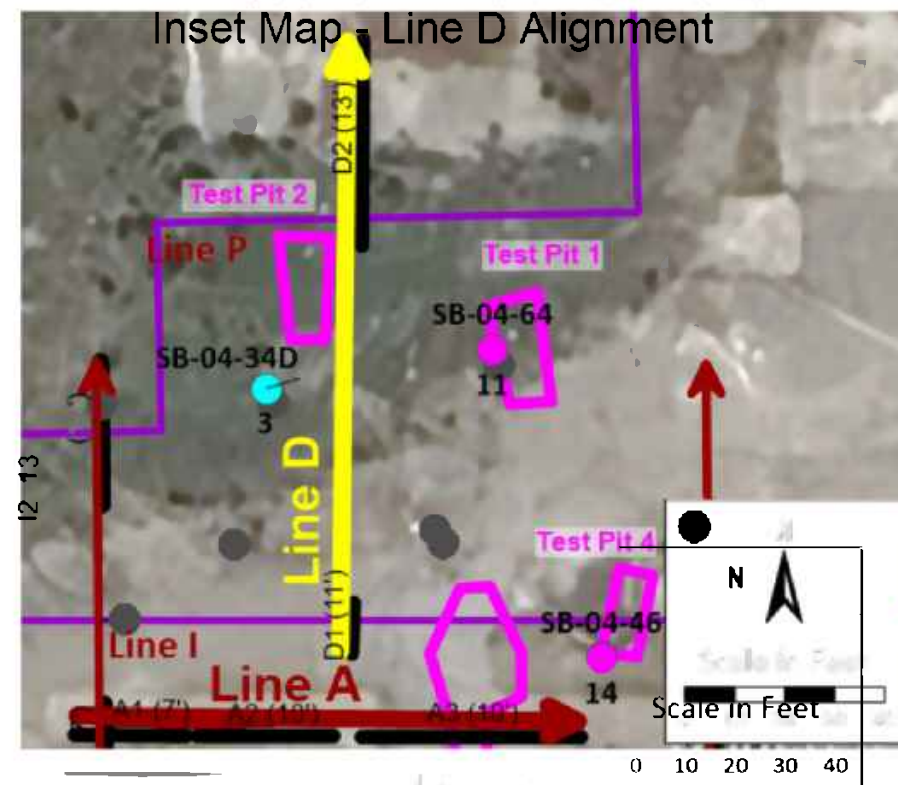
LINE B SHEAR WAVE VELOCITY PROFILE
RACER TRUST - BUICK CITY SITE EVALUATION
FLINT, MICHIGAN - GENESEE COUNTY

FIGURE 3

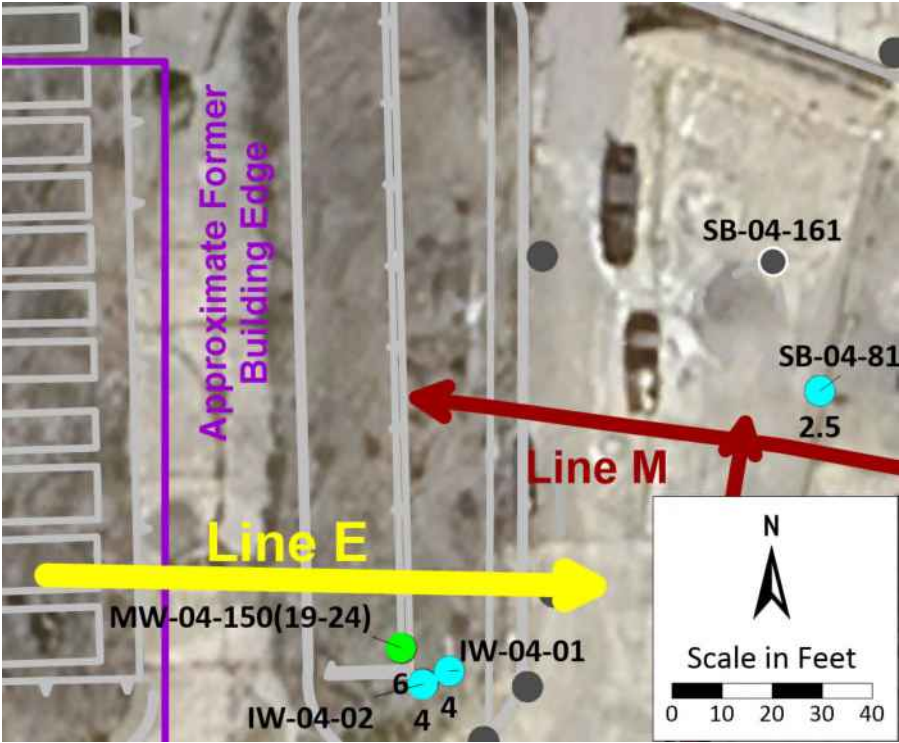


LINE C SHEAR WAVE VELOCITY PROFILE
 RACER TRUST - BUICK CITY SITE EVALUATION
 FLINT, MICHIGAN - GENESEE COUNTY

FIGURE 4



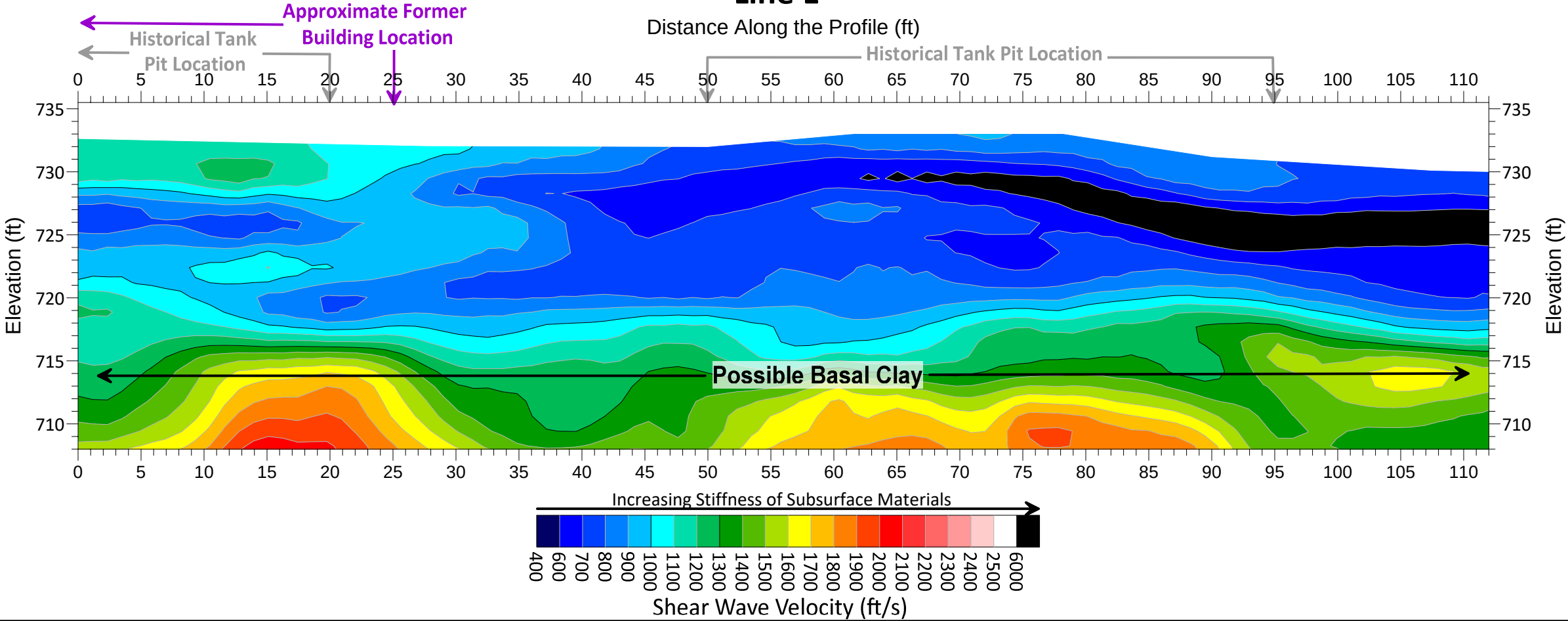
Inset Map - Line E Alignment



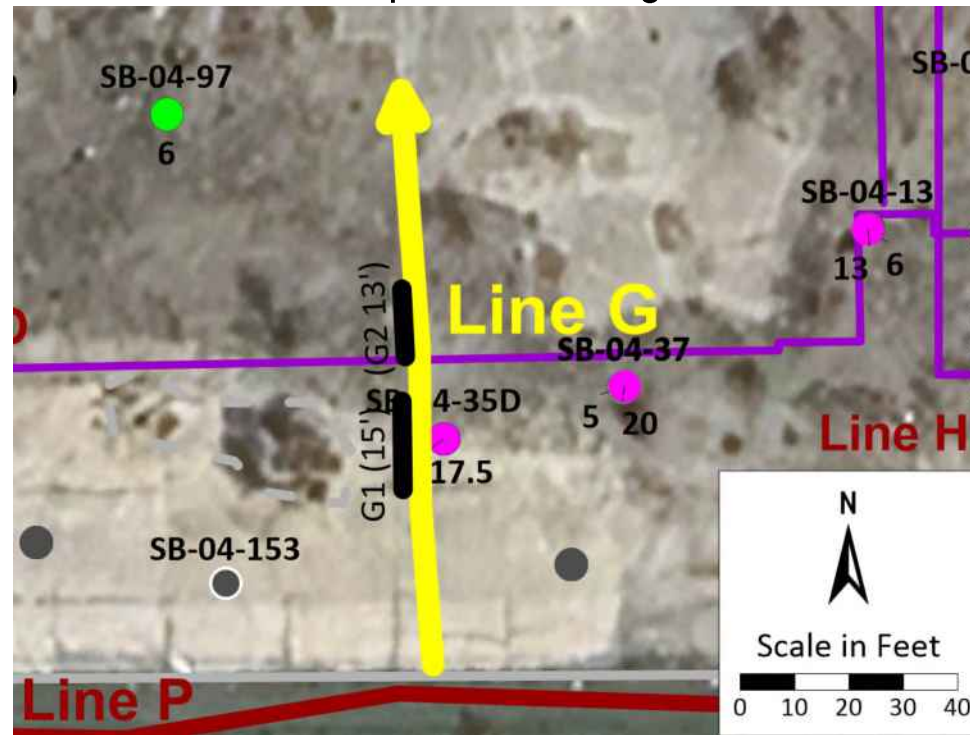
West

East

Line E



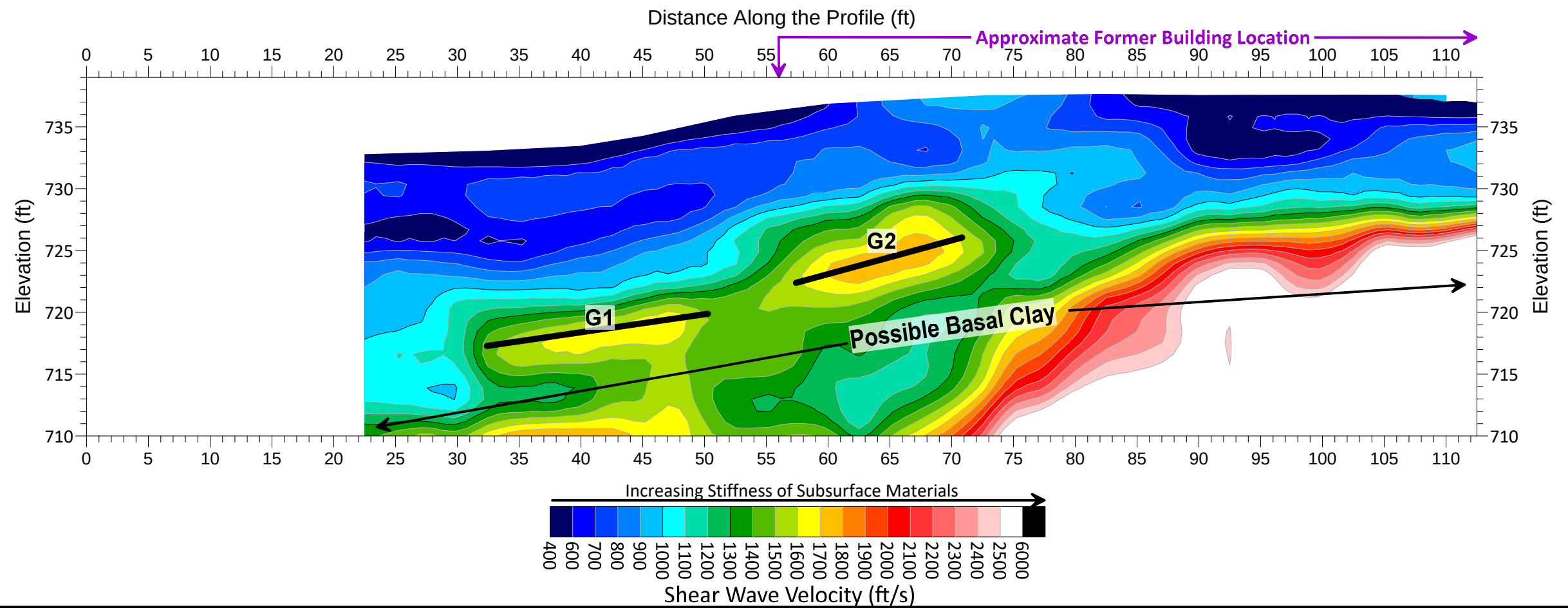
Inset Map - Line G Alignment

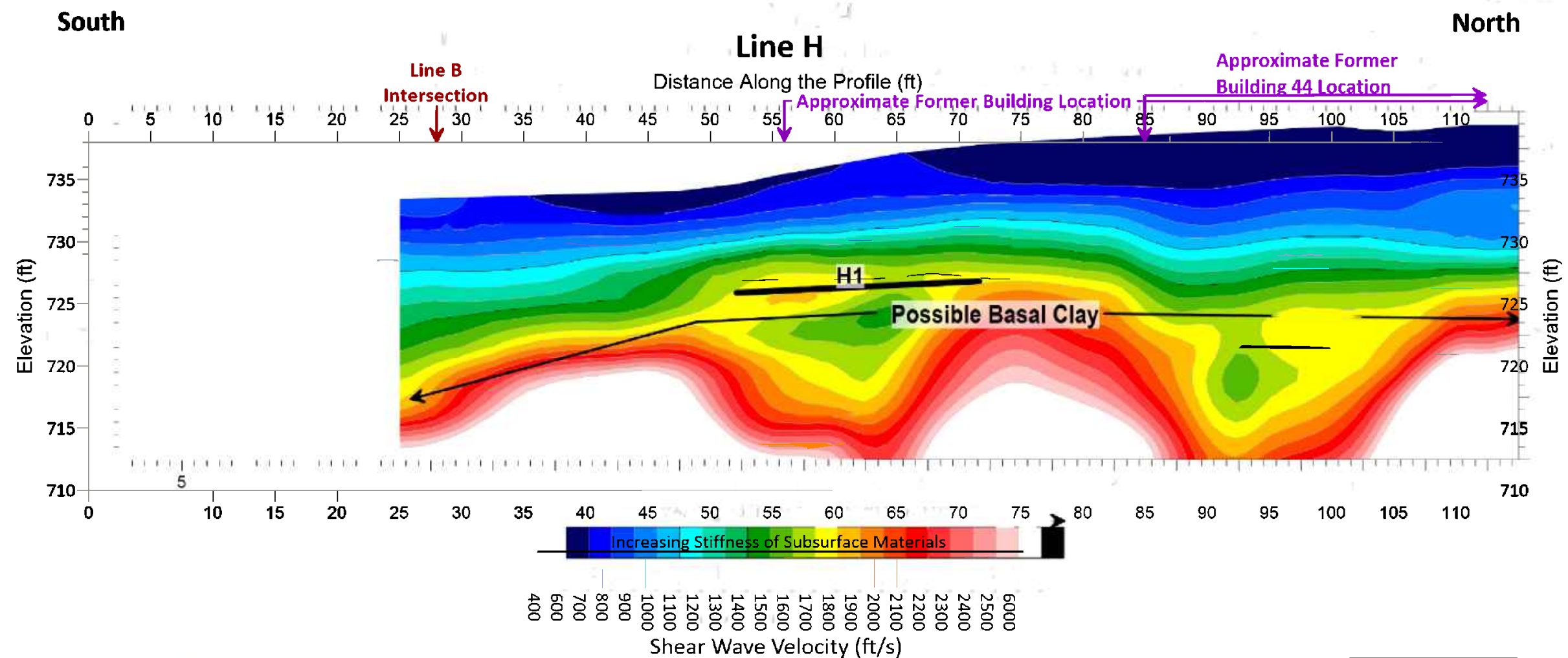
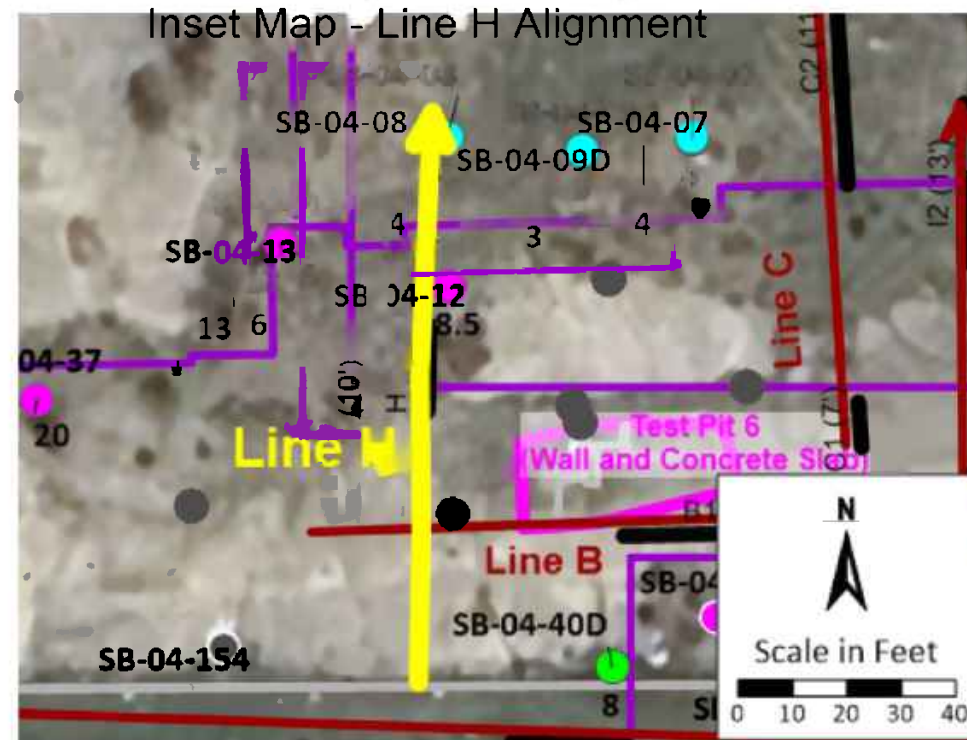


South

North

Line G

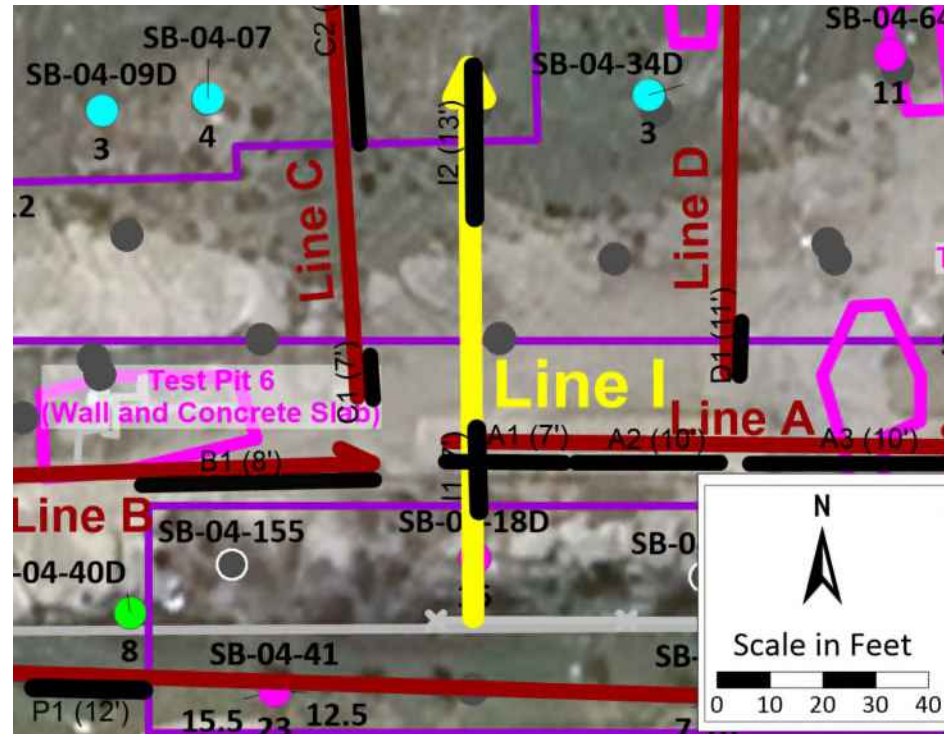




LINE H SHEAR WAVE VELOCITY PROFILE
RACER TRUST - BUICK CITY SITE EVALUATION
FLINT, MICHIGAN - GENESEE COUNTY

FIGURE 9

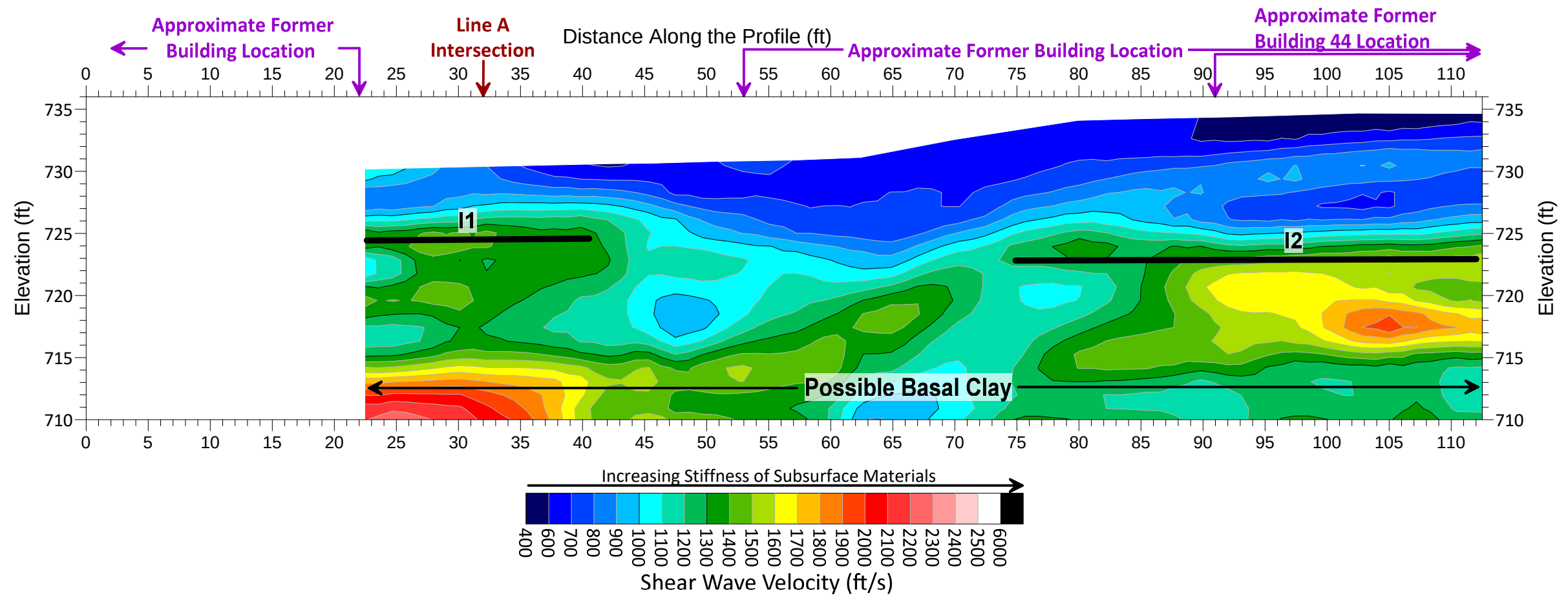
Inset Map - Line I Alignment



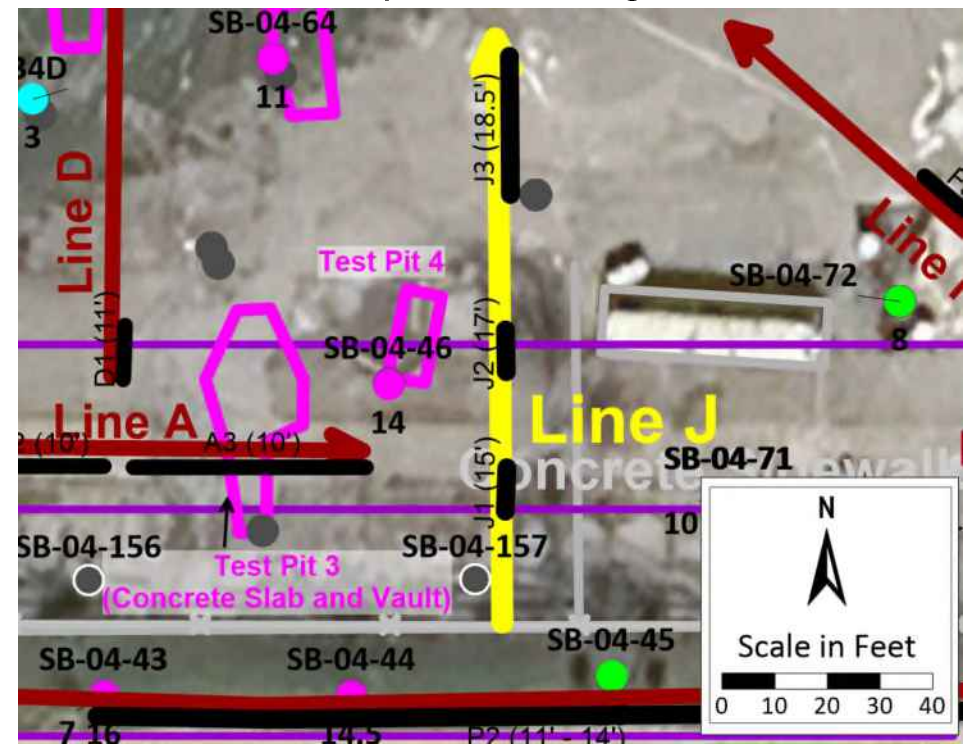
South

North

Line I



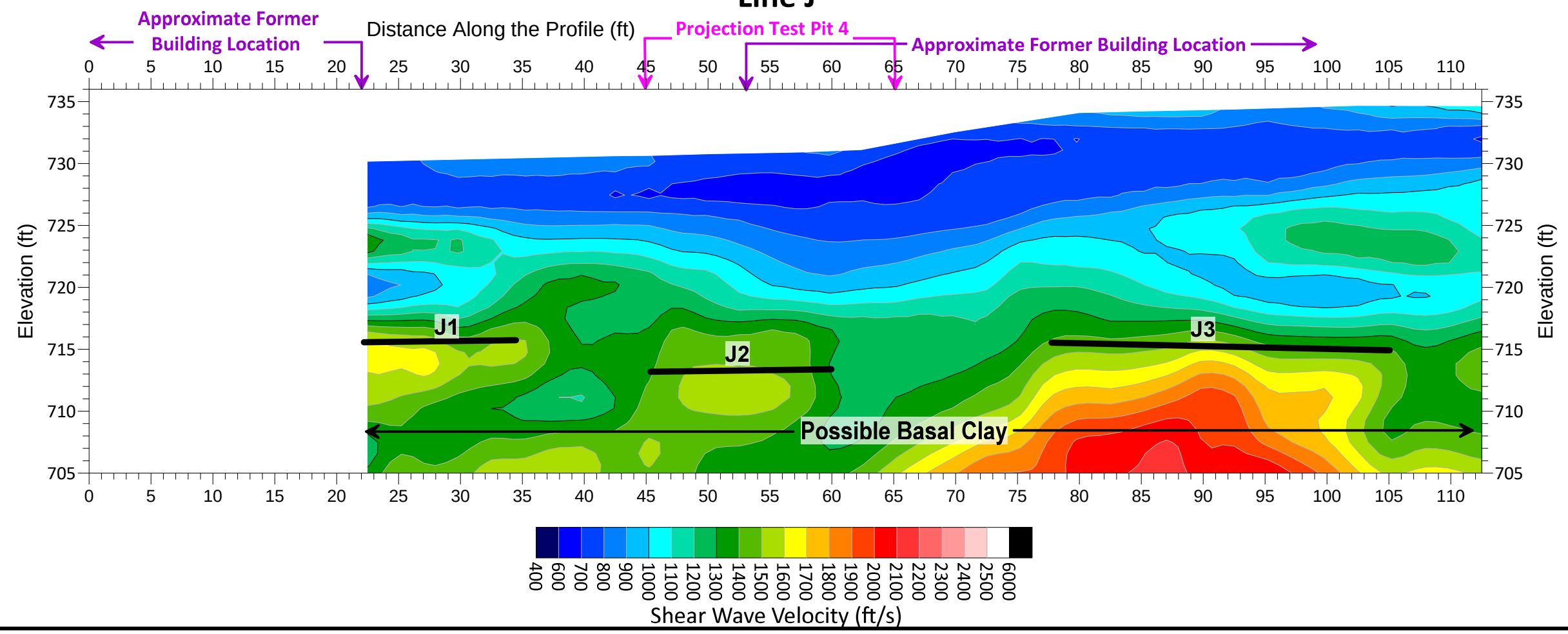
Inset Map - Line J Alignment

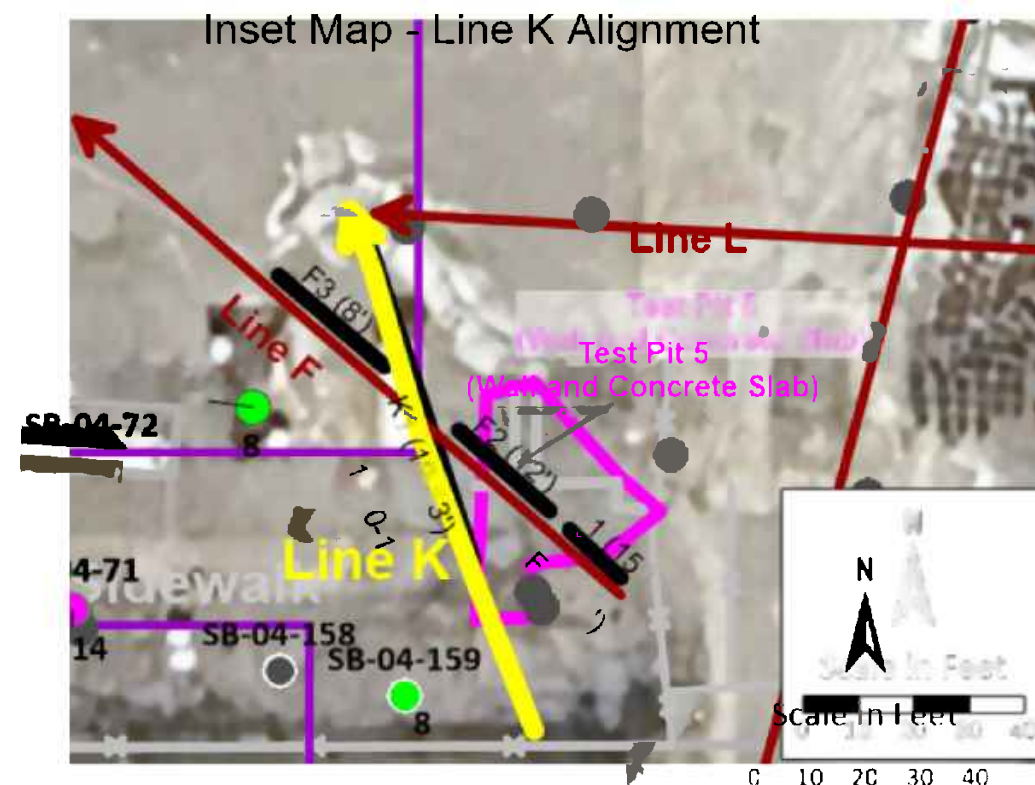


South

North

Line J

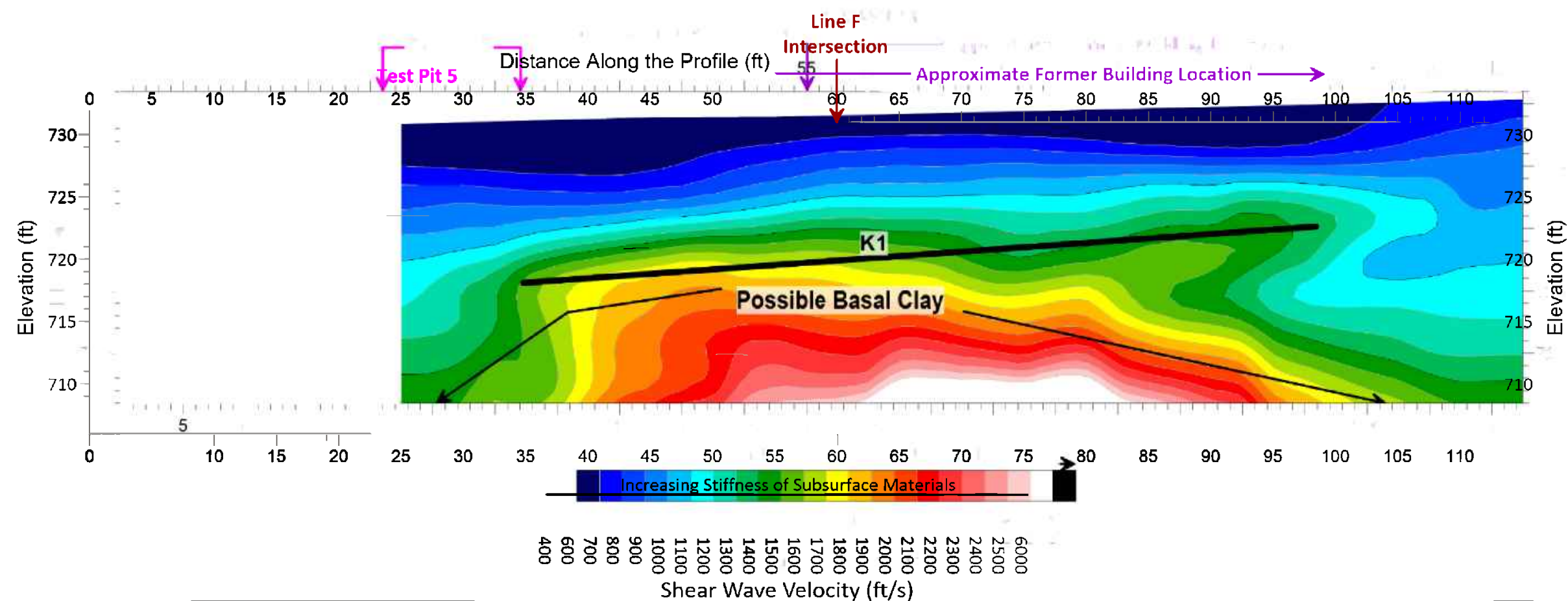




Southeast

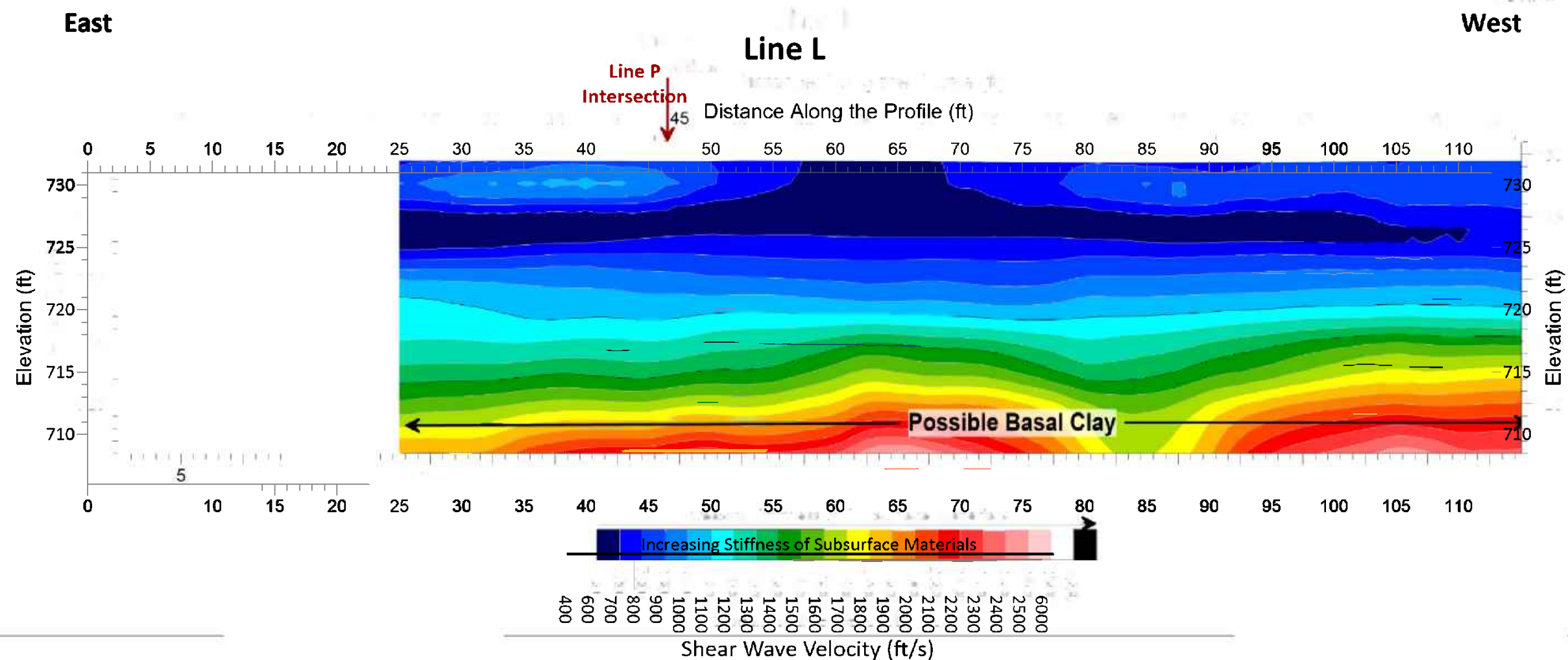
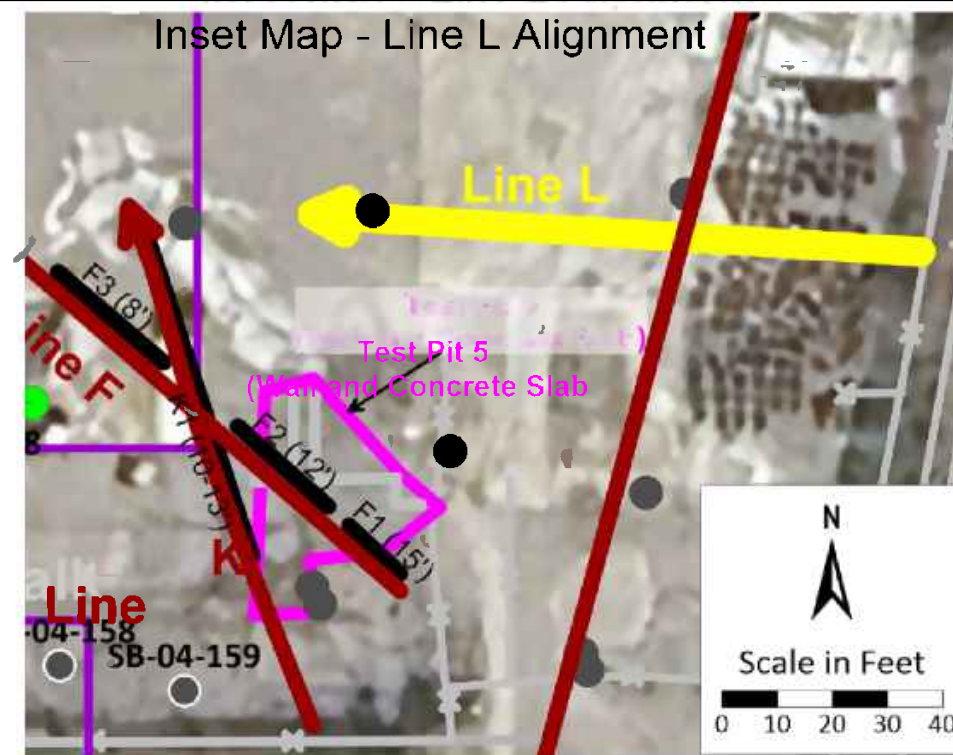
Northwest

Line K

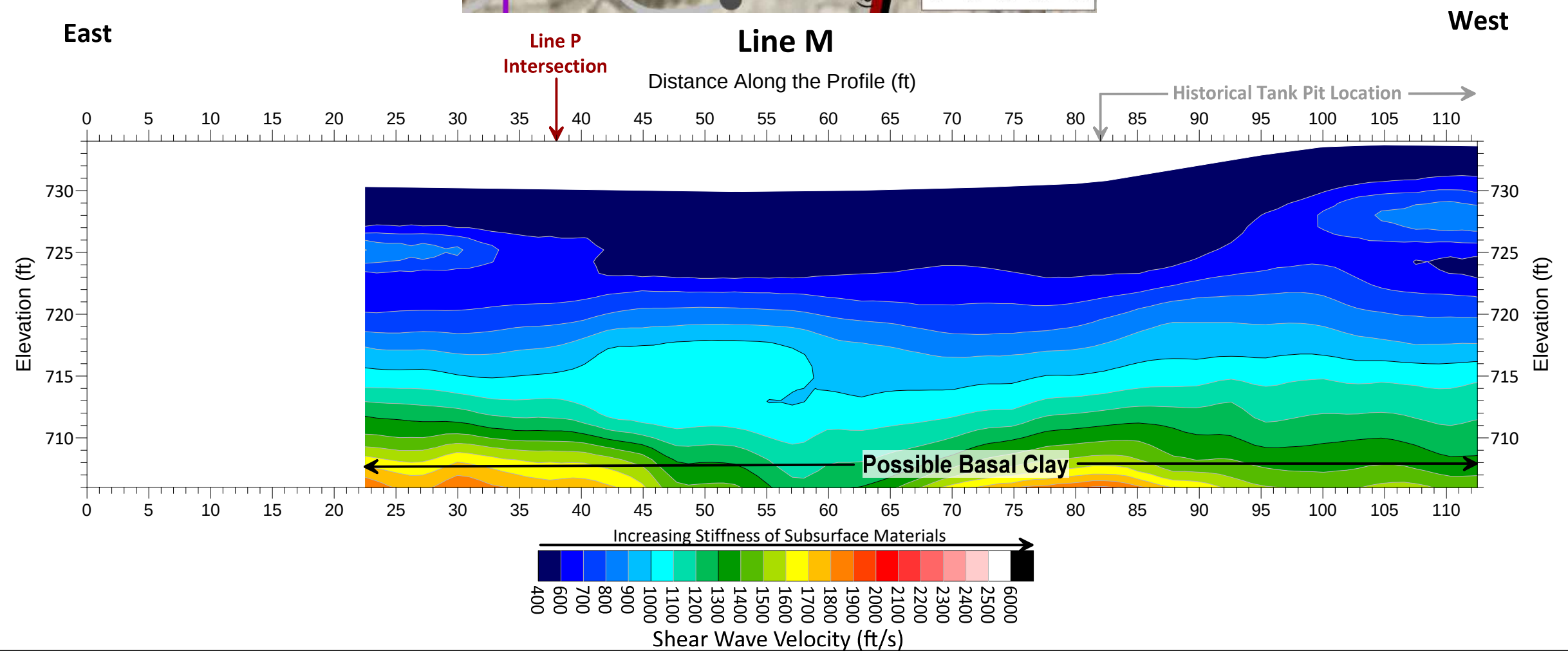
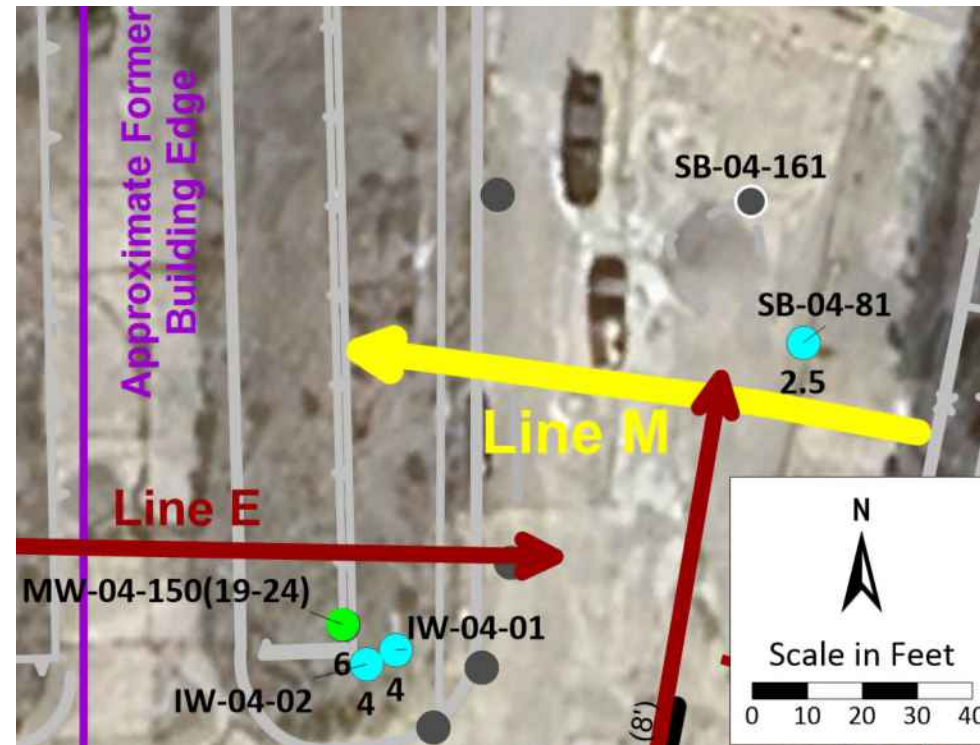


LINE K SHEAR WAVE VELOCITY PROFILE
RACER TRUST - BUICK CITY SITE EVALUATION
FLINT, MICHIGAN - GENESEE COUNTY

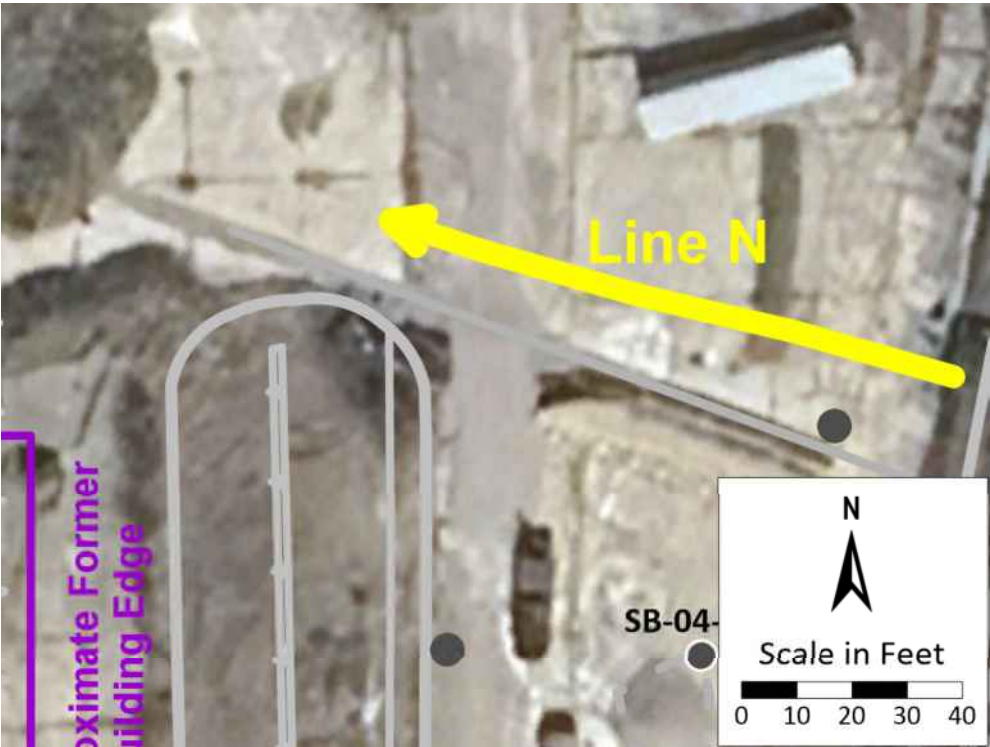
FIGURE 12



Inset Map - Line M Alignment



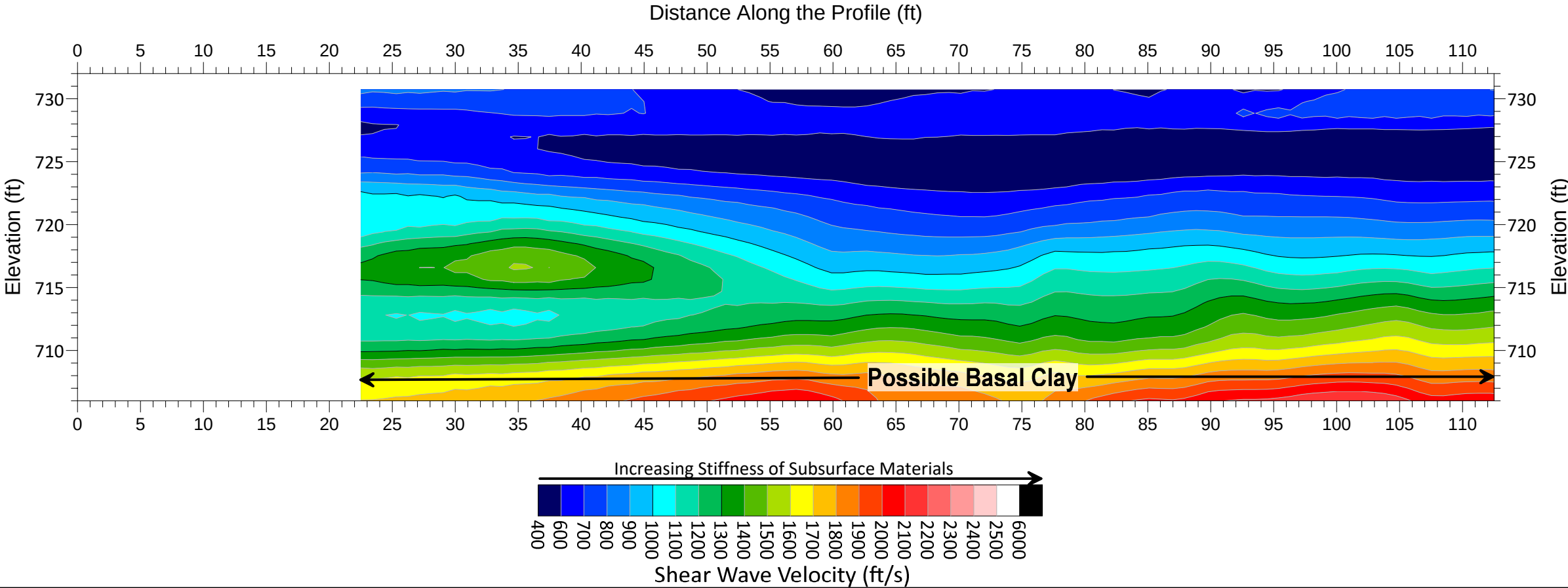
Inset Map - Line N Alignment



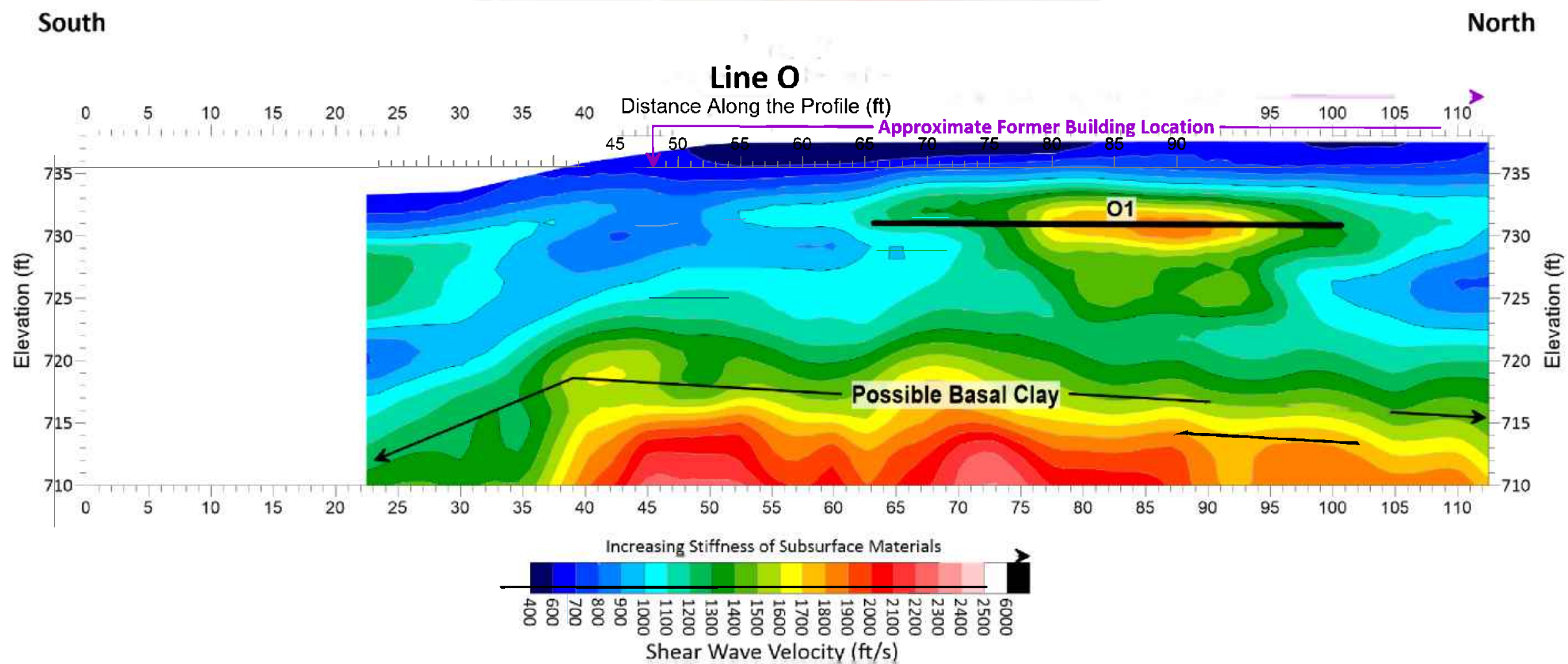
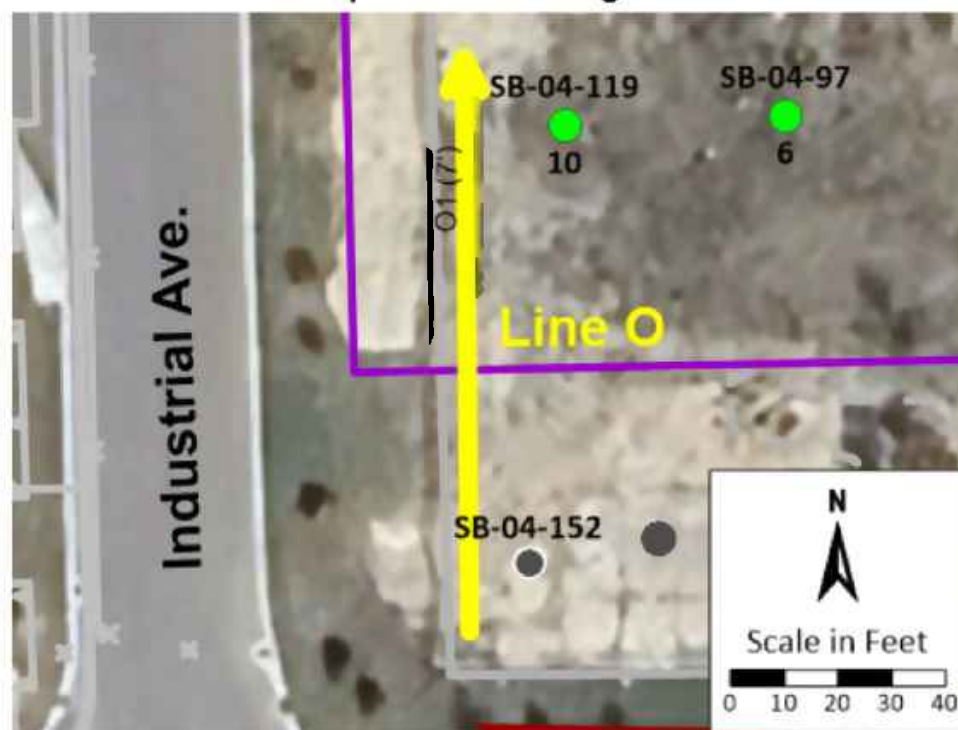
East

West

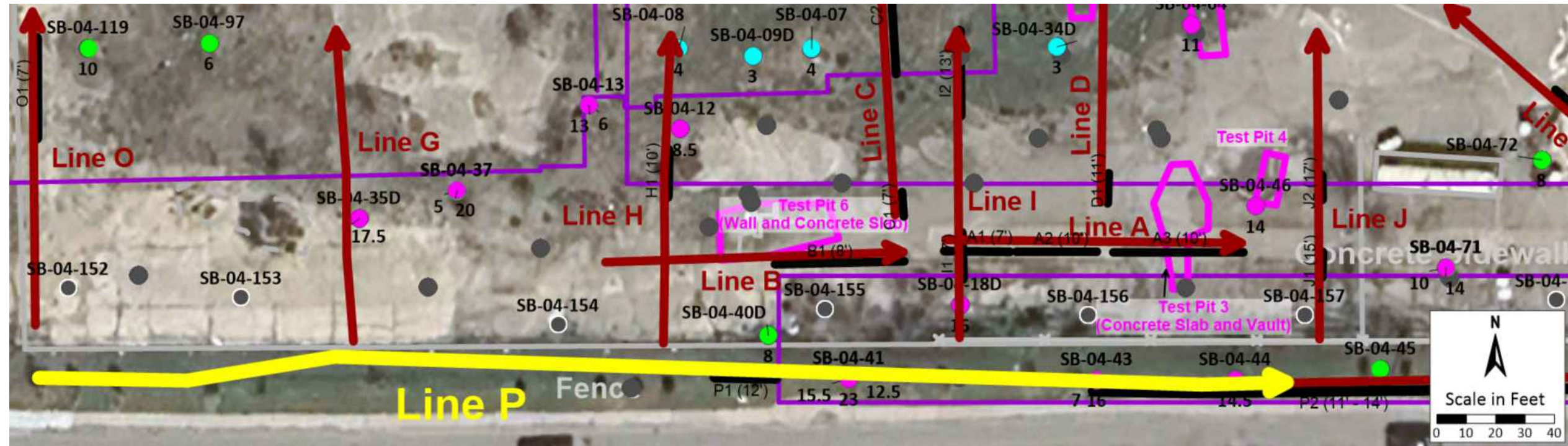
Line N



Inset Map - Line O Alignment



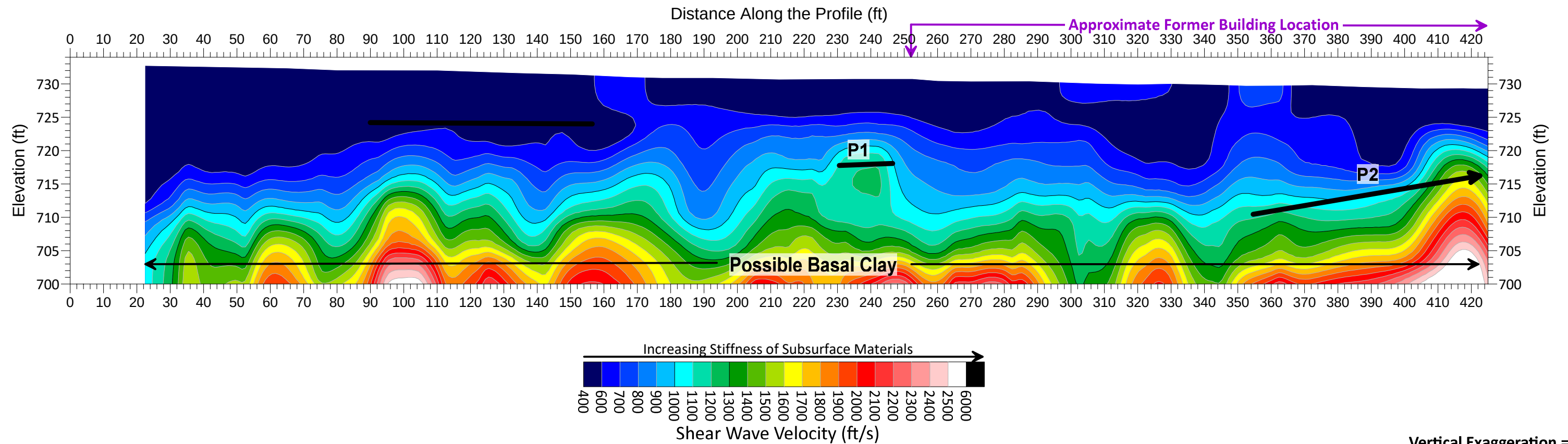
Inset Map - Line P Alignment



West

Line P

East



Inset Map - Line P Alignment



Southwest

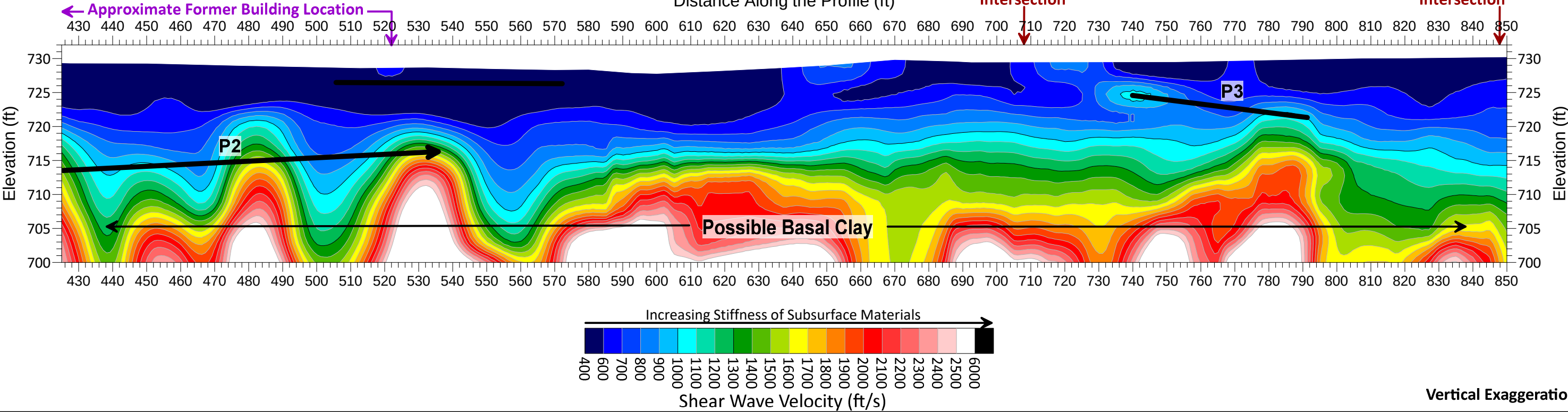
Northeast

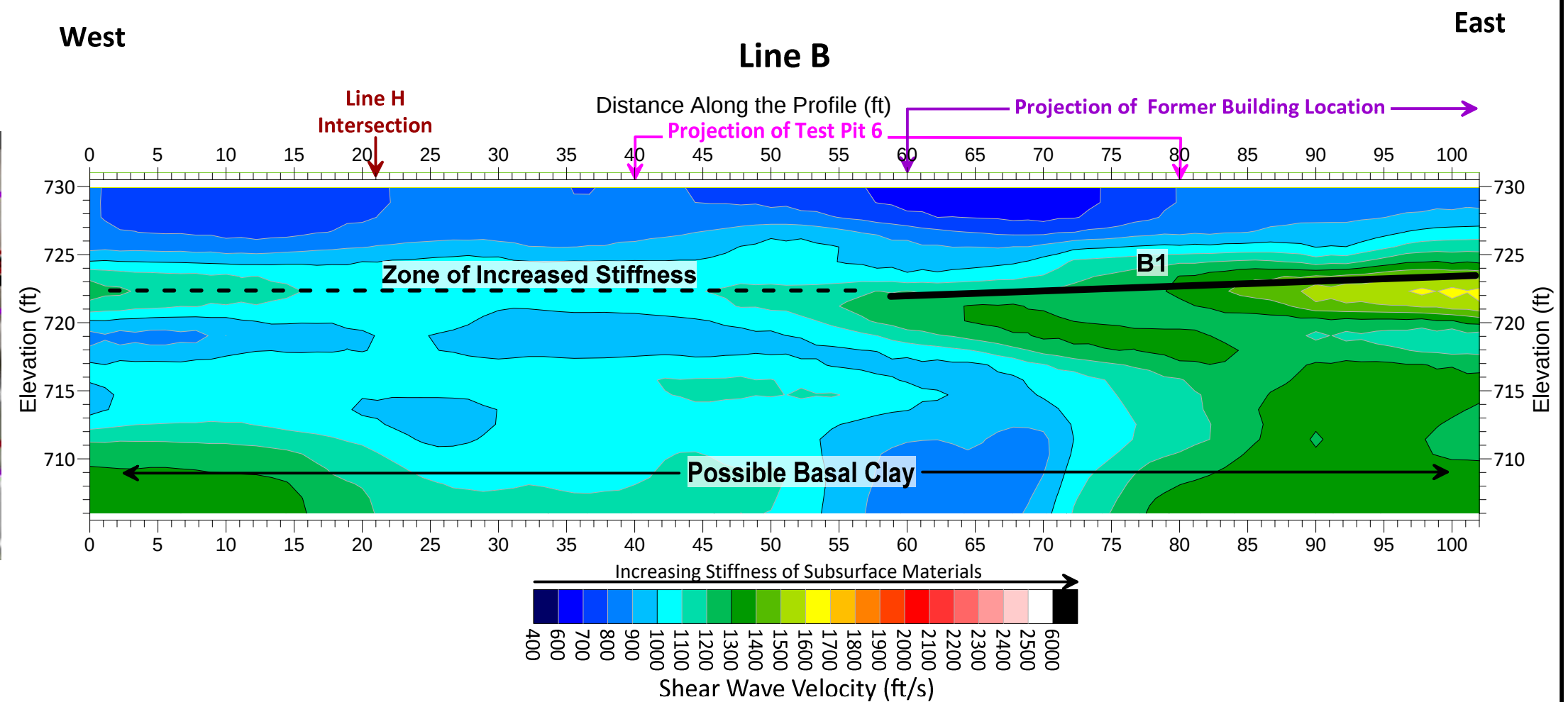
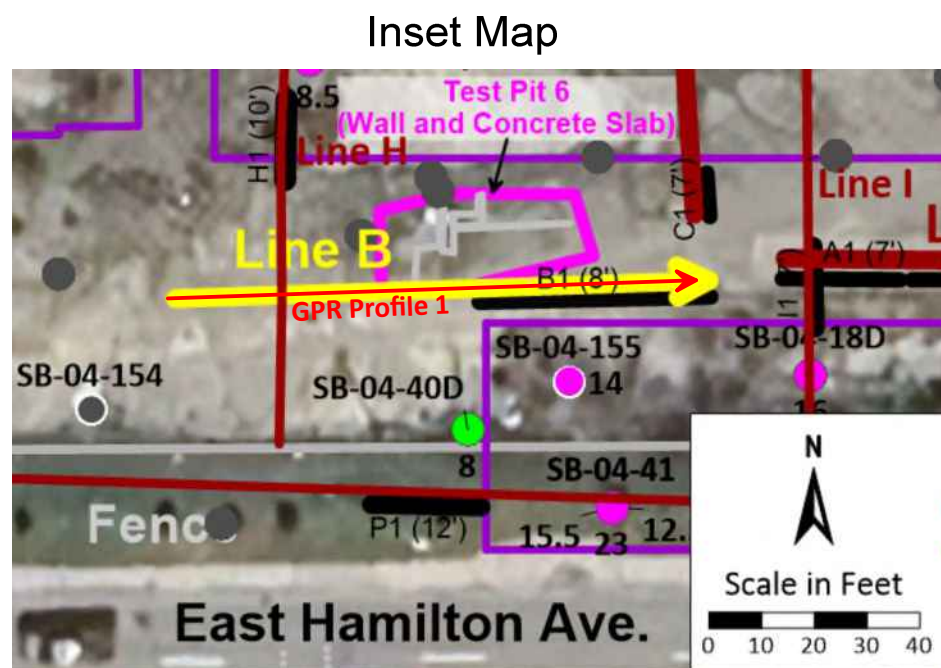
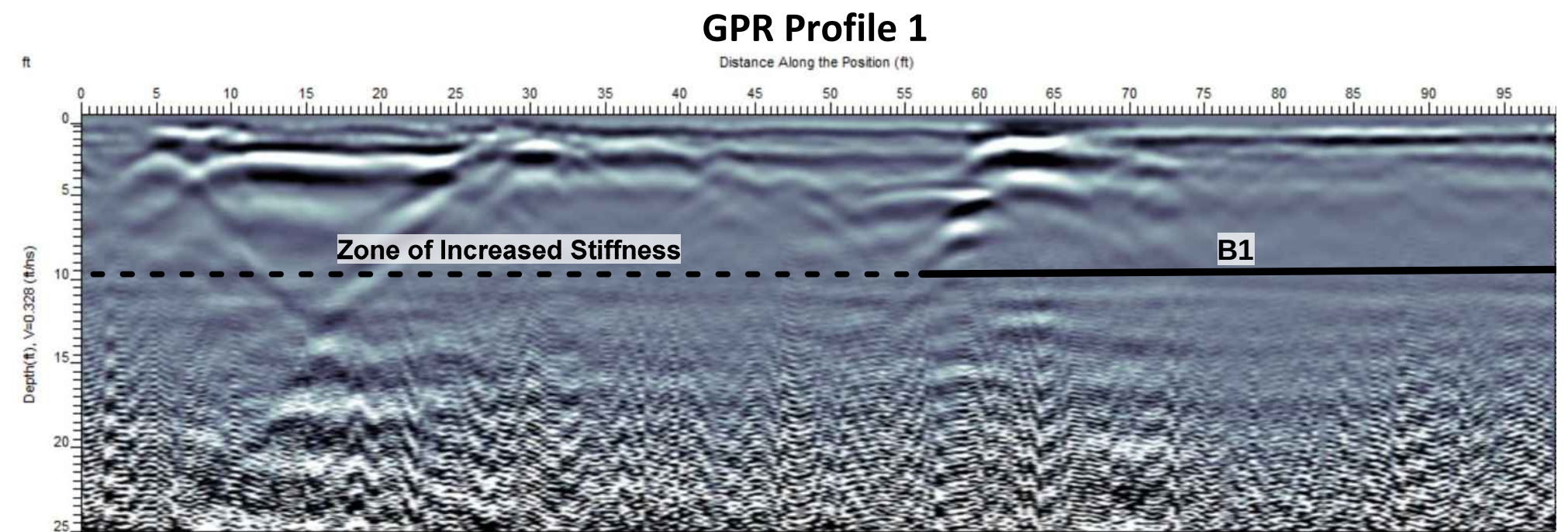
Line P

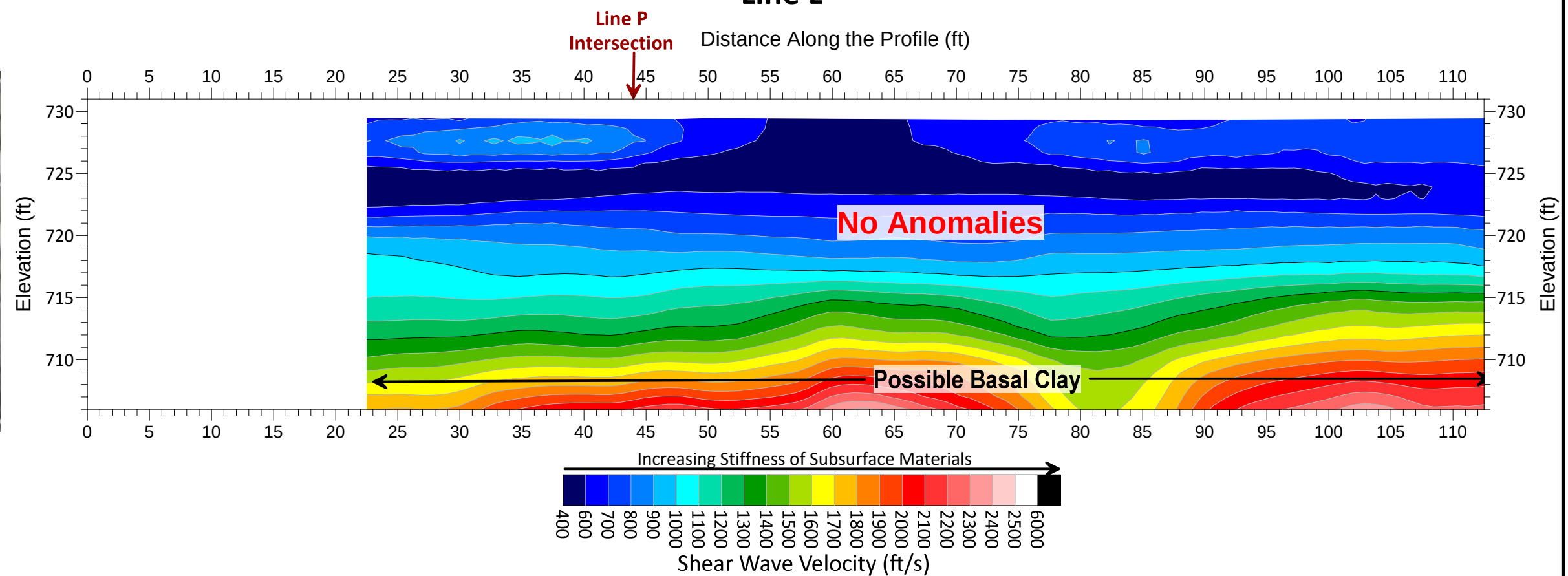
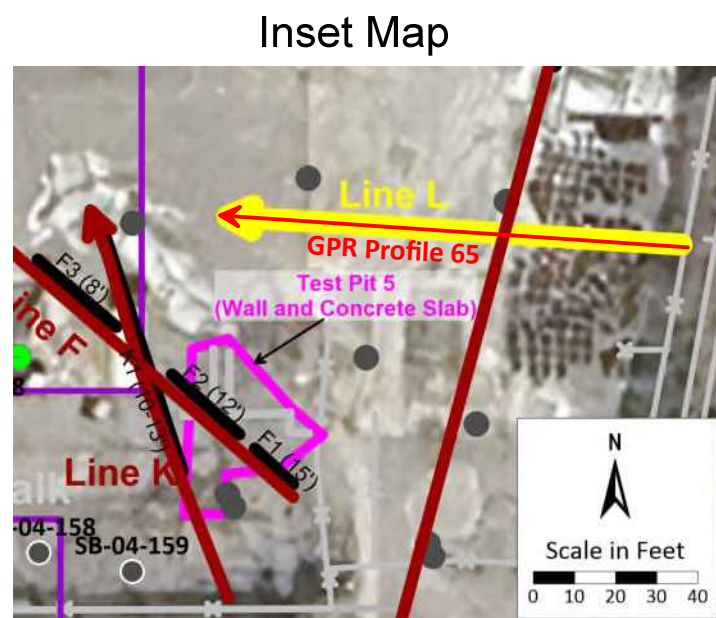
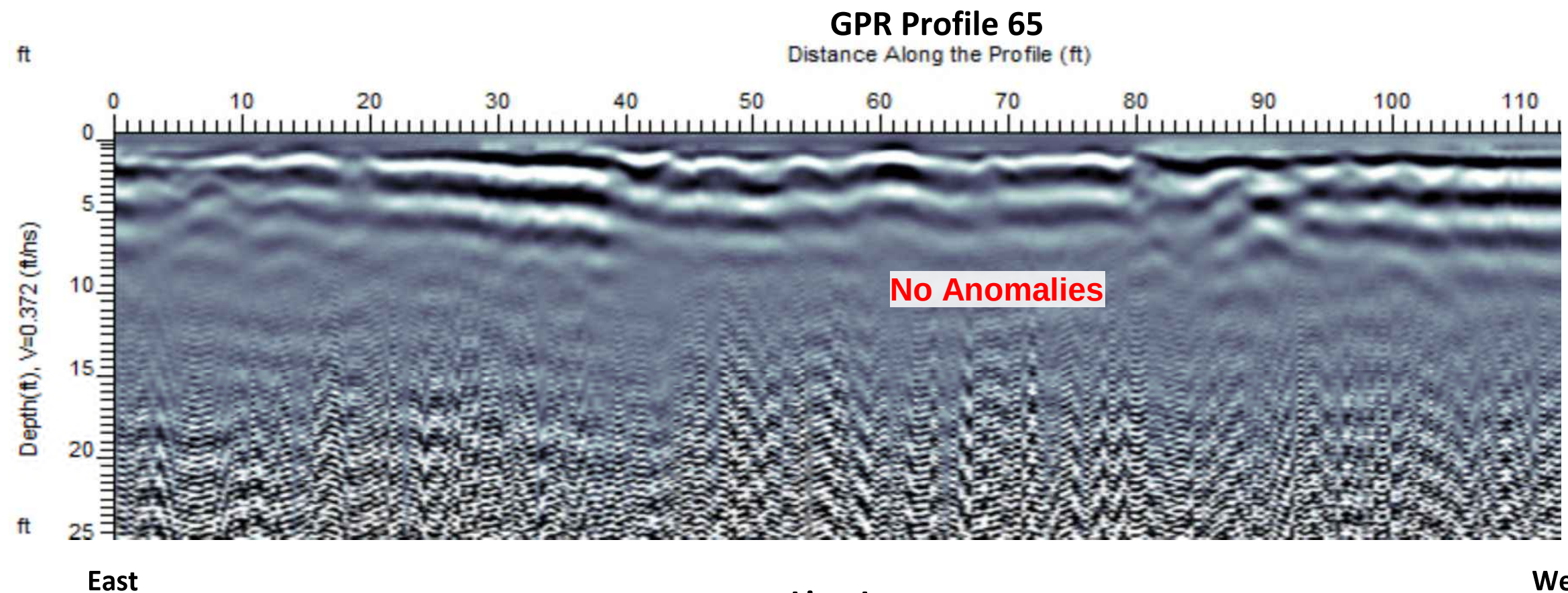
Distance Along the Profile (ft)

Line L
Intersection

Line M
Intersection







Appendix C

Influent Laboratory Analytical Reports

December 31, 2025

Kasey Matteson
Arcadis US, Inc.
28550 Cabot Drive
Suite 500
Novi, MI 48377

Re: **RACER Buick City RSST (30280115)**

Date Received: **12/13/2025**

Work Order: **HN2518802**

Dear Kasey,

Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Kathy Jones-Gronda

/S/ KATHY JONES-GRONDA

Project Manager



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802
Date Received: 13-Dec-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

4 groundwater samples were received for analysis at ALS Environmental on 13-Dec-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

The DOC samples were received more than 48 hours after collection and were lab-filtered and preserved upon receipt. Consequently, analysis was performed beyond the recommended holding time.

Organics

EPA 8270E-FULL HN-3510-W

Run ID: 3775729

The LCSD recovery was below the lower control limit. The sample results may be biased low for this analyte: 4-Chloroaniline.

The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: Di-n-octyl phthalate.

The RPD between the LCS and LCSD was outside of the control limit for this analyte: See QC report.

The Continuing Calibration Verification did not meet acceptance criteria with low bias. Instrument sensitivity was verified as sufficient through the analysis of a low-level standard. The following non-detects are reported without qualification: Hexachlorocyclopentadiene.

The concentration in the Method Blank was greater than the Method Detection Limit. Positive results in the batch may be biased high for this analyte: See QC report.

EPA 8260D-FULL HN-W

Run ID: 3777789

The RPD between the LCS and LCSD was outside of the control limit for this analyte: dichlorodifluoromethane, chloromethane, vinyl chloride

The LCSD recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for this analyte: See QC report

EPA 537 Mod-W

Run ID: 3772641

HN2518802-004: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low. See attached QC report.

HN2518802-001: Perfluorodecane sulfonic acid (PFDS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)

HN2518802-001: 13C2-FtS 6:2 - Surrogate high due to matrix interference.

HN2518802-001: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2518802-001: Perfluoropentanoic acid (PFPeA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802
Date Received: 13-Dec-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Run ID: 3772641

HN2518802-001: 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-001: 18O2-PFHxS - One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

HN2518802-001: 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)

HN2518802-002: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2518802-002: Perfluorodecane sulfonic acid (PFDS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)

HN2518802-002: Perfluoropentanoic acid (PFPeA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-002: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2518802-002: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2518802-002: 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-002: Perfluorobutane sulfonic acid (PFBS) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-002: 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)

HN2518802-003: Perfluoropentanoic acid (PFPeA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-003: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2518802-003: 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-003: Perfluorodecane sulfonic acid (PFDS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)

HN2518802-003: 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)

HN2518802-003: Perfluorobutane sulfonic acid (PFBS) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

HN2518802-003: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2518802-003: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802
Date Received: 13-Dec-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Run ID: 3772641

HN2518802-003: 13C4-PFOS - One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.
HN2518802-004: 2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)
HN2518802-004: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.
HN2518802-004: Perfluorodecane sulfonic acid (PFDS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)
HN2518802-004: 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) - The RPD between the LCS and LCSD was outside of the control limit for this analyte: (Recovery within range in LCS and LCSD)
HN2518802-004: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

Run ID: 3772831

HN2518802-001: Perfluorobutane sulfonic acid (PFBS) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)
HN2518802-004: Perfluorobutane sulfonic acid (PFBS) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)
HN2518802-004: Perfluoropentanoic acid (PFPeA) - The LCS recovery was above the upper control limit. The sample results for this batch may be biased high for this analyte: (LCSD recovery and the RPD between the LCS and LCSD was in control)

Metals

EPA 6020B LL-3015A-D

Run ID: 3778921

The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Na, Ba Batch 2390841
HN2518802-001: Barium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Ba
HN2518802-002: Barium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Ba
HN2518802-002: Sodium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Na
HN2518802-003: Barium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Ba



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802
Date Received: 13-Dec-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Run ID: 3778921

HN2518802-003: Sodium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Na

HN2518802-004: Barium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Ba

HN2518802-004: Sodium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Na

Run ID: 3779186

The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Ba, Na Batch 2390841

HN2518802-001: Sodium, dissolved - The concentration in the Method Blank was greater than the quantitation limit. The sample result was greater than 10x the concentration in the Method Blank; therefore, no qualification is necessary for this analyte: Na

Run ID: 3796881

HN2518802-002: Potassium, dissolved - re-prep analysis confirms original result

HN2518802-003: Magnesium, dissolved - re-prep analysis confirms original result

HN2518802-003: Sodium, dissolved - re-prep analysis confirms original result

HN2518802-004: Manganese, dissolved - re-prep analysis confirms original result

HN2518802-004: Calcium, dissolved - re-prep analysis confirms original result

HN2518802-004: Copper, dissolved - re-prep analysis confirms original result

HN2518802-004: Arsenic, dissolved - re-prep analysis confirms original result

EPA 245.1-T

Run ID: 3786221

The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Hg batch 2395543

The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: Hg Batch 2395543

EPA 6020B LL-3015A-T

Run ID: 3796878

The concentration in the Method Blank was greater than the quantitation limit. All samples in the batch were non-detect; therefore, no qualification is needed for this analyte: Cr, Cu batch 2402034

HN2518802-002: Potassium - re-prep confirms original result

HN2518802-003: Sodium - re-prep confirms original result

HN2518802-003: Magnesium - re-prep confirms original result

HN2518802-004: Calcium - re-prep confirms original result



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802
Date Received: 13-Dec-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Run ID: 3796878

HN2518802-004: Arsenic - re-prep confirms original result
HN2518802-004: Manganese - re-prep confirms original result
HN2518802-004: Copper - re-prep confirms original result

Inorganics

EPA 9056A (High)

Run ID: 3783310

The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: C,3,S
The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: C,S
The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: C3S
Matrix spike duplicate value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.
The LCS recovery was below the lower control limit. The sample results for this batch may be biased low for this analyte: F
The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: BF
The LCS recovery was below the lower control limit. The sample results for this batch may be biased low for this analyte: F
Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.
The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: BF
The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: SC

Run ID: 3788998

The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Fluoride
The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s): Fluoride
Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent. Chloride, Sulfate
Matrix spike duplicate value was outside upper limit of calibration. Processed at equivalent dilution level as the parent. Chloride, Sulfate

EPA 9060A-DOC

Run ID: 3773121

HN2518802-001: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte:
HN2518802-001: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for the following analyte(s):
HN2518802-001 through -004: Sample holding time expired before receipt by laboratory.

HN2518802-003: Insufficient sample volume provided to obtain the method specified minimum level of 2.5 mg residue.

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: MW-04-151(15-20)_120825			Lab ID: HN2518802-001			
Analyte	Results	Flag	MDL	MRL	Units	Method
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	2.57	J	2.00	5.21	ng/L	EPA 537Mod
2,4-Dimethylphenol	0.490	J	0.384	1.07	µg/L	EPA 8270E
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	22.2		1.45	5.21	ng/L	EPA 537Mod
Alkalinity as CaCO ₃	532		1.43	2.00	mg/L	SM 2320 B-2021
Alkalinity, Bicarbonate	532		1.43	2.00	mg/L	SM 2320 B-2021
Arsenic	0.00587		0.000174	0.001000	mg/L	EPA 6020B
Arsenic, dissolved	0.00281		0.000174	0.001000	mg/L	EPA 6020B
Barium	0.0885		0.000396	0.00199	mg/L	EPA 6020B
Barium, dissolved	0.0828	B	0.000396	0.00199	mg/L	EPA 6020B
Bromide	0.152	J	0.0319	0.200	mg/L	EPA 9056A
Calcium	57.7		0.0686	0.200	mg/L	EPA 6020B
Calcium, dissolved	56.5		0.0686	0.200	mg/L	EPA 6020B
Chloride	27.0		3.10	10.0	mg/L	EPA 9056A
cis & trans-1,2-Dichloroethene	4.06		0.480	2.00	µg/L	EPA 8260D
cis-1,2-Dichloroethylene	4.06	S	0.420	1.00	µg/L	EPA 8260D
Dissolved Organic Carbon (DOC)	55.4	HS	1.39	5.00	mg/L	EPA 9060A
Fluoride	0.184		0.0670	0.100	mg/L	EPA 9056A
Iron	1.47		0.0141	0.0200	mg/L	EPA 6020B
Magnesium	12.3		0.0145	0.200	mg/L	EPA 6020B
Magnesium, dissolved	12.7		0.0145	0.200	mg/L	EPA 6020B
Manganese	0.0230		0.00110	0.00199	mg/L	EPA 6020B
Manganese, dissolved	0.0199		0.00110	0.00199	mg/L	EPA 6020B
Methyl tert-butyl ether (MTBE)	1.11		0.450	1.00	µg/L	EPA 8260D
n-Hexane Extractable Material (O&G)	3.46	J	1.35	4.81	mg/L	EPA 1664A
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	37.7		0.924	5.21	ng/L	EPA 537Mod
Perfluorobutane sulfonic acid (PFBS)	521		3.66	52.1	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	114		2.71	5.21	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	95.1		2.07	5.21	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	337		5.90	52.1	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	279		1.80	5.21	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	7480		94.1	521	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	576		9.15	52.1	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	893		12.5	52.1	ng/L	EPA 537Mod
Perfluorononane sulfonic acid (PFNS)	13.6		0.517	5.21	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	9.18		0.907	5.21	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	8630		93.0	208	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	763		6.57	20.8	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	825		5.80	52.1	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	222	S	1.33	5.21	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: MW-04-151(15-20)_120825				Lab ID: HN2518802-001		
Analyte	Results	Flag	MDL	MRL	Units	Method
Potassium	9.76		0.0344	0.1000	mg/L	EPA 6020B
Potassium, dissolved	9.92		0.0344	0.1000	mg/L	EPA 6020B
Residue-filterable (TDS)	677		36.9	50.0	mg/L	SM 2540 C-2020
Residue-nonfilterable (TSS)	4.60		0.380	1.00	mg/L	SM 2540 D-2020
Silica-dissolved	19.0		0.500	0.500	mg/L	SM 4500-SiO2 C-2011
Sodium	228		0.468	2.00	mg/L	EPA 6020B
Sodium, dissolved	237	B	0.468	2.00	mg/L	EPA 6020B
Sulfate	58.1		1.90	10.0	mg/L	EPA 9056A
Total Hardness as CaCO3	200		2.17	5.00	mg/L	SM 2340 C-2021
Total Organic Carbon (TOC)	185		10.3	20.0	mg/L	EPA 9060A
Vinyl chloride (Chloroethene)	0.540	J	0.530	1.00	µg/L	EPA 8260D

CLIENT ID: MW-04-151(4-9)_120925				Lab ID: HN2518802-002		
Analyte	Results	Flag	MDL	MRL	Units	Method
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	7.04		1.42	5.12	ng/L	EPA 537Mod
Alkalinity as CaCO3	477		1.43	2.00	mg/L	SM 2320 B-2021
Alkalinity, Bicarbonate	477		1.43	2.00	mg/L	SM 2320 B-2021
Arsenic	0.00126		0.000174	0.001000	mg/L	EPA 6020B
Arsenic, dissolved	0.000486	J	0.000174	0.001000	mg/L	EPA 6020B
Barium	0.0836		0.000396	0.00199	mg/L	EPA 6020B
Barium, dissolved	0.0653	B	0.000396	0.00199	mg/L	EPA 6020B
Bromide	0.0830	J	0.0319	0.200	mg/L	EPA 9056A
Calcium	140		0.0686	0.200	mg/L	EPA 6020B
Calcium, dissolved	66.5		0.0686	0.200	mg/L	EPA 6020B
Chloride	10.7		0.310	1.00	mg/L	EPA 9056A
Copper	0.000660	J	0.000560	0.001000	mg/L	EPA 6020B
Copper, dissolved	0.000733	J	0.000560	0.001000	mg/L	EPA 6020B
Dissolved Organic Carbon (DOC)	43.9	H	1.39	5.00	mg/L	EPA 9060A
Fluoride	0.104		0.0670	0.100	mg/L	EPA 9056A
Iron	1.13		0.0141	0.0200	mg/L	EPA 6020B
Magnesium	25.7		0.0145	0.200	mg/L	EPA 6020B
Magnesium, dissolved	25.6		0.0145	0.200	mg/L	EPA 6020B
Manganese	2.21		0.0110	0.0199	mg/L	EPA 6020B
Manganese, dissolved	0.123		0.00110	0.00199	mg/L	EPA 6020B
n-Hexane Extractable Material (O&G)	3.46	J	1.35	4.81	mg/L	EPA 1664A
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	2.66	J	0.907	5.12	ng/L	EPA 537Mod
Perfluorobutane sulfonic acid (PFBS)	14.7	S	0.359	5.12	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	24.9		2.66	5.12	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	5.36		2.03	5.12	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	8.49		0.580	5.12	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: MW-04-151(4-9)_120925				Lab ID: HN2518802-002		
Analyte	Results	Flag	MDL	MRL	Units	Method
Perfluoroheptanoic acid (PFHpA)	50.6		1.77	5.12	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	383		1.85	10.2	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	4.43	J	0.899	5.12	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	77.5		1.23	5.12	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	112		0.891	5.12	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	193		0.913	2.05	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	129		0.645	2.05	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	21.8		0.569	5.12	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	41.0	S	1.31	5.12	ng/L	EPA 537Mod
Potassium	13.9		0.0344	0.1000	mg/L	EPA 6020B
Potassium, dissolved	23.0		0.0344	0.1000	mg/L	EPA 6020B
Residue-filterable (TDS)	440		36.9	50.0	mg/L	SM 2540 C-2020
Residue-nonfilterable (TSS)	9.70		0.396	1.04	mg/L	SM 2540 D-2020
Silica-dissolved	16.7		0.500	0.500	mg/L	SM 4500-SiO ₂ C-2011
Sodium	52.6		0.0468	0.200	mg/L	EPA 6020B
Sodium, dissolved	44.3	B	0.0468	0.200	mg/L	EPA 6020B
Sulfate	23.6		1.90	10.0	mg/L	EPA 9056A
Total Hardness as CaCO ₃	420		2.17	5.00	mg/L	SM 2340 C-2021
Total Organic Carbon (TOC)	149		10.3	20.0	mg/L	EPA 9060A

CLIENT ID: SB-04-46(4-9)_120925				Lab ID: HN2518802-003		
Analyte	Results	Flag	MDL	MRL	Units	Method
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	22.8		1.43	5.13	ng/L	EPA 537Mod
Alkalinity as CaCO ₃	349		1.43	2.00	mg/L	SM 2320 B-2021
Alkalinity, Bicarbonate	349		1.43	2.00	mg/L	SM 2320 B-2021
Arsenic	0.00214		0.000174	0.001000	mg/L	EPA 6020B
Arsenic, dissolved	0.000675	J	0.000174	0.001000	mg/L	EPA 6020B
Barium	0.0663		0.000396	0.00199	mg/L	EPA 6020B
Barium, dissolved	0.0733		0.000396	0.00199	mg/L	EPA 6020B
Bromide	0.123	J	0.0319	0.200	mg/L	EPA 9056A
Calcium	109		0.0686	0.200	mg/L	EPA 6020B
Calcium, dissolved	92.7		0.0686	0.200	mg/L	EPA 6020B
Chloride	11.7		3.10	10.0	mg/L	EPA 9056A
Copper, dissolved	0.000774	J	0.000560	0.001000	mg/L	EPA 6020B
Dissolved Organic Carbon (DOC)	34.9	H	1.39	5.00	mg/L	EPA 9060A
Fluoride	0.325		0.0670	0.100	mg/L	EPA 9056A
Iron	1.35		0.0141	0.0200	mg/L	EPA 6020B
Magnesium	19.7		0.0145	0.200	mg/L	EPA 6020B
Magnesium, dissolved	23.9		0.0145	0.200	mg/L	EPA 6020B
Manganese	0.747		0.00110	0.00199	mg/L	EPA 6020B
Manganese, dissolved	0.362		0.00110	0.00199	mg/L	EPA 6020B

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: SB-04-46(4-9)_120925		Lab ID: HN2518802-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	1.87	J	1.59	5.13	ng/L	EPA 537Mod
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	2.00	J	0.661	5.13	ng/L	EPA 537Mod
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	15.3		0.910	5.13	ng/L	EPA 537Mod
Perfluorobutane sulfonic acid (PFBS)	46.9	S	0.360	5.13	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	52.5		2.67	5.13	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	63.3		2.04	5.13	ng/L	EPA 537Mod
Perfluorodecane sulfonic acid (PFDS)	7.50		1.41	5.13	ng/L	EPA 537Mod
Perfluorodecanoic acid (PFDA)	76.0		1.27	5.13	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	223		0.581	5.13	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	165		1.78	5.13	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	1610		9.27	51.3	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	2980		9.02	51.3	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	455		1.23	5.13	ng/L	EPA 537Mod
Perfluorononane sulfonic acid (PFNS)	237		0.509	5.13	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	145		0.893	5.13	ng/L	EPA 537Mod
Perfluorooctane sulfonamide (PFOSAm)	22.7		0.730	5.13	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	17400		91.6	205	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	410		0.647	2.05	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	106		0.571	5.13	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	157	S	1.31	5.13	ng/L	EPA 537Mod
Perfluoroundecanoic acid (PFUnDA)	3.03	J	1.00	5.13	ng/L	EPA 537Mod
Potassium	21.5		0.0344	0.1000	mg/L	EPA 6020B
Potassium, dissolved	13.8		0.0344	0.1000	mg/L	EPA 6020B
Residue-filterable (TDS)	313		36.9	50.0	mg/L	SM 2540 C-2020
Residue-nonfilterable (TSS)	1.22		0.387	1.02	mg/L	SM 2540 D-2020
Silica-dissolved	35.0		2.50	2.50	mg/L	SM 4500-SiO ₂ C-2011
Sodium	27.4		0.0468	0.200	mg/L	EPA 6020B
Sodium, dissolved	51.9		0.0468	0.200	mg/L	EPA 6020B
Sulfate	30.0		1.90	10.0	mg/L	EPA 9056A
Total Hardness as CaCO ₃	380		2.17	5.00	mg/L	SM 2340 C-2021
Total Organic Carbon (TOC)	112		10.3	20.0	mg/L	EPA 9060A

CLIENT ID: SB-04-49(13-18)_121025		Lab ID: HN2518802-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	3.21	J	1.97	5.12	ng/L	EPA 537Mod
1-Methylnaphthalene	0.0990	J	0.0830	0.100	µg/L	EPA 8270E
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	4.72	JS	3.09	5.12	ng/L	EPA 537Mod
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	84.4		1.42	5.12	ng/L	EPA 537Mod
Acenaphthene	0.148		0.0810	0.100	µg/L	EPA 8270E

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: SB-04-49(13-18)_121025		Lab ID: HN2518802-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity as CaCO ₃	334		1.43	2.00	mg/L	SM 2320 B-2021
Alkalinity, Bicarbonate	334		1.43	2.00	mg/L	SM 2320 B-2021
Arsenic	0.000561	J	0.000174	0.001000	mg/L	EPA 6020B
Arsenic, dissolved	0.000939	J	0.000174	0.001000	mg/L	EPA 6020B
Barium	0.0724		0.000396	0.00199	mg/L	EPA 6020B
Barium, dissolved	0.0602	B	0.000396	0.00199	mg/L	EPA 6020B
Benzene	15.2		0.460	1.00	µg/L	EPA 8260D
Bromide	0.103	J	0.0319	0.200	mg/L	EPA 9056A
Calcium	68.1		0.0686	0.200	mg/L	EPA 6020B
Calcium, dissolved	98.3		0.0686	0.200	mg/L	EPA 6020B
Chloride	10.5		0.310	1.00	mg/L	EPA 9056A
Copper, dissolved	0.000866	J	0.000560	0.001000	mg/L	EPA 6020B
Cyclohexane	2.54		0.630	2.00	µg/L	EPA 8260D
Dissolved Organic Carbon (DOC)	31.8	H	1.39	5.00	mg/L	EPA 9060A
Ethylbenzene	5.16		0.340	1.00	µg/L	EPA 8260D
Fluorene	0.109		0.0510	0.100	µg/L	EPA 8270E
Fluoride	0.276		0.0670	0.100	mg/L	EPA 9056A
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	1.62	J	1.20	5.12	ng/L	EPA 537Mod
Iron	1.46		0.0141	0.0200	mg/L	EPA 6020B
Isopropylbenzene	43.3		0.350	1.00	µg/L	EPA 8260D
Lead	0.000455	J	0.000250	0.001000	mg/L	EPA 6020B
Magnesium	25.7		0.0145	0.200	mg/L	EPA 6020B
Magnesium, dissolved	20.3		0.0145	0.200	mg/L	EPA 6020B
Manganese	0.138		0.00110	0.00199	mg/L	EPA 6020B
Manganese, dissolved	0.427		0.00110	0.00199	mg/L	EPA 6020B
Naphthalene	0.188		0.0670	0.100	µg/L	EPA 8270E
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	1.87	J	1.58	5.12	ng/L	EPA 537Mod
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	6.04		0.659	5.12	ng/L	EPA 537Mod
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	176	J	90.7	512	ng/L	EPA 537Mod
Perfluorobutane sulfonic acid (PFBS)	731		35.9	512	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	420		2.66	5.12	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	654		203	512	ng/L	EPA 537Mod
Perfluorodecane sulfonic acid (PFDS)	11.6		1.40	5.12	ng/L	EPA 537Mod
Perfluorodecanoic acid (PFDA)	26.6		1.27	5.12	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	5630		57.9	512	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	588		177	512	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	65500		924	5120	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	46900		89.9	512	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: SB-04-49(13-18)_121025			Lab ID: HN2518802-004			
Analyte	Results	Flag	MDL	MRL	Units	Method
Perfluorohexanoic acid (PFHxA)	6580		123	512	ng/L	EPA 537Mod
Perfluorononane sulfonic acid (PFNS)	461	J	50.8	512	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	141		0.890	5.12	ng/L	EPA 537Mod
Perfluorooctane sulfonamide (PFOSAm)	131		0.728	5.12	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	248000		913	2050	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	4950		64.5	205	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	2690		56.9	512	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	851		131	512	ng/L	EPA 537Mod
Potassium	23.6		0.0344	0.1000	mg/L	EPA 6020B
Potassium, dissolved	20.6		0.0344	0.1000	mg/L	EPA 6020B
Residue-filterable (TDS)	340		36.9	50.0	mg/L	SM 2540 C-2020
Residue-nonfilterable (TSS)	21.1		0.380	1.00	mg/L	SM 2540 D-2020
Silica-dissolved	34.6		2.50	2.50	mg/L	SM 4500-SiO2 C-2011
Sodium	43.7		0.0468	0.200	mg/L	EPA 6020B
Sodium, dissolved	28.2	B	0.0468	0.200	mg/L	EPA 6020B
Sulfate	4.94		0.190	1.00	mg/L	EPA 9056A
Toluene	0.800	J	0.450	1.00	µg/L	EPA 8260D
Total Hardness as CaCO3	300		2.17	5.00	mg/L	SM 2340 C-2021
Total Organic Carbon (TOC)	106		10.3	20.0	mg/L	EPA 9060A

SAMPLE SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Workorder: HN2518802

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2518802-001	MW-04-151(15-20)_120825	GROUNDWATER	12/08/25 13:45	12/13/25 08:00
HN2518802-002	MW-04-151(4-9)_120925	GROUNDWATER	12/09/25 11:05	12/13/25 08:00
HN2518802-003	SB-04-46(4-9)_120925	GROUNDWATER	12/09/25 16:45	12/13/25 08:00
HN2518802-004	SB-04-49(13-18)_121025	GROUNDWATER	12/10/25 13:30	12/13/25 08:00



Simi Valley, CA
+1 805 526 7161
Cincinnati, OH
+1 513 733 5336
Fort Collins, CO
+1 970 490 1511
Kelso, WA
+1 360 577 7222
Everett, WA
+1 425 356 2600
Holland, MI
+1 616 399 6070

Chain of Custody Form

Houston, TX
+1 281 530 5656
Valparaiso, IN
+1 219 299 8127
South Charleston, WV
+1 304 356 3168
Middletown, PA
+1 717 944 5541
Salt Lake City, UT
+1 801 266 7700
Rochester, NY
+1 585 288 5380

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Customer Information

Project Information

Parameter/Method Request for Analysis

ALS Project Manager:

ALS Work Order #:

Purchase Order

Queue #

Company Name

Send Report To

Address

City/State/Zip

Phone

Fax

e-Mail Address

Project Name

Project Number

Bill To Company

Invoice Attn

Address

City/State/Zip

Phone

Fax

e-Mail Address

No.

Sample Description

Date

Time

Matrix

Pres.

Bottles

A B C D E F G H I J Hold

1

2

3

4

5

6

7

8

9

10

Telephone : +1 616 399 6070



Environmental Division
Holland
Work Order Reference
HN2518802

Sampler(s) Please Print & Sign

Shipment Method

Turnaround Time in Business Days (BD)

Other

Relinquished by:

Relinquished by:

Relinquished by:

Logged by (Laboratory):

Preservative Key:

1-HCl

2-HNO₃

3-H₂SO₄

4-NaOH

5-Na₂S₂O₃

6-NaHSO₄

7-Other

8-4°C

9-5035

Notes:

Cooler ID

Cooler Temp.

QC Package: (Check One Box Below)

☐ Level II Std QC

☐ Level III Std QC/Raw Date

☐ Level IV SW646/CLP

☐ TRRP Checklist

☐ TRRP Level IV

1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.



ALS Holland
3352 128th Ave., Holland MI 49424

ALS Holland Sample Receiving Checklist

Received by:

Chynal B

Date/Time:

12/13/25 0800

Carrier Name:

QS

Shipping container/cooler in good condition?

☒ Yes / ☐ No / ☐ Not Present

Custody seals intact on shipping container/cooler?

Yes / ☐ No / ☒ Not Present

Custody seals intact on sample bottles?

Yes / ☒ No / ☐ Not Present

Chain of Custody present?

☒ Yes / ☐ No

COC signed when relinquished and received?

☒ Yes / ☐ No

COC agrees with sample labels?

☒ Yes / ☐ No

Samples in proper container/bottle?

☒ Yes / ☐ No

Sample containers intact?

☒ Yes / ☐ No

Sufficient sample volume for indicated test?

☒ Yes / ☐ No

All samples received within holding time?

☒ Yes / ☐ No

Container/Temp Blank temperature in compliance?

☒ Yes / ☐ No

Temperature(s) (°C):

1.4c / 1.4c

Thermometer(s):

1R6

Sample(s) received on ice?

☒ Yes / ☐ No

Matrix/Matrices:

groundwater

Cooler(s)/Kit(s):

—

Date/Time sample(s) sent to storage:

12/13/25 1057

Water – VOA vials have zero headspace?

☒ Yes / ☐ No / ☐ No Vials

Water – pH acceptable upon receipt?

☒ Yes / ☐ No / ☐ N/A

pH strip lot #: 44

< 2 ☒

> 12 ☐ Other ☐

pH adjusted (note adjustments below)?

Yes ☒ No / ☐ N/A

pH adjusted by:

—

Login Notes:

HN-SHT-160-R01, Sample Receipt Checklist

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Holland Laboratory Certifications¹

Agency	Type	ID	Issued	Expires
Alabama	Drinking Water (Secondary)	42500	12/17/2024	12/31/2025
Colorado	UST		07/01/2025	06/30/2026
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2025	06/30/2026
Illinois	NELAP (Secondary)	200076	11/14/2024	12/31/2025
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/01/2025	09/01/2027
Kansas	NELAP (Secondary)	E-10411	08/01/2025	07/31/2026
Kentucky	Waste Water	KY98004	12/20/2024	12/31/2025
Kentucky	UST	120474	07/07/2025	06/30/2026
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/17/2024	12/31/2025
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2025	6/30/2026
New York	NELAP (Secondary)	12128	04/01/2025	04/01/2026
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/26/2025	6/30/2026
Pennsylvania	NELAP (Secondary)	68-03827	11/25/2025	07/31/2026
Texas	NELAP (Secondary)	T104704494	02/12/2025	01/31/2026
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572	03/03/2023	03/03/2026
West Virginia	State Specific	355	06/07/2025	08/31/2026
Wisconsin	State Specific	399084510	08/08/2025	08/31/2026

¹ - Scope available upon request

ANALYST SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802

Sample Name: MW-04-151(15-20)_120825
Laboratory Code: HN2518802-001
Sample Matrix: GROUNDWATER

Date Collected: 12/08/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 1664A	EPA 1664A	001-AJ	2398618	Nicole Whan	3792073	Nicole Whan
EPA 245.1	Method	001-AI	2395543	Maxx Richey	3786221	Maxx Richey
EPA 537Mod	EPA 537Mod	001-AD	2385421	Kaylin Aviles	3772641	Morgan Morehouse
EPA 537Mod	EPA 537Mod	001-AD	2385421	Kaylin Aviles	3772831	Morgan Morehouse
EPA 537Mod	EPA 537Mod	001-AD	2385421	Kaylin Aviles	3773331	Morgan Morehouse
EPA 6020B	EPA 3015A	001-AI	2384762	Nicolee Allen	3769084	Hunter Johnson
EPA 6020B	EPA 3015A	001-AI	2384762	Nicolee Allen	3770235	Hunter Johnson
EPA 6020B	EPA 3015A	001-AG	2390841	Chloe Patrick	3778921	Hunter Johnson
EPA 6020B	EPA 3015A	001-AG	2390841	Chloe Patrick	3779186	Denise Coffey
EPA 8260D		001-AO	2391029		3777789	Caroline Cox
EPA 8270E	EPA 3510C	001-AA	2385380	Mac Peterson	3775729	Erin Wall
EPA 9056A	Method	001-AC	2393549	Sage Hansen	3783310	Katrina Grassel
EPA 9056A	Method	001-AC	2395614	Katrina Grassel	3788998	Sage Hansen
EPA 9060A	Method	001-AL	2385539	Kelsey Beaudette	3770155	Kelsey Beaudette
EPA 9060A	Method	001-AH	2385798	Kelsey Beaudette	3773121	Kelsey Beaudette
SM 2320 B-2021	SM 2320 B-2021	001-AC	2385842	Kelsey Beaudette	3769007	Kelsey Beaudette
SM 2340 C-2021		001-AI	2396860		3787612	Kelsey Beaudette
SM 2540 C-2020	SM 2540 C-2020	001-AC	2384880	Jenna Vargo	3775601	Karen Hernandez
SM 2540 D-2020	SM 2540 D-2020	001-AB	2385089	Gabriella Chudy	3769249	Laci Anderson
SM 4500-SiO2 C-2011	Method	001-AC	2389223	Dylan Launiere	3775989	Dylan Launiere

Sample Name: MW-04-151(4-9)_120925
Laboratory Code: HN2518802-002
Sample Matrix: GROUNDWATER

Date Collected: 12/09/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 1664A	EPA 1664A	002-AJ	2398618	Nicole Whan	3792073	Nicole Whan
EPA 245.1	Method	002-AI	2395543	Maxx Richey	3786221	Maxx Richey
EPA 537Mod	EPA 537Mod	002-AD	2385421	Kaylin Aviles	3772641	Morgan Morehouse
EPA 537Mod	EPA 537Mod	002-AD	2385421	Kaylin Aviles	3772831	Morgan Morehouse
EPA 6020B	EPA 3015A	002-AI	2384762	Nicolee Allen	3769084	Denise Coffey
EPA 6020B	EPA 3015A	002-AI	2384762	Nicolee Allen	3770235	Denise Coffey

ANALYST SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802

Sample Name: MW-04-151(4-9)_120925
Laboratory Code: HN2518802-002
Sample Matrix: GROUNDWATER

Date Collected: 12/09/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 6020B	EPA 3015A	002-AG	2390841	Chloe Patrick	3778921	Denise Coffey
EPA 6020B	EPA 3015A	002-AI	2402034	Chloe Patrick	3796878	Denise Coffey
EPA 6020B	EPA 3015A	002-AG	2402037	Chloe Patrick	3796881	Hunter Johnson
EPA 8260D		002-AO	2391029		3777789	Caroline Cox
EPA 8270E	EPA 3510C	002-AA	2385380	Mac Peterson	3775729	Erin Wall
EPA 9056A	Method	002-AC	2393549	Sage Hansen	3783310	Katrina Grassel
EPA 9056A	Method	002-AC	2395614	Katrina Grassel	3788998	Sage Hansen
EPA 9060A	Method	002-AL	2385539	Kelsey Beaudette	3770155	Kelsey Beaudette
EPA 9060A	Method	002-AH	2385798	Kelsey Beaudette	3773121	Kelsey Beaudette
SM 2320 B-2021	SM 2320 B-2021	002-AC	2385842	Kelsey Beaudette	3769007	Kelsey Beaudette
SM 2340 C-2021		002-AI	2396860		3787612	Kelsey Beaudette
SM 2540 C-2020	SM 2540 C-2020	002-AC	2384880	Jenna Vargo	3775601	Karen Hernandez
SM 2540 D-2020	SM 2540 D-2020	002-AB	2386087	Laci Anderson	3772582	Karen Hernandez
SM 4500-SiO2 C-2011	Method	002-AC	2389223	Dylan Launiere	3775989	Dylan Launiere

Sample Name: SB-04-46(4-9)_120925
Laboratory Code: HN2518802-003
Sample Matrix: GROUNDWATER

Date Collected: 12/09/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 1664A	EPA 1664A	003-AJ	2398618	Nicole Whan	3792073	Nicole Whan
EPA 245.1	Method	003-AI	2395543	Maxx Richey	3786221	Maxx Richey
EPA 537Mod	EPA 537Mod	003-AD	2385421	Kaylin Aviles	3772641	Morgan Morehouse
EPA 537Mod	EPA 537Mod	003-AD	2385421	Kaylin Aviles	3772831	Morgan Morehouse
EPA 537Mod	EPA 537Mod	003-AD	2385421	Kaylin Aviles	3773331	Morgan Morehouse
EPA 6020B	EPA 3015A	003-AI	2384762	Nicolee Allen	3769084	Denise Coffey
EPA 6020B	EPA 3015A	003-AG	2390841	Chloe Patrick	3778921	Denise Coffey
EPA 6020B	EPA 3015A	003-AI	2402034	Chloe Patrick	3796878	Denise Coffey
EPA 6020B	EPA 3015A	003-AG	2402037	Chloe Patrick	3796881	Hunter Johnson
EPA 8260D		003-AO	2391029		3777789	Caroline Cox
EPA 8270E	EPA 3510C	003-AA	2385380	Mac Peterson	3775729	Erin Wall
EPA 9056A	Method	003-AC	2393549	Sage Hansen	3783310	Katrina Grassel

ANALYST SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802

Sample Name: SB-04-46(4-9)_120925
Laboratory Code: HN2518802-003
Sample Matrix: GROUNDWATER

Date Collected: 12/09/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 9056A	Method	003-AC	2395614	Katrina Grassel	3788998	Sage Hansen
EPA 9060A	Method	003-AL	2385539	Kelsey Beaudette	3770155	Kelsey Beaudette
EPA 9060A	Method	003-AH	2385798	Kelsey Beaudette	3773121	Kelsey Beaudette
SM 2320 B-2021	SM 2320 B-2021	003-AC	2385842	Kelsey Beaudette	3769007	Kelsey Beaudette
SM 2340 C-2021		003-AI	2396860		3787612	Kelsey Beaudette
SM 2540 C-2020	SM 2540 C-2020	003-AC	2384880	Jenna Vargo	3775601	Karen Hernandez
SM 2540 D-2020	SM 2540 D-2020	003-AB	2386087	Laci Anderson	3772582	Karen Hernandez
SM 4500-SiO2 C-2011	Method	003-AC	2389223	Dylan Launiere	3775989	Dylan Launiere

Sample Name: SB-04-49(13-18)_121025
Laboratory Code: HN2518802-004
Sample Matrix: GROUNDWATER

Date Collected: 12/10/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 1664A	EPA 1664A	004-AJ	2398618	Nicole Whan	3792073	Nicole Whan
EPA 245.1	Method	004-AI	2395543	Maxx Richey	3786221	Maxx Richey
EPA 537Mod	EPA 537Mod	004-AD	2385421	Kaylin Aviles	3772641	Morgan Morehouse
EPA 537Mod	EPA 537Mod	004-AD	2385421	Kaylin Aviles	3772831	Morgan Morehouse
EPA 537Mod	EPA 537Mod	004-AD	2385421	Kaylin Aviles	3773331	Morgan Morehouse
EPA 6020B	EPA 3015A	004-AI	2384762	Nicolee Allen	3769084	Denise Coffey
EPA 6020B	EPA 3015A	004-AG	2390841	Chloe Patrick	3778921	Denise Coffey
EPA 6020B	EPA 3015A	004-AI	2402034	Chloe Patrick	3796878	Denise Coffey
EPA 6020B	EPA 3015A	004-AG	2402037	Chloe Patrick	3796881	Hunter Johnson
EPA 8260D		004-AO	2391029		3777789	Caroline Cox
EPA 8270E	EPA 3510C	004-AA	2385380	Mac Peterson	3775729	Erin Wall
EPA 9056A	Method	004-AC	2395614	Katrina Grassel	3788998	Sage Hansen
EPA 9060A	Method	004-AL	2385539	Kelsey Beaudette	3770155	Kelsey Beaudette
EPA 9060A	Method	004-AH	2385798	Kelsey Beaudette	3773121	Kelsey Beaudette
SM 2320 B-2021	SM 2320 B-2021	004-AC	2385842	Kelsey Beaudette	3769007	Kelsey Beaudette
SM 2340 C-2021		004-AI	2396860		3787612	Kelsey Beaudette
SM 2540 C-2020	SM 2540 C-2020	004-AC	2384880	Jenna Vargo	3775601	Karen Hernandez
SM 2540 D-2020	SM 2540 D-2020	004-AB	2389028	Laci Anderson	3779204	Karen Hernandez

ANALYST SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)

Work Order: HN2518802

Sample Name: SB-04-49(13-18)_121025
Laboratory Code: HN2518802-004
Sample Matrix: GROUNDWATER

Date Collected: 12/10/25
Date Received: 12/13/25

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
SM 4500-SiO2 C-2011	Method	004-AC	2389223	Dylan Launiere	3775989	Dylan Launiere

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
n-Hexane Extractable Material (O&G)	EPA 1664A	3.46	J	mg/L	1.35	4.81	1	12/24/25 14:16	12/24/25 14:14
Bromide	EPA 9056A	0.152	J	mg/L	0.0319	0.200	1	12/22/25 14:51	12/22/25 12:16
Chloride	EPA 9056A	27.0		mg/L	3.10	10.0	10	12/19/25 21:03	12/19/25 16:58
Fluoride	EPA 9056A	0.184		mg/L	0.0670	0.100	1	12/22/25 14:51	12/22/25 12:16
Sulfate	EPA 9056A	58.1		mg/L	1.90	10.0	10	12/19/25 21:03	12/19/25 16:58
Dissolved Organic Carbon (DOC)	EPA 9060A	55.4	HS	mg/L	1.39	5.00	10	12/17/25 12:00	12/15/25 15:01
Total Organic Carbon (TOC)	EPA 9060A	185		mg/L	10.3	20.0	40	12/15/25 16:55	12/15/25 11:27
Alkalinity as CaCO3	SM 2320 B-2021	532		mg/L	1.43	2.00	1	12/15/25 13:45	12/15/25 11:50
Alkalinity, Bicarbonate	SM 2320 B-2021	532		mg/L	1.43	2.00	1	12/15/25 13:45	12/15/25 11:50
Alkalinity, Carbonate	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:45	12/15/25 11:50
Alkalinity, Hydroxide	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:45	12/15/25 11:50
Alkalinity, Phenolphthalein	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:45	12/15/25 11:50
Total Hardness as CaCO3	SM 2340 C-2021	200		mg/L	2.17	5.00	1	12/23/25 10:15	NA
Residue-filterable (TDS)	SM 2540 C-2020	677		mg/L	36.9	50.0	1	12/16/25 13:18	12/14/25 15:10
Residue-nonfilterable (TSS)	SM 2540 D-2020	4.60		mg/L	0.380	1.00	1	12/15/25 12:20	12/14/25 16:47
Silica-dissolved	SM 4500-SiO2 C-2011	19.0		mg/L	0.500	0.500	10	12/17/25 16:08	12/17/25 15:05
Metals									
Mercury	EPA 245.1	<0.000160	SU	mg/L	0.000160	0.000195	1	12/22/25 16:22	12/22/25 14:24
Arsenic	EPA 6020B	0.00587		mg/L	0.000174	0.001000	1	12/15/25 15:55	12/14/25 10:27
Arsenic, dissolved	EPA 6020B	0.00281		mg/L	0.000174	0.001000	1	12/18/25 14:10	12/18/25 12:42
Barium	EPA 6020B	0.0885		mg/L	0.000396	0.00199	1	12/15/25 15:55	12/14/25 10:27
Barium, dissolved	EPA 6020B	0.0828	B	mg/L	0.000396	0.00199	1	12/18/25 14:10	12/18/25 12:42
Cadmium	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/15/25 15:55	12/14/25 10:27
Cadmium, dissolved	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/18/25 14:10	12/18/25 12:42
Calcium	EPA 6020B	57.7		mg/L	0.0686	0.200	1	12/15/25 15:55	12/14/25 10:27
Calcium, dissolved	EPA 6020B	56.5		mg/L	0.0686	0.200	1	12/18/25 14:10	12/18/25 12:42
Chromium	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/15/25 15:55	12/14/25 10:27
Chromium, dissolved	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/18/25 14:10	12/18/25 12:42

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Copper	EPA 6020B	<0.000560	U	mg/L	0.000560	0.001000	1	12/15/25 15:55	12/14/25 10:27
Copper, dissolved	EPA 6020B	<0.000560	U	mg/L	0.000560	0.001000	1	12/18/25 14:10	12/18/25 12:42
Iron	EPA 6020B	1.47		mg/L	0.0141	0.0200	1	12/15/25 15:55	12/14/25 10:27
Lead	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/15/25 15:55	12/14/25 10:27
Lead, dissolved	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/18/25 14:10	12/18/25 12:42
Magnesium	EPA 6020B	12.3		mg/L	0.0145	0.200	1	12/15/25 15:55	12/14/25 10:27
Magnesium, dissolved	EPA 6020B	12.7		mg/L	0.0145	0.200	1	12/18/25 14:10	12/18/25 12:42
Manganese	EPA 6020B	0.0230		mg/L	0.00110	0.00199	1	12/15/25 15:55	12/14/25 10:27
Manganese, dissolved	EPA 6020B	0.0199		mg/L	0.00110	0.00199	1	12/18/25 14:10	12/18/25 12:42
Potassium	EPA 6020B	9.76		mg/L	0.0344	0.1000	1	12/15/25 15:55	12/14/25 10:27
Potassium, dissolved	EPA 6020B	9.92		mg/L	0.0344	0.1000	1	12/18/25 14:10	12/18/25 12:42
Selenium	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/15/25 15:55	12/14/25 10:27
Selenium, dissolved	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/18/25 14:10	12/18/25 12:42
Silver	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/15/25 15:55	12/14/25 10:27
Silver, dissolved	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/18/25 14:10	12/18/25 12:42
Sodium	EPA 6020B	228		mg/L	0.468	2.00	10	12/15/25 17:51	12/14/25 10:27
Sodium, dissolved	EPA 6020B	237	B	mg/L	0.468	2.00	10	12/18/25 15:03	12/18/25 12:42
Zinc	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/15/25 15:55	12/14/25 10:27
Zinc, dissolved	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/18/25 14:10	12/18/25 12:42

Per- and Polyfluorinated Alkyl Substances by LC-MS

11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	<0.487	U	ng/L	0.487	5.21	1	12/16/25 00:11	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	<1.18	U	ng/L	1.18	5.21	1	12/16/25 00:11	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	<0.976	U	ng/L	0.976	5.21	1	12/16/25 00:11	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	2.57	J	ng/L	2.00	5.21	1	12/16/25 00:11	12/15/25 13:34
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	<1.13	U	ng/L	1.13	5.21	1	12/16/25 00:11	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	<3.15	SU	ng/L	3.15	5.21	1	12/16/25 00:11	12/15/25 13:34
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	22.2		ng/L	1.45	5.21	1	12/16/25 00:11	12/15/25 13:34
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	<0.586	U	ng/L	0.586	5.21	1	12/16/25 00:11	12/15/25 13:34
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	<0.467	U	ng/L	0.467	5.21	1	12/16/25 00:11	12/15/25 13:34
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	<1.22	U	ng/L	1.22	5.21	1	12/16/25 00:11	12/15/25 13:34
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	<1.61	U	ng/L	1.61	5.21	1	12/16/25 00:11	12/15/25 13:34
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	<0.671	U	ng/L	0.671	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	37.7		ng/L	0.924	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	521		ng/L	3.66	52.1	10	12/16/25 12:46	12/15/25 13:34
Perfluorobutanoic acid (PFBA)	EPA 537Mod	114		ng/L	2.71	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	95.1		ng/L	2.07	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	<1.43	U	ng/L	1.43	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorodecanoic acid (PFDA)	EPA 537Mod	<1.29	U	ng/L	1.29	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	<0.720	U	ng/L	0.720	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	337		ng/L	5.90	52.1	10	12/16/25 12:46	12/15/25 13:34
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	279		ng/L	1.80	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	7480		ng/L	94.1	521	100	12/16/25 12:17	12/15/25 13:34
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	576		ng/L	9.15	52.1	10	12/16/25 12:46	12/15/25 13:34
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	893		ng/L	12.5	52.1	10	12/16/25 12:46	12/15/25 13:34
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	13.6		ng/L	0.517	5.21	1	12/16/25 00:11	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorononanoic acid (PFNA)	EPA 537Mod	9.18		ng/L	0.907	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	<0.741	U	ng/L	0.741	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	8630		ng/L	93.0	208	100	12/16/25 12:17	12/15/25 13:34
Perfluorooctanoic acid (PFOA)	EPA 537Mod	763		ng/L	6.57	20.8	10	12/16/25 12:46	12/15/25 13:34
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	825		ng/L	5.80	52.1	10	12/16/25 12:46	12/15/25 13:34
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	222	S	ng/L	1.33	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	<2.75	U	ng/L	2.75	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluorotridecanoic acid (PFTrDA)	EPA 537Mod	<2.01	U	ng/L	2.01	5.21	1	12/16/25 00:11	12/15/25 13:34
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	<1.02	U	ng/L	1.02	5.21	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-FtS 4:2	EPA 537Mod	353	S	%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-FtS 6:2	EPA 537Mod	209	S	%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-FtS 8:2	EPA 537Mod	138		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-PFDA	EPA 537Mod	105		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-PFDoA	EPA 537Mod	92.3		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-PFHxA	EPA 537Mod	70.0		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-PFTeA	EPA 537Mod	85.6		%REC		27-134	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C2-PFUnA	EPA 537Mod	93.3		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C3-HFPO-DA	EPA 537Mod	83.9		%REC		41-142	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C3-PFBS	EPA 537Mod	80.4		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C4-PFBA	EPA 537Mod	97.2		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C4-PFHpA	EPA 537Mod	44.0		%REC		42-141	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C4-PFOA	EPA 537Mod	77.1		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C4-PFOS	EPA 537Mod	55.3		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C5-PFNA	EPA 537Mod	73.7		%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C5-PFPeA	EPA 537Mod	80.7		%REC		43-138	1	12/16/25 00:11	12/15/25 13:34
Surr: 13C8-FOSA	EPA 537Mod	85.7		%REC		30-122	1	12/16/25 00:11	12/15/25 13:34
Surr: 18O2-PFHxS	EPA 537Mod	40.9	S	%REC		50-150	1	12/16/25 00:11	12/15/25 13:34
Surr: d3-N-MeFOSAA	EPA 537Mod	80.2		%REC		35-136	1	12/16/25 00:11	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
<i>Surr: d5-N-EtFOSAA</i>	<i>EPA 537Mod</i>	85.7		%REC		34-142	1	12/16/25 00:11	12/15/25 13:34
Semivolatile Organic Compounds by GC-MS									
1,1'-Biphenyl (BZ-0)	EPA 8270E	<0.448	U	µg/L	0.448	1.07	1	12/16/25 17:33	12/15/25 14:48
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<1.82	U	µg/L	1.82	5.33	1	12/16/25 17:33	12/15/25 14:48
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<0.767	U	µg/L	0.767	5.33	1	12/16/25 17:33	12/15/25 14:48
1-Methylnaphthalene	EPA 8270E	<0.0885	U	µg/L	0.0885	0.107	1	12/16/25 17:33	12/15/25 14:48
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<0.245	U	µg/L	0.245	1.07	1	12/16/25 17:33	12/15/25 14:48
2,3,4,6-Tetrachlorophenol	EPA 8270E	<0.480	U	µg/L	0.480	1.07	1	12/16/25 17:33	12/15/25 14:48
2,4,5-Trichlorophenol	EPA 8270E	<0.181	U	µg/L	0.181	1.07	1	12/16/25 17:33	12/15/25 14:48
2,4,6-Trichlorophenol	EPA 8270E	<0.266	U	µg/L	0.266	1.07	1	12/16/25 17:33	12/15/25 14:48
2,4-Dichlorophenol	EPA 8270E	<0.373	U	µg/L	0.373	1.07	1	12/16/25 17:33	12/15/25 14:48
2,4-Dimethylphenol	EPA 8270E	0.490	J	µg/L	0.384	1.07	1	12/16/25 17:33	12/15/25 14:48
2,4-Dinitrophenol	EPA 8270E	<2.78	U	µg/L	2.78	5.33	1	12/16/25 17:33	12/15/25 14:48
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<0.373	U	µg/L	0.373	1.07	1	12/16/25 17:33	12/15/25 14:48
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<0.352	U	µg/L	0.352	1.07	1	12/16/25 17:33	12/15/25 14:48
2-Chloronaphthalene	EPA 8270E	<0.0799	U	µg/L	0.0799	0.107	1	12/16/25 17:33	12/15/25 14:48
2-Chlorophenol	EPA 8270E	<0.245	U	µg/L	0.245	1.07	1	12/16/25 17:33	12/15/25 14:48
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<0.288	U	µg/L	0.288	1.07	1	12/16/25 17:33	12/15/25 14:48
2-Methylnaphthalene	EPA 8270E	<0.0693	U	µg/L	0.0693	0.107	1	12/16/25 17:33	12/15/25 14:48
2-Methylphenol (o-Cresol)	EPA 8270E	<0.266	U	µg/L	0.266	1.07	1	12/16/25 17:33	12/15/25 14:48
2-Nitroaniline	EPA 8270E	<0.224	U	µg/L	0.224	1.07	1	12/16/25 17:33	12/15/25 14:48
2-Nitrophenol	EPA 8270E	<0.362	U	µg/L	0.362	1.07	1	12/16/25 17:33	12/15/25 14:48
3&4-Methylphenol	EPA 8270E	<0.224	U	µg/L	0.224	1.07	1	12/16/25 17:33	12/15/25 14:48
3,3'-Dichlorobenzidine	EPA 8270E	<0.490	U	µg/L	0.490	5.33	1	12/16/25 17:33	12/15/25 14:48
3-Nitroaniline	EPA 8270E	<0.200	U	µg/L	0.200	1.07	1	12/16/25 17:33	12/15/25 14:48
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<0.352	U	µg/L	0.352	1.07	1	12/16/25 17:33	12/15/25 14:48
4-Chloro-3-methylphenol	EPA 8270E	<0.277	U	µg/L	0.277	1.07	1	12/16/25 17:33	12/15/25 14:48
4-Chloroaniline	EPA 8270E	<0.362	SU	µg/L	0.362	1.07	1	12/16/25 17:33	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
4-Chlorophenyl phenylether	EPA 8270E	<0.330	U	µg/L	0.330	1.07	1	12/16/25 17:33	12/15/25 14:48
4-Nitroaniline	EPA 8270E	<0.243	U	µg/L	0.243	1.07	1	12/16/25 17:33	12/15/25 14:48
4-Nitrophenol	EPA 8270E	<1.15	U	µg/L	1.15	5.33	1	12/16/25 17:33	12/15/25 14:48
Acenaphthene	EPA 8270E	<0.0863	U	µg/L	0.0863	0.107	1	12/16/25 17:33	12/15/25 14:48
Acenaphthylene	EPA 8270E	<0.0799	U	µg/L	0.0799	0.107	1	12/16/25 17:33	12/15/25 14:48
Acetophenone	EPA 8270E	<0.394	U	µg/L	0.394	1.07	1	12/16/25 17:33	12/15/25 14:48
Anthracene	EPA 8270E	<0.0863	U	µg/L	0.0863	0.107	1	12/16/25 17:33	12/15/25 14:48
Atrazine	EPA 8270E	<0.373	U	µg/L	0.373	1.07	1	12/16/25 17:33	12/15/25 14:48
Benzaldehyde	EPA 8270E	<0.554	U	µg/L	0.554	1.07	1	12/16/25 17:33	12/15/25 14:48
Benzo(a)anthracene	EPA 8270E	<0.106	U	µg/L	0.106	0.107	1	12/16/25 17:33	12/15/25 14:48
Benzo(a)pyrene	EPA 8270E	<0.0469	U	µg/L	0.0469	0.107	1	12/16/25 17:33	12/15/25 14:48
Benzo(b)fluoranthene	EPA 8270E	<0.0544	U	µg/L	0.0544	0.107	1	12/16/25 17:33	12/15/25 14:48
Benzo(g,h,i)perylene	EPA 8270E	<0.0949	U	µg/L	0.0949	0.107	1	12/16/25 17:33	12/15/25 14:48
Benzo(k)fluoranthene	EPA 8270E	<0.0512	U	µg/L	0.0512	0.107	1	12/16/25 17:33	12/15/25 14:48
bis(2-Chloroethoxy) methane	EPA 8270E	<0.309	U	µg/L	0.309	1.07	1	12/16/25 17:33	12/15/25 14:48
bis(2-Chloroethyl) ether	EPA 8270E	<0.394	U	µg/L	0.394	1.07	1	12/16/25 17:33	12/15/25 14:48
Butyl benzyl phthalate	EPA 8270E	<0.320	U	µg/L	0.320	1.07	1	12/16/25 17:33	12/15/25 14:48
Caprolactam	EPA 8270E	<1.02	U	µg/L	1.02	5.33	1	12/16/25 17:33	12/15/25 14:48
Carbazole	EPA 8270E	<0.256	U	µg/L	0.256	1.07	1	12/16/25 17:33	12/15/25 14:48
Chrysene	EPA 8270E	<0.0512	U	µg/L	0.0512	0.107	1	12/16/25 17:33	12/15/25 14:48
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<0.426	U	µg/L	0.426	1.07	1	12/16/25 17:33	12/15/25 14:48
Dibenz(a,h) anthracene	EPA 8270E	<0.0778	U	µg/L	0.0778	0.107	1	12/16/25 17:33	12/15/25 14:48
Dibenzofuran	EPA 8270E	<0.245	U	µg/L	0.245	1.07	1	12/16/25 17:33	12/15/25 14:48
Diethyl phthalate	EPA 8270E	<0.373	U	µg/L	0.373	1.07	1	12/16/25 17:33	12/15/25 14:48
Dimethyl phthalate	EPA 8270E	<0.213	U	µg/L	0.213	1.07	1	12/16/25 17:33	12/15/25 14:48
Di-n-butyl phthalate	EPA 8270E	<0.224	U	µg/L	0.224	1.07	1	12/16/25 17:33	12/15/25 14:48
Di-n-octyl phthalate	EPA 8270E	<0.565	U	µg/L	0.565	1.07	1	12/16/25 17:33	12/15/25 14:48
Fluoranthene	EPA 8270E	<0.0881	U	µg/L	0.0881	0.107	1	12/16/25 17:33	12/15/25 14:48
Fluorene	EPA 8270E	<0.0544	U	µg/L	0.0544	0.107	1	12/16/25 17:33	12/15/25 14:48
Hexachlorobenzene	EPA 8270E	<0.469	U	µg/L	0.469	1.07	1	12/16/25 17:33	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Hexachlorobutadiene	EPA 8270E	<0.671	U	µg/L	0.671	1.07	1	12/16/25 17:33	12/15/25 14:48
Hexachlorocyclopentadiene	EPA 8270E	<1.16	U	µg/L	1.16	5.33	1	12/16/25 17:33	12/15/25 14:48
Hexachloroethane	EPA 8270E	<0.661	U	µg/L	0.661	1.07	1	12/16/25 17:33	12/15/25 14:48
Indeno(1,2,3-cd) pyrene	EPA 8270E	<0.0714	U	µg/L	0.0714	0.107	1	12/16/25 17:33	12/15/25 14:48
Isophorone	EPA 8270E	<0.362	U	µg/L	0.362	5.33	1	12/16/25 17:33	12/15/25 14:48
Methylphenol, Total	EPA 8270E	<0.490	U	µg/L	0.490	2.13	1	12/16/25 17:33	12/15/25 14:48
Naphthalene	EPA 8270E	<0.0714	U	µg/L	0.0714	0.107	1	12/16/25 17:33	12/15/25 14:48
Nitrobenzene	EPA 8270E	<0.277	U	µg/L	0.277	1.07	1	12/16/25 17:33	12/15/25 14:48
n-Nitrosodi-n-propylamine	EPA 8270E	<0.373	U	µg/L	0.373	1.07	1	12/16/25 17:33	12/15/25 14:48
N-Nitrosodiphenylamine	EPA 8270E	<0.522	U	µg/L	0.522	1.07	1	12/16/25 17:33	12/15/25 14:48
Pentachlorophenol	EPA 8270E	<1.03	U	µg/L	1.03	5.33	1	12/16/25 17:33	12/15/25 14:48
Phenanthrene	EPA 8270E	<0.0863	U	µg/L	0.0863	0.107	1	12/16/25 17:33	12/15/25 14:48
Phenol	EPA 8270E	<0.224	U	µg/L	0.224	1.07	1	12/16/25 17:33	12/15/25 14:48
Pyrene	EPA 8270E	<0.0929	U	µg/L	0.0929	0.107	1	12/16/25 17:33	12/15/25 14:48
Pyridine	EPA 8270E	<1.20	U	µg/L	1.20	10.7	1	12/16/25 17:33	12/15/25 14:48
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	70.4		%REC		38-103	1	12/16/25 17:33	12/15/25 14:48
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	56.3		%REC		36-96	1	12/16/25 17:33	12/15/25 14:48
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	35.9		%REC		20-73	1	12/16/25 17:33	12/15/25 14:48
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	73.9		%REC		44-114	1	12/16/25 17:33	12/15/25 14:48
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	57.5		%REC		33-100	1	12/16/25 17:33	12/15/25 14:48
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	20.4		%REC		10-48	1	12/16/25 17:33	12/15/25 14:48

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 16:14	NA
1,1,2,2-Tetrachloroethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:14	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 16:14	NA
1,1,2-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 16:14	NA
1,1-Dichloroethane	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 16:14	NA
1,1-Dichloroethylene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:14	NA
1,2,3-Trichlorobenzene	EPA 8260D	<2.99	U	µg/L	2.99	5.00	1	12/17/25 16:14	NA
1,2,3-Trichloropropane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:14	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2,4-Trichlorobenzene	EPA 8260D	<0.940	U	µg/L	0.940	1.00	1	12/17/25 16:14	NA
1,2,4-Trimethylbenzene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 16:14	NA
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 16:14	NA
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<0.410	U	µg/L	0.410	1.00	1	12/17/25 16:14	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<0.320	U	µg/L	0.320	1.00	1	12/17/25 16:14	NA
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 16:14	NA
1,2-Dichloropropane	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 16:14	NA
1,3,5-Trimethylbenzene	EPA 8260D	<0.650	U	µg/L	0.650	1.00	1	12/17/25 16:14	NA
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 16:14	NA
1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	2.00	1	12/17/25 16:14	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 16:14	NA
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<2.43	U	µg/L	2.43	5.00	1	12/17/25 16:14	NA
2-Hexanone	EPA 8260D	<0.590	U	µg/L	0.590	5.00	1	12/17/25 16:14	NA
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 16:14	NA
Acetone	EPA 8260D	<4.53	U	µg/L	4.53	10.0	1	12/17/25 16:14	NA
Benzene	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 16:14	NA
Bromochloromethane	EPA 8260D	<0.450	SU	µg/L	0.450	1.00	1	12/17/25 16:14	NA
Bromodichloromethane	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 16:14	NA
Bromoform	EPA 8260D	<0.560	U	µg/L	0.560	1.00	1	12/17/25 16:14	NA
Carbon disulfide	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 16:14	NA
Carbon tetrachloride	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:14	NA
Chlorobenzene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:14	NA
Chlorodibromomethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:14	NA
Chloroethane (Ethyl chloride)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 16:14	NA
Chloroform	EPA 8260D	<0.460	SU	µg/L	0.460	1.00	1	12/17/25 16:14	NA
cis & trans-1,2-Dichloroethene	EPA 8260D	4.06		µg/L	0.480	2.00	1	12/17/25 16:14	NA
cis-1,2-Dichloroethylene	EPA 8260D	4.06	S	µg/L	0.420	1.00	1	12/17/25 16:14	NA
cis-1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	1.00	1	12/17/25 16:14	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/08/25 13:45
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(15-20)_120825

Lab ID: HN2518802-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Cyclohexane	EPA 8260D	<0.630	U	µg/L	0.630	2.00	1	12/17/25 16:14	NA
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 16:14	NA
Ethylbenzene	EPA 8260D	<0.340	U	µg/L	0.340	1.00	1	12/17/25 16:14	NA
Isopropylbenzene	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 16:14	NA
m+p-Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 16:14	NA
Methyl acetate	EPA 8260D	<0.590	U	µg/L	0.590	2.00	1	12/17/25 16:14	NA
Methyl bromide (Bromomethane)	EPA 8260D	<0.900	U	µg/L	0.900	1.00	1	12/17/25 16:14	NA
Methyl chloride (Chloromethane)	EPA 8260D	<0.830	U	µg/L	0.830	5.00	1	12/17/25 16:14	NA
Methyl tert-butyl ether (MTBE)	EPA 8260D	1.11		µg/L	0.450	1.00	1	12/17/25 16:14	NA
Methylcyclohexane	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 16:14	NA
Methylene chloride (Dichloromethane)	EPA 8260D	<0.860	U	µg/L	0.860	5.00	1	12/17/25 16:14	NA
o-Xylene	EPA 8260D	<0.310	U	µg/L	0.310	1.00	1	12/17/25 16:14	NA
Styrene	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 16:14	NA
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<0.390	U	µg/L	0.390	1.00	1	12/17/25 16:14	NA
Toluene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 16:14	NA
Total Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 16:14	NA
trans-1,2-Dichloroethylene	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 16:14	NA
trans-1,3-Dichloropropylene	EPA 8260D	<0.380	U	µg/L	0.380	1.00	1	12/17/25 16:14	NA
Trichloroethene (Trichloroethylene)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 16:14	NA
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 16:14	NA
Vinyl chloride (Chloroethene)	EPA 8260D	0.540	J	µg/L	0.530	1.00	1	12/17/25 16:14	NA
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	111		%REC		80-120	1	12/17/25 16:14	NA
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	99.4		%REC		80-120	1	12/17/25 16:14	NA
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	98.6		%REC		80-120	1	12/17/25 16:14	NA
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	98.0		%REC		80-120	1	12/17/25 16:14	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
n-Hexane Extractable Material (O&G)	EPA 1664A	3.46	J	mg/L	1.35	4.81	1	12/24/25 14:16	12/24/25 14:14
Bromide	EPA 9056A	0.0830	J	mg/L	0.0319	0.200	1	12/22/25 15:16	12/22/25 12:16
Chloride	EPA 9056A	10.7		mg/L	0.310	1.00	1	12/22/25 15:16	12/22/25 12:16
Fluoride	EPA 9056A	0.104		mg/L	0.0670	0.100	1	12/22/25 15:16	12/22/25 12:16
Sulfate	EPA 9056A	23.6		mg/L	1.90	10.0	10	12/19/25 21:32	12/19/25 16:58
Dissolved Organic Carbon (DOC)	EPA 9060A	43.9	H	mg/L	1.39	5.00	10	12/17/25 12:48	12/15/25 15:01
Total Organic Carbon (TOC)	EPA 9060A	149		mg/L	10.3	20.0	40	12/15/25 17:14	12/15/25 11:27
Alkalinity as CaCO3	SM 2320 B-2021	477		mg/L	1.43	2.00	1	12/15/25 13:48	12/15/25 11:50
Alkalinity, Bicarbonate	SM 2320 B-2021	477		mg/L	1.43	2.00	1	12/15/25 13:48	12/15/25 11:50
Alkalinity, Carbonate	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:48	12/15/25 11:50
Alkalinity, Hydroxide	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:48	12/15/25 11:50
Alkalinity, Phenolphthalein	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:48	12/15/25 11:50
Total Hardness as CaCO3	SM 2340 C-2021	420		mg/L	2.17	5.00	1	12/23/25 10:15	NA
Residue-filterable (TDS)	SM 2540 C-2020	440		mg/L	36.9	50.0	1	12/16/25 13:18	12/14/25 15:10
Residue-nonfilterable (TSS)	SM 2540 D-2020	9.70		mg/L	0.396	1.04	1	12/16/25 13:53	12/15/25 15:07
Silica-dissolved	SM 4500-SiO2 C-2011	16.7		mg/L	0.500	0.500	10	12/17/25 16:10	12/17/25 15:05
Metals									
Mercury	EPA 245.1	<0.000160	SU	mg/L	0.000160	0.000195	1	12/22/25 16:28	12/22/25 14:24
Arsenic	EPA 6020B	0.00126		mg/L	0.000174	0.001000	1	12/15/25 15:56	12/14/25 10:27
Arsenic, dissolved	EPA 6020B	0.000486	J	mg/L	0.000174	0.001000	1	12/18/25 14:12	12/18/25 12:42
Barium	EPA 6020B	0.0836		mg/L	0.000396	0.00199	1	12/15/25 15:56	12/14/25 10:27
Barium, dissolved	EPA 6020B	0.0653	B	mg/L	0.000396	0.00199	1	12/18/25 14:12	12/18/25 12:42
Cadmium	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/15/25 15:56	12/14/25 10:27
Cadmium, dissolved	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/18/25 14:12	12/18/25 12:42
Calcium	EPA 6020B	140		mg/L	0.0686	0.200	1	12/15/25 15:56	12/14/25 10:27
Calcium, dissolved	EPA 6020B	66.5		mg/L	0.0686	0.200	1	12/18/25 14:12	12/18/25 12:42
Chromium	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/15/25 15:56	12/14/25 10:27
Chromium, dissolved	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/18/25 14:12	12/18/25 12:42

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Copper	EPA 6020B	0.000660	J	mg/L	0.000560	0.001000	1	12/15/25 15:56	12/14/25 10:27
Copper, dissolved	EPA 6020B	0.000733	J	mg/L	0.000560	0.001000	1	12/18/25 14:12	12/18/25 12:42
Iron	EPA 6020B	1.13		mg/L	0.0141	0.0200	1	12/15/25 15:56	12/14/25 10:27
Lead	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/15/25 15:56	12/14/25 10:27
Lead, dissolved	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/18/25 14:12	12/18/25 12:42
Magnesium	EPA 6020B	25.7		mg/L	0.0145	0.200	1	12/15/25 15:56	12/14/25 10:27
Magnesium, dissolved	EPA 6020B	25.6		mg/L	0.0145	0.200	1	12/18/25 14:12	12/18/25 12:42
Manganese	EPA 6020B	2.21		mg/L	0.0110	0.0199	10	12/15/25 17:52	12/14/25 10:27
Manganese, dissolved	EPA 6020B	0.123		mg/L	0.00110	0.00199	1	12/18/25 14:12	12/18/25 12:42
Potassium	EPA 6020B	13.9		mg/L	0.0344	0.1000	1	12/30/25 14:12	12/30/25 11:33
Potassium, dissolved	EPA 6020B	23.0		mg/L	0.0344	0.1000	1	12/30/25 13:56	12/30/25 11:33
Selenium	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/15/25 15:56	12/14/25 10:27
Selenium, dissolved	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/18/25 14:12	12/18/25 12:42
Silver	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/15/25 15:56	12/14/25 10:27
Silver, dissolved	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/18/25 14:12	12/18/25 12:42
Sodium	EPA 6020B	52.6		mg/L	0.0468	0.200	1	12/15/25 15:56	12/14/25 10:27
Sodium, dissolved	EPA 6020B	44.3	B	mg/L	0.0468	0.200	1	12/18/25 14:12	12/18/25 12:42
Zinc	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/15/25 15:56	12/14/25 10:27
Zinc, dissolved	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/18/25 14:12	12/18/25 12:42

Per- and Polyfluorinated Alkyl Substances by LC-MS

11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	<0.478	U	ng/L	0.478	5.12	1	12/16/25 00:25	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	<1.16	U	ng/L	1.16	5.12	1	12/16/25 00:25	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	<0.958	U	ng/L	0.958	5.12	1	12/16/25 00:25	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	<1.97	U	ng/L	1.97	5.12	1	12/16/25 00:25	12/15/25 13:34
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	<1.11	U	ng/L	1.11	5.12	1	12/16/25 00:25	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	<3.09	SU	ng/L	3.09	5.12	1	12/16/25 00:25	12/15/25 13:34
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	7.04		ng/L	1.42	5.12	1	12/16/25 00:25	12/15/25 13:34
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	<0.575	U	ng/L	0.575	5.12	1	12/16/25 00:25	12/15/25 13:34
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	<0.459	U	ng/L	0.459	5.12	1	12/16/25 00:25	12/15/25 13:34
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	<1.20	U	ng/L	1.20	5.12	1	12/16/25 00:25	12/15/25 13:34
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	<1.58	U	ng/L	1.58	5.12	1	12/16/25 00:25	12/15/25 13:34
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	<0.659	U	ng/L	0.659	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	2.66	J	ng/L	0.907	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	14.7	S	ng/L	0.359	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorobutanoic acid (PFBA)	EPA 537Mod	24.9		ng/L	2.66	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	5.36		ng/L	2.03	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	<1.40	U	ng/L	1.40	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorodecanoic acid (PFDA)	EPA 537Mod	<1.27	U	ng/L	1.27	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	<0.708	U	ng/L	0.708	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	8.49		ng/L	0.580	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	50.6		ng/L	1.77	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	383		ng/L	1.85	10.2	2	12/16/25 09:21	12/15/25 13:34
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	4.43	J	ng/L	0.899	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	77.5		ng/L	1.23	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	<0.508	U	ng/L	0.508	5.12	1	12/16/25 00:25	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925	Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorononanoic acid (PFNA)	EPA 537Mod	112		ng/L	0.891	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	<0.728	U	ng/L	0.728	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	193		ng/L	0.913	2.05	1	12/16/25 00:25	12/15/25 13:34
Perfluorooctanoic acid (PFOA)	EPA 537Mod	129		ng/L	0.645	2.05	1	12/16/25 00:25	12/15/25 13:34
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	21.8		ng/L	0.569	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	41.0	S	ng/L	1.31	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	<2.70	U	ng/L	2.70	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluorotridecanoic acid (PFTrDA)	EPA 537Mod	<1.98	U	ng/L	1.98	5.12	1	12/16/25 00:25	12/15/25 13:34
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	<0.997	U	ng/L	0.997	5.12	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-FtS 4:2	EPA 537Mod	357	S	%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-FtS 6:2	EPA 537Mod	343	S	%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-FtS 8:2	EPA 537Mod	280	S	%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-PFDA	EPA 537Mod	101		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-PFDoA	EPA 537Mod	91.0		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-PFHxA	EPA 537Mod	79.8		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-PFTeA	EPA 537Mod	78.5		%REC		27-134	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C2-PFUnA	EPA 537Mod	96.3		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C3-HFPO-DA	EPA 537Mod	77.0		%REC		41-142	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C3-PFBS	EPA 537Mod	77.6		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C4-PFBA	EPA 537Mod	97.2		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C4-PFHpA	EPA 537Mod	73.2		%REC		42-141	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C4-PFOA	EPA 537Mod	79.4		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C4-PFOS	EPA 537Mod	86.5		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C5-PFNA	EPA 537Mod	93.9		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C5-PFPeA	EPA 537Mod	75.2		%REC		43-138	1	12/16/25 00:25	12/15/25 13:34
Surr: 13C8-FOSA	EPA 537Mod	73.8		%REC		30-122	1	12/16/25 00:25	12/15/25 13:34
Surr: 18O2-PFHxS	EPA 537Mod	79.4		%REC		50-150	1	12/16/25 00:25	12/15/25 13:34
Surr: d3-N-MeFOSAA	EPA 537Mod	81.8		%REC		35-136	1	12/16/25 00:25	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
<i>Surr: d5-N-EtFOSAA</i>	<i>EPA 537Mod</i>	84.4		%REC		34-142	1	12/16/25 00:25	12/15/25 13:34
Semivolatile Organic Compounds by GC-MS									
1,1'-Biphenyl (BZ-0)	EPA 8270E	<0.436	U	µg/L	0.436	1.04	1	12/16/25 17:53	12/15/25 14:48
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<1.77	U	µg/L	1.77	5.19	1	12/16/25 17:53	12/15/25 14:48
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<0.748	U	µg/L	0.748	5.19	1	12/16/25 17:53	12/15/25 14:48
1-Methylnaphthalene	EPA 8270E	<0.0862	U	µg/L	0.0862	0.104	1	12/16/25 17:53	12/15/25 14:48
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<0.239	U	µg/L	0.239	1.04	1	12/16/25 17:53	12/15/25 14:48
2,3,4,6-Tetrachlorophenol	EPA 8270E	<0.467	U	µg/L	0.467	1.04	1	12/16/25 17:53	12/15/25 14:48
2,4,5-Trichlorophenol	EPA 8270E	<0.177	U	µg/L	0.177	1.04	1	12/16/25 17:53	12/15/25 14:48
2,4,6-Trichlorophenol	EPA 8270E	<0.260	U	µg/L	0.260	1.04	1	12/16/25 17:53	12/15/25 14:48
2,4-Dichlorophenol	EPA 8270E	<0.364	U	µg/L	0.364	1.04	1	12/16/25 17:53	12/15/25 14:48
2,4-Dimethylphenol	EPA 8270E	<0.374	U	µg/L	0.374	1.04	1	12/16/25 17:53	12/15/25 14:48
2,4-Dinitrophenol	EPA 8270E	<2.71	U	µg/L	2.71	5.19	1	12/16/25 17:53	12/15/25 14:48
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<0.364	U	µg/L	0.364	1.04	1	12/16/25 17:53	12/15/25 14:48
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<0.343	U	µg/L	0.343	1.04	1	12/16/25 17:53	12/15/25 14:48
2-Chloronaphthalene	EPA 8270E	<0.0779	U	µg/L	0.0779	0.104	1	12/16/25 17:53	12/15/25 14:48
2-Chlorophenol	EPA 8270E	<0.239	U	µg/L	0.239	1.04	1	12/16/25 17:53	12/15/25 14:48
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<0.280	U	µg/L	0.280	1.04	1	12/16/25 17:53	12/15/25 14:48
2-Methylnaphthalene	EPA 8270E	<0.0675	U	µg/L	0.0675	0.104	1	12/16/25 17:53	12/15/25 14:48
2-Methylphenol (o-Cresol)	EPA 8270E	<0.260	U	µg/L	0.260	1.04	1	12/16/25 17:53	12/15/25 14:48
2-Nitroaniline	EPA 8270E	<0.218	U	µg/L	0.218	1.04	1	12/16/25 17:53	12/15/25 14:48
2-Nitrophenol	EPA 8270E	<0.353	U	µg/L	0.353	1.04	1	12/16/25 17:53	12/15/25 14:48
3&4-Methylphenol	EPA 8270E	<0.218	U	µg/L	0.218	1.04	1	12/16/25 17:53	12/15/25 14:48
3,3'-Dichlorobenzidine	EPA 8270E	<0.478	U	µg/L	0.478	5.19	1	12/16/25 17:53	12/15/25 14:48
3-Nitroaniline	EPA 8270E	<0.195	U	µg/L	0.195	1.04	1	12/16/25 17:53	12/15/25 14:48
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<0.343	U	µg/L	0.343	1.04	1	12/16/25 17:53	12/15/25 14:48
4-Chloro-3-methylphenol	EPA 8270E	<0.270	U	µg/L	0.270	1.04	1	12/16/25 17:53	12/15/25 14:48
4-Chloroaniline	EPA 8270E	<0.353	SU	µg/L	0.353	1.04	1	12/16/25 17:53	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
4-Chlorophenyl phenylether	EPA 8270E	<0.322	U	µg/L	0.322	1.04	1	12/16/25 17:53	12/15/25 14:48
4-Nitroaniline	EPA 8270E	<0.237	U	µg/L	0.237	1.04	1	12/16/25 17:53	12/15/25 14:48
4-Nitrophenol	EPA 8270E	<1.12	U	µg/L	1.12	5.19	1	12/16/25 17:53	12/15/25 14:48
Acenaphthene	EPA 8270E	<0.0841	U	µg/L	0.0841	0.104	1	12/16/25 17:53	12/15/25 14:48
Acenaphthylene	EPA 8270E	<0.0779	U	µg/L	0.0779	0.104	1	12/16/25 17:53	12/15/25 14:48
Acetophenone	EPA 8270E	<0.384	U	µg/L	0.384	1.04	1	12/16/25 17:53	12/15/25 14:48
Anthracene	EPA 8270E	<0.0841	U	µg/L	0.0841	0.104	1	12/16/25 17:53	12/15/25 14:48
Atrazine	EPA 8270E	<0.364	U	µg/L	0.364	1.04	1	12/16/25 17:53	12/15/25 14:48
Benzaldehyde	EPA 8270E	<0.540	U	µg/L	0.540	1.04	1	12/16/25 17:53	12/15/25 14:48
Benzo(a)anthracene	EPA 8270E	<0.103	U	µg/L	0.103	0.104	1	12/16/25 17:53	12/15/25 14:48
Benzo(a)pyrene	EPA 8270E	<0.0457	U	µg/L	0.0457	0.104	1	12/16/25 17:53	12/15/25 14:48
Benzo(b)fluoranthene	EPA 8270E	<0.0530	U	µg/L	0.0530	0.104	1	12/16/25 17:53	12/15/25 14:48
Benzo(g,h,i)perylene	EPA 8270E	<0.0924	U	µg/L	0.0924	0.104	1	12/16/25 17:53	12/15/25 14:48
Benzo(k)fluoranthene	EPA 8270E	<0.0499	U	µg/L	0.0499	0.104	1	12/16/25 17:53	12/15/25 14:48
bis(2-Chloroethoxy) methane	EPA 8270E	<0.301	U	µg/L	0.301	1.04	1	12/16/25 17:53	12/15/25 14:48
bis(2-Chloroethyl) ether	EPA 8270E	<0.384	U	µg/L	0.384	1.04	1	12/16/25 17:53	12/15/25 14:48
Butyl benzyl phthalate	EPA 8270E	<0.312	U	µg/L	0.312	1.04	1	12/16/25 17:53	12/15/25 14:48
Caprolactam	EPA 8270E	<0.997	U	µg/L	0.997	5.19	1	12/16/25 17:53	12/15/25 14:48
Carbazole	EPA 8270E	<0.249	U	µg/L	0.249	1.04	1	12/16/25 17:53	12/15/25 14:48
Chrysene	EPA 8270E	<0.0499	U	µg/L	0.0499	0.104	1	12/16/25 17:53	12/15/25 14:48
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<0.415	U	µg/L	0.415	1.04	1	12/16/25 17:53	12/15/25 14:48
Dibenz(a,h) anthracene	EPA 8270E	<0.0758	U	µg/L	0.0758	0.104	1	12/16/25 17:53	12/15/25 14:48
Dibenzofuran	EPA 8270E	<0.239	U	µg/L	0.239	1.04	1	12/16/25 17:53	12/15/25 14:48
Diethyl phthalate	EPA 8270E	<0.364	U	µg/L	0.364	1.04	1	12/16/25 17:53	12/15/25 14:48
Dimethyl phthalate	EPA 8270E	<0.208	U	µg/L	0.208	1.04	1	12/16/25 17:53	12/15/25 14:48
Di-n-butyl phthalate	EPA 8270E	<0.218	U	µg/L	0.218	1.04	1	12/16/25 17:53	12/15/25 14:48
Di-n-octyl phthalate	EPA 8270E	<0.551	U	µg/L	0.551	1.04	1	12/16/25 17:53	12/15/25 14:48
Fluoranthene	EPA 8270E	<0.0859	U	µg/L	0.0859	0.104	1	12/16/25 17:53	12/15/25 14:48
Fluorene	EPA 8270E	<0.0530	U	µg/L	0.0530	0.104	1	12/16/25 17:53	12/15/25 14:48
Hexachlorobenzene	EPA 8270E	<0.457	U	µg/L	0.457	1.04	1	12/16/25 17:53	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925	Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Hexachlorobutadiene	EPA 8270E	<0.654	U	µg/L	0.654	1.04	1	12/16/25 17:53	12/15/25 14:48
Hexachlorocyclopentadiene	EPA 8270E	<1.13	U	µg/L	1.13	5.19	1	12/16/25 17:53	12/15/25 14:48
Hexachloroethane	EPA 8270E	<0.644	U	µg/L	0.644	1.04	1	12/16/25 17:53	12/15/25 14:48
Indeno(1,2,3-cd) pyrene	EPA 8270E	<0.0696	U	µg/L	0.0696	0.104	1	12/16/25 17:53	12/15/25 14:48
Isophorone	EPA 8270E	<0.353	U	µg/L	0.353	5.19	1	12/16/25 17:53	12/15/25 14:48
Methylphenol, Total	EPA 8270E	<0.478	U	µg/L	0.478	2.08	1	12/16/25 17:53	12/15/25 14:48
Naphthalene	EPA 8270E	<0.0696	U	µg/L	0.0696	0.104	1	12/16/25 17:53	12/15/25 14:48
Nitrobenzene	EPA 8270E	<0.270	U	µg/L	0.270	1.04	1	12/16/25 17:53	12/15/25 14:48
n-Nitrosodi-n-propylamine	EPA 8270E	<0.364	U	µg/L	0.364	1.04	1	12/16/25 17:53	12/15/25 14:48
N-Nitrosodiphenylamine	EPA 8270E	<0.509	U	µg/L	0.509	1.04	1	12/16/25 17:53	12/15/25 14:48
Pentachlorophenol	EPA 8270E	<1.01	U	µg/L	1.01	5.19	1	12/16/25 17:53	12/15/25 14:48
Phenanthrene	EPA 8270E	<0.0841	U	µg/L	0.0841	0.104	1	12/16/25 17:53	12/15/25 14:48
Phenol	EPA 8270E	<0.218	U	µg/L	0.218	1.04	1	12/16/25 17:53	12/15/25 14:48
Pyrene	EPA 8270E	<0.0905	U	µg/L	0.0905	0.104	1	12/16/25 17:53	12/15/25 14:48
Pyridine	EPA 8270E	<1.17	U	µg/L	1.17	10.4	1	12/16/25 17:53	12/15/25 14:48
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	75.2		%REC		38-103	1	12/16/25 17:53	12/15/25 14:48
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	62.4		%REC		36-96	1	12/16/25 17:53	12/15/25 14:48
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	36.5		%REC		20-73	1	12/16/25 17:53	12/15/25 14:48
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	76.0		%REC		44-114	1	12/16/25 17:53	12/15/25 14:48
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	64.5		%REC		33-100	1	12/16/25 17:53	12/15/25 14:48
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	19.9		%REC		10-48	1	12/16/25 17:53	12/15/25 14:48

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 16:37	NA
1,1,2,2-Tetrachloroethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:37	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 16:37	NA
1,1,2-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 16:37	NA
1,1-Dichloroethane	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 16:37	NA
1,1-Dichloroethylene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:37	NA
1,2,3-Trichlorobenzene	EPA 8260D	<2.99	U	µg/L	2.99	5.00	1	12/17/25 16:37	NA
1,2,3-Trichloropropane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:37	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2,4-Trichlorobenzene	EPA 8260D	<0.940	U	µg/L	0.940	1.00	1	12/17/25 16:37	NA
1,2,4-Trimethylbenzene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 16:37	NA
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 16:37	NA
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<0.410	U	µg/L	0.410	1.00	1	12/17/25 16:37	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<0.320	U	µg/L	0.320	1.00	1	12/17/25 16:37	NA
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 16:37	NA
1,2-Dichloropropane	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 16:37	NA
1,3,5-Trimethylbenzene	EPA 8260D	<0.650	U	µg/L	0.650	1.00	1	12/17/25 16:37	NA
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 16:37	NA
1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	2.00	1	12/17/25 16:37	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 16:37	NA
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<2.43	U	µg/L	2.43	5.00	1	12/17/25 16:37	NA
2-Hexanone	EPA 8260D	<0.590	U	µg/L	0.590	5.00	1	12/17/25 16:37	NA
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 16:37	NA
Acetone	EPA 8260D	<4.53	U	µg/L	4.53	10.0	1	12/17/25 16:37	NA
Benzene	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 16:37	NA
Bromochloromethane	EPA 8260D	<0.450	SU	µg/L	0.450	1.00	1	12/17/25 16:37	NA
Bromodichloromethane	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 16:37	NA
Bromoform	EPA 8260D	<0.560	U	µg/L	0.560	1.00	1	12/17/25 16:37	NA
Carbon disulfide	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 16:37	NA
Carbon tetrachloride	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:37	NA
Chlorobenzene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:37	NA
Chlorodibromomethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 16:37	NA
Chloroethane (Ethyl chloride)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 16:37	NA
Chloroform	EPA 8260D	<0.460	SU	µg/L	0.460	1.00	1	12/17/25 16:37	NA
cis & trans-1,2-Dichloroethene	EPA 8260D	<0.480	U	µg/L	0.480	2.00	1	12/17/25 16:37	NA
cis-1,2-Dichloroethylene	EPA 8260D	<0.420	SU	µg/L	0.420	1.00	1	12/17/25 16:37	NA
cis-1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	1.00	1	12/17/25 16:37	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 11:05
Date Received: 12/13/25 08:00

CLIENT ID: MW-04-151(4-9)_120925

Lab ID: HN2518802-002

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Cyclohexane	EPA 8260D	<0.630	U	µg/L	0.630	2.00	1	12/17/25 16:37	NA
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 16:37	NA
Ethylbenzene	EPA 8260D	<0.340	U	µg/L	0.340	1.00	1	12/17/25 16:37	NA
Isopropylbenzene	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 16:37	NA
m+p-Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 16:37	NA
Methyl acetate	EPA 8260D	<0.590	U	µg/L	0.590	2.00	1	12/17/25 16:37	NA
Methyl bromide (Bromomethane)	EPA 8260D	<0.900	U	µg/L	0.900	1.00	1	12/17/25 16:37	NA
Methyl chloride (Chloromethane)	EPA 8260D	<0.830	U	µg/L	0.830	5.00	1	12/17/25 16:37	NA
Methyl tert-butyl ether (MTBE)	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 16:37	NA
Methylcyclohexane	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 16:37	NA
Methylene chloride (Dichloromethane)	EPA 8260D	<0.860	U	µg/L	0.860	5.00	1	12/17/25 16:37	NA
o-Xylene	EPA 8260D	<0.310	U	µg/L	0.310	1.00	1	12/17/25 16:37	NA
Styrene	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 16:37	NA
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<0.390	U	µg/L	0.390	1.00	1	12/17/25 16:37	NA
Toluene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 16:37	NA
Total Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 16:37	NA
trans-1,2-Dichloroethylene	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 16:37	NA
trans-1,3-Dichloropropylene	EPA 8260D	<0.380	U	µg/L	0.380	1.00	1	12/17/25 16:37	NA
Trichloroethene (Trichloroethylene)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 16:37	NA
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 16:37	NA
Vinyl chloride (Chloroethene)	EPA 8260D	<0.530	U	µg/L	0.530	1.00	1	12/17/25 16:37	NA
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	112		%REC		80-120	1	12/17/25 16:37	NA
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	97.6		%REC		80-120	1	12/17/25 16:37	NA
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	101		%REC		80-120	1	12/17/25 16:37	NA
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	98.0		%REC		80-120	1	12/17/25 16:37	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
n-Hexane Extractable Material (O&G)	EPA 1664A	<1.35	U	mg/L	1.35	4.81	1	12/24/25 14:16	12/24/25 14:14
Bromide	EPA 9056A	0.123	J	mg/L	0.0319	0.200	1	12/22/25 15:24	12/22/25 12:16
Chloride	EPA 9056A	11.7		mg/L	3.10	10.0	10	12/19/25 21:42	12/19/25 16:58
Fluoride	EPA 9056A	0.325		mg/L	0.0670	0.100	1	12/22/25 15:24	12/22/25 12:16
Sulfate	EPA 9056A	30.0		mg/L	1.90	10.0	10	12/19/25 21:42	12/19/25 16:58
Dissolved Organic Carbon (DOC)	EPA 9060A	34.9	H	mg/L	1.39	5.00	10	12/17/25 13:00	12/15/25 15:01
Total Organic Carbon (TOC)	EPA 9060A	112		mg/L	10.3	20.0	40	12/15/25 17:27	12/15/25 11:27
Alkalinity as CaCO3	SM 2320 B-2021	349		mg/L	1.43	2.00	1	12/15/25 13:52	12/15/25 11:50
Alkalinity, Bicarbonate	SM 2320 B-2021	349		mg/L	1.43	2.00	1	12/15/25 13:52	12/15/25 11:50
Alkalinity, Carbonate	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:52	12/15/25 11:50
Alkalinity, Hydroxide	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:52	12/15/25 11:50
Alkalinity, Phenolphthalein	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:52	12/15/25 11:50
Total Hardness as CaCO3	SM 2340 C-2021	380		mg/L	2.17	5.00	1	12/23/25 10:15	NA
Residue-filterable (TDS)	SM 2540 C-2020	313		mg/L	36.9	50.0	1	12/16/25 13:18	12/14/25 15:10
Residue-nonfilterable (TSS)	SM 2540 D-2020	1.22		mg/L	0.387	1.02	1	12/16/25 13:53	12/15/25 15:07
Silica-dissolved	SM 4500-SiO2 C-2011	35.0		mg/L	2.50	2.50	50	12/17/25 16:30	12/17/25 15:05
Metals									
Mercury	EPA 245.1	<0.000160	SU	mg/L	0.000160	0.000195	1	12/22/25 16:30	12/22/25 14:24
Arsenic	EPA 6020B	0.00214		mg/L	0.000174	0.001000	1	12/15/25 15:58	12/14/25 10:27
Arsenic, dissolved	EPA 6020B	0.000675	J	mg/L	0.000174	0.001000	1	12/18/25 14:13	12/18/25 12:42
Barium	EPA 6020B	0.0663		mg/L	0.000396	0.00199	1	12/30/25 14:17	12/30/25 11:33
Barium, dissolved	EPA 6020B	0.0733		mg/L	0.000396	0.00199	1	12/30/25 14:04	12/30/25 11:33
Cadmium	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/15/25 15:58	12/14/25 10:27
Cadmium, dissolved	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/18/25 14:13	12/18/25 12:42
Calcium	EPA 6020B	109		mg/L	0.0686	0.200	1	12/30/25 14:17	12/30/25 11:33
Calcium, dissolved	EPA 6020B	92.7		mg/L	0.0686	0.200	1	12/30/25 14:04	12/30/25 11:33
Chromium	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/15/25 15:58	12/14/25 10:27
Chromium, dissolved	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/18/25 14:13	12/18/25 12:42

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Copper	EPA 6020B	<0.000560	U	mg/L	0.000560	0.001000	1	12/15/25 15:58	12/14/25 10:27
Copper, dissolved	EPA 6020B	0.000774	J	mg/L	0.000560	0.001000	1	12/18/25 14:13	12/18/25 12:42
Iron	EPA 6020B	1.35		mg/L	0.0141	0.0200	1	12/15/25 15:58	12/14/25 10:27
Lead	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/15/25 15:58	12/14/25 10:27
Lead, dissolved	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/18/25 14:13	12/18/25 12:42
Magnesium	EPA 6020B	19.7		mg/L	0.0145	0.200	1	12/30/25 14:17	12/30/25 11:33
Magnesium, dissolved	EPA 6020B	23.9		mg/L	0.0145	0.200	1	12/30/25 14:04	12/30/25 11:33
Manganese	EPA 6020B	0.747		mg/L	0.00110	0.00199	1	12/30/25 14:17	12/30/25 11:33
Manganese, dissolved	EPA 6020B	0.362		mg/L	0.00110	0.00199	1	12/30/25 14:04	12/30/25 11:33
Potassium	EPA 6020B	21.5		mg/L	0.0344	0.1000	1	12/15/25 15:58	12/14/25 10:27
Potassium, dissolved	EPA 6020B	13.8		mg/L	0.0344	0.1000	1	12/18/25 14:13	12/18/25 12:42
Selenium	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/15/25 15:58	12/14/25 10:27
Selenium, dissolved	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/18/25 14:13	12/18/25 12:42
Silver	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/15/25 15:58	12/14/25 10:27
Silver, dissolved	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/18/25 14:13	12/18/25 12:42
Sodium	EPA 6020B	27.4		mg/L	0.0468	0.200	1	12/30/25 14:17	12/30/25 11:33
Sodium, dissolved	EPA 6020B	51.9		mg/L	0.0468	0.200	1	12/30/25 14:04	12/30/25 11:33
Zinc	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/15/25 15:58	12/14/25 10:27
Zinc, dissolved	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/18/25 14:13	12/18/25 12:42

Per- and Polyfluorinated Alkyl Substances by LC-MS

11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	<0.480	U	ng/L	0.480	5.13	1	12/16/25 00:40	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	<1.16	U	ng/L	1.16	5.13	1	12/16/25 00:40	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	<0.961	U	ng/L	0.961	5.13	1	12/16/25 00:40	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	<1.97	U	ng/L	1.97	5.13	1	12/16/25 00:40	12/15/25 13:34
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	<1.11	U	ng/L	1.11	5.13	1	12/16/25 00:40	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	<3.10	SU	ng/L	3.10	5.13	1	12/16/25 00:40	12/15/25 13:34
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	22.8		ng/L	1.43	5.13	1	12/16/25 00:40	12/15/25 13:34
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	<0.577	U	ng/L	0.577	5.13	1	12/16/25 00:40	12/15/25 13:34
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	<0.460	U	ng/L	0.460	5.13	1	12/16/25 00:40	12/15/25 13:34
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	<1.20	U	ng/L	1.20	5.13	1	12/16/25 00:40	12/15/25 13:34
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	1.87	J	ng/L	1.59	5.13	1	12/16/25 00:40	12/15/25 13:34
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	2.00	J	ng/L	0.661	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	15.3		ng/L	0.910	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	46.9	S	ng/L	0.360	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorobutanoic acid (PFBA)	EPA 537Mod	52.5		ng/L	2.67	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	63.3		ng/L	2.04	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	7.50		ng/L	1.41	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorodecanoic acid (PFDA)	EPA 537Mod	76.0		ng/L	1.27	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	<0.710	U	ng/L	0.710	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	223		ng/L	0.581	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	165		ng/L	1.78	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	1610		ng/L	9.27	51.3	10	12/16/25 13:01	12/15/25 13:34
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	2980		ng/L	9.02	51.3	10	12/16/25 13:01	12/15/25 13:34
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	455		ng/L	1.23	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	237		ng/L	0.509	5.13	1	12/16/25 00:40	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorononanoic acid (PFNA)	EPA 537Mod	145		ng/L	0.893	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	22.7		ng/L	0.730	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	17400		ng/L	91.6	205	100	12/16/25 12:32	12/15/25 13:34
Perfluorooctanoic acid (PFOA)	EPA 537Mod	410		ng/L	0.647	2.05	1	12/16/25 00:40	12/15/25 13:34
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	106		ng/L	0.571	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	157	S	ng/L	1.31	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	<2.71	U	ng/L	2.71	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluorotridecanoic acid (PFTrDA)	EPA 537Mod	<1.98	U	ng/L	1.98	5.13	1	12/16/25 00:40	12/15/25 13:34
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	3.03	J	ng/L	1.00	5.13	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-FtS 4:2	EPA 537Mod	393	S	%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-FtS 6:2	EPA 537Mod	276	S	%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-FtS 8:2	EPA 537Mod	248	S	%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-PFDA	EPA 537Mod	116		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-PFDoA	EPA 537Mod	113		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-PFHxA	EPA 537Mod	90.6		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-PFTeA	EPA 537Mod	93.0		%REC		27-134	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C2-PFUnA	EPA 537Mod	113		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C3-HFPO-DA	EPA 537Mod	97.8		%REC		41-142	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C3-PFBS	EPA 537Mod	88.3		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C4-PFBA	EPA 537Mod	112		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C4-PFHpA	EPA 537Mod	65.3		%REC		42-141	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C4-PFOA	EPA 537Mod	93.0		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C4-PFOS	EPA 537Mod	32.5	S	%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C5-PFNA	EPA 537Mod	56.4		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C5-PFPeA	EPA 537Mod	85.9		%REC		43-138	1	12/16/25 00:40	12/15/25 13:34
Surr: 13C8-FOSA	EPA 537Mod	89.8		%REC		30-122	1	12/16/25 00:40	12/15/25 13:34
Surr: 18O2-PFHxS	EPA 537Mod	78.1		%REC		50-150	1	12/16/25 00:40	12/15/25 13:34
Surr: d3-N-MeFOSAA	EPA 537Mod	87.3		%REC		35-136	1	12/16/25 00:40	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
<i>Surr: d5-N-EtFOSAA</i>	<i>EPA 537Mod</i>	94.3		%REC		34-142	1	12/16/25 00:40	12/15/25 13:34
Semivolatile Organic Compounds by GC-MS									
1,1'-Biphenyl (BZ-0)	EPA 8270E	<0.429	U	µg/L	0.429	1.02	1	12/16/25 18:14	12/15/25 14:48
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<1.74	U	µg/L	1.74	5.11	1	12/16/25 18:14	12/15/25 14:48
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<0.735	U	µg/L	0.735	5.11	1	12/16/25 18:14	12/15/25 14:48
1-Methylnaphthalene	EPA 8270E	<0.0848	U	µg/L	0.0848	0.102	1	12/16/25 18:14	12/15/25 14:48
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<0.235	U	µg/L	0.235	1.02	1	12/16/25 18:14	12/15/25 14:48
2,3,4,6-Tetrachlorophenol	EPA 8270E	<0.460	U	µg/L	0.460	1.02	1	12/16/25 18:14	12/15/25 14:48
2,4,5-Trichlorophenol	EPA 8270E	<0.174	U	µg/L	0.174	1.02	1	12/16/25 18:14	12/15/25 14:48
2,4,6-Trichlorophenol	EPA 8270E	<0.255	U	µg/L	0.255	1.02	1	12/16/25 18:14	12/15/25 14:48
2,4-Dichlorophenol	EPA 8270E	<0.357	U	µg/L	0.357	1.02	1	12/16/25 18:14	12/15/25 14:48
2,4-Dimethylphenol	EPA 8270E	<0.368	U	µg/L	0.368	1.02	1	12/16/25 18:14	12/15/25 14:48
2,4-Dinitrophenol	EPA 8270E	<2.67	U	µg/L	2.67	5.11	1	12/16/25 18:14	12/15/25 14:48
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<0.357	U	µg/L	0.357	1.02	1	12/16/25 18:14	12/15/25 14:48
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<0.337	U	µg/L	0.337	1.02	1	12/16/25 18:14	12/15/25 14:48
2-Chloronaphthalene	EPA 8270E	<0.0766	U	µg/L	0.0766	0.102	1	12/16/25 18:14	12/15/25 14:48
2-Chlorophenol	EPA 8270E	<0.235	U	µg/L	0.235	1.02	1	12/16/25 18:14	12/15/25 14:48
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<0.276	U	µg/L	0.276	1.02	1	12/16/25 18:14	12/15/25 14:48
2-Methylnaphthalene	EPA 8270E	<0.0664	U	µg/L	0.0664	0.102	1	12/16/25 18:14	12/15/25 14:48
2-Methylphenol (o-Cresol)	EPA 8270E	<0.255	U	µg/L	0.255	1.02	1	12/16/25 18:14	12/15/25 14:48
2-Nitroaniline	EPA 8270E	<0.214	U	µg/L	0.214	1.02	1	12/16/25 18:14	12/15/25 14:48
2-Nitrophenol	EPA 8270E	<0.347	U	µg/L	0.347	1.02	1	12/16/25 18:14	12/15/25 14:48
3&4-Methylphenol	EPA 8270E	<0.214	U	µg/L	0.214	1.02	1	12/16/25 18:14	12/15/25 14:48
3,3'-Dichlorobenzidine	EPA 8270E	<0.470	U	µg/L	0.470	5.11	1	12/16/25 18:14	12/15/25 14:48
3-Nitroaniline	EPA 8270E	<0.192	U	µg/L	0.192	1.02	1	12/16/25 18:14	12/15/25 14:48
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<0.337	U	µg/L	0.337	1.02	1	12/16/25 18:14	12/15/25 14:48
4-Chloro-3-methylphenol	EPA 8270E	<0.265	U	µg/L	0.265	1.02	1	12/16/25 18:14	12/15/25 14:48
4-Chloroaniline	EPA 8270E	<0.347	SU	µg/L	0.347	1.02	1	12/16/25 18:14	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
4-Chlorophenyl phenylether	EPA 8270E	<0.317	U	µg/L	0.317	1.02	1	12/16/25 18:14	12/15/25 14:48
4-Nitroaniline	EPA 8270E	<0.233	U	µg/L	0.233	1.02	1	12/16/25 18:14	12/15/25 14:48
4-Nitrophenol	EPA 8270E	<1.11	U	µg/L	1.11	5.11	1	12/16/25 18:14	12/15/25 14:48
Acenaphthene	EPA 8270E	<0.0827	U	µg/L	0.0827	0.102	1	12/16/25 18:14	12/15/25 14:48
Acenaphthylene	EPA 8270E	<0.0766	U	µg/L	0.0766	0.102	1	12/16/25 18:14	12/15/25 14:48
Acetophenone	EPA 8270E	<0.378	U	µg/L	0.378	1.02	1	12/16/25 18:14	12/15/25 14:48
Anthracene	EPA 8270E	<0.0827	U	µg/L	0.0827	0.102	1	12/16/25 18:14	12/15/25 14:48
Atrazine	EPA 8270E	<0.357	U	µg/L	0.357	1.02	1	12/16/25 18:14	12/15/25 14:48
Benzaldehyde	EPA 8270E	<0.531	U	µg/L	0.531	1.02	1	12/16/25 18:14	12/15/25 14:48
Benzo(a)anthracene	EPA 8270E	<0.101	U	µg/L	0.101	0.102	1	12/16/25 18:14	12/15/25 14:48
Benzo(a)pyrene	EPA 8270E	<0.0449	U	µg/L	0.0449	0.102	1	12/16/25 18:14	12/15/25 14:48
Benzo(b)fluoranthene	EPA 8270E	<0.0521	U	µg/L	0.0521	0.102	1	12/16/25 18:14	12/15/25 14:48
Benzo(g,h,i)perylene	EPA 8270E	<0.0909	U	µg/L	0.0909	0.102	1	12/16/25 18:14	12/15/25 14:48
Benzo(k)fluoranthene	EPA 8270E	<0.0490	U	µg/L	0.0490	0.102	1	12/16/25 18:14	12/15/25 14:48
bis(2-Chloroethoxy) methane	EPA 8270E	<0.296	U	µg/L	0.296	1.02	1	12/16/25 18:14	12/15/25 14:48
bis(2-Chloroethyl) ether	EPA 8270E	<0.378	U	µg/L	0.378	1.02	1	12/16/25 18:14	12/15/25 14:48
Butyl benzyl phthalate	EPA 8270E	<0.306	U	µg/L	0.306	1.02	1	12/16/25 18:14	12/15/25 14:48
Caprolactam	EPA 8270E	<0.980	U	µg/L	0.980	5.11	1	12/16/25 18:14	12/15/25 14:48
Carbazole	EPA 8270E	<0.245	U	µg/L	0.245	1.02	1	12/16/25 18:14	12/15/25 14:48
Chrysene	EPA 8270E	<0.0490	U	µg/L	0.0490	0.102	1	12/16/25 18:14	12/15/25 14:48
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<0.408	U	µg/L	0.408	1.02	1	12/16/25 18:14	12/15/25 14:48
Dibenz(a,h) anthracene	EPA 8270E	<0.0745	U	µg/L	0.0745	0.102	1	12/16/25 18:14	12/15/25 14:48
Dibenzofuran	EPA 8270E	<0.235	U	µg/L	0.235	1.02	1	12/16/25 18:14	12/15/25 14:48
Diethyl phthalate	EPA 8270E	<0.357	U	µg/L	0.357	1.02	1	12/16/25 18:14	12/15/25 14:48
Dimethyl phthalate	EPA 8270E	<0.204	U	µg/L	0.204	1.02	1	12/16/25 18:14	12/15/25 14:48
Di-n-butyl phthalate	EPA 8270E	<0.214	U	µg/L	0.214	1.02	1	12/16/25 18:14	12/15/25 14:48
Di-n-octyl phthalate	EPA 8270E	<0.541	U	µg/L	0.541	1.02	1	12/16/25 18:14	12/15/25 14:48
Fluoranthene	EPA 8270E	<0.0844	U	µg/L	0.0844	0.102	1	12/16/25 18:14	12/15/25 14:48
Fluorene	EPA 8270E	<0.0521	U	µg/L	0.0521	0.102	1	12/16/25 18:14	12/15/25 14:48
Hexachlorobenzene	EPA 8270E	<0.449	U	µg/L	0.449	1.02	1	12/16/25 18:14	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Hexachlorobutadiene	EPA 8270E	<0.643	U	µg/L	0.643	1.02	1	12/16/25 18:14	12/15/25 14:48
Hexachlorocyclopentadiene	EPA 8270E	<1.11	U	µg/L	1.11	5.11	1	12/16/25 18:14	12/15/25 14:48
Hexachloroethane	EPA 8270E	<0.633	U	µg/L	0.633	1.02	1	12/16/25 18:14	12/15/25 14:48
Indeno(1,2,3-cd) pyrene	EPA 8270E	<0.0684	U	µg/L	0.0684	0.102	1	12/16/25 18:14	12/15/25 14:48
Isophorone	EPA 8270E	<0.347	U	µg/L	0.347	5.11	1	12/16/25 18:14	12/15/25 14:48
Methylphenol, Total	EPA 8270E	<0.470	U	µg/L	0.470	2.04	1	12/16/25 18:14	12/15/25 14:48
Naphthalene	EPA 8270E	<0.0684	U	µg/L	0.0684	0.102	1	12/16/25 18:14	12/15/25 14:48
Nitrobenzene	EPA 8270E	<0.265	U	µg/L	0.265	1.02	1	12/16/25 18:14	12/15/25 14:48
n-Nitrosodi-n-propylamine	EPA 8270E	<0.357	U	µg/L	0.357	1.02	1	12/16/25 18:14	12/15/25 14:48
N-Nitrosodiphenylamine	EPA 8270E	<0.500	U	µg/L	0.500	1.02	1	12/16/25 18:14	12/15/25 14:48
Pentachlorophenol	EPA 8270E	<0.991	U	µg/L	0.991	5.11	1	12/16/25 18:14	12/15/25 14:48
Phenanthrene	EPA 8270E	<0.0827	U	µg/L	0.0827	0.102	1	12/16/25 18:14	12/15/25 14:48
Phenol	EPA 8270E	<0.214	U	µg/L	0.214	1.02	1	12/16/25 18:14	12/15/25 14:48
Pyrene	EPA 8270E	<0.0890	U	µg/L	0.0890	0.102	1	12/16/25 18:14	12/15/25 14:48
Pyridine	EPA 8270E	<1.15	U	µg/L	1.15	10.2	1	12/16/25 18:14	12/15/25 14:48
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	78.2		%REC		38-103	1	12/16/25 18:14	12/15/25 14:48
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	64.3		%REC		36-96	1	12/16/25 18:14	12/15/25 14:48
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	39.8		%REC		20-73	1	12/16/25 18:14	12/15/25 14:48
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	80.8		%REC		44-114	1	12/16/25 18:14	12/15/25 14:48
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	67.6		%REC		33-100	1	12/16/25 18:14	12/15/25 14:48
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	21.7		%REC		10-48	1	12/16/25 18:14	12/15/25 14:48

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 17:00	NA
1,1,2,2-Tetrachloroethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:00	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 17:00	NA
1,1,2-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 17:00	NA
1,1-Dichloroethane	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 17:00	NA
1,1-Dichloroethylene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:00	NA
1,2,3-Trichlorobenzene	EPA 8260D	<2.99	U	µg/L	2.99	5.00	1	12/17/25 17:00	NA
1,2,3-Trichloropropane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:00	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2,4-Trichlorobenzene	EPA 8260D	<0.940	U	µg/L	0.940	1.00	1	12/17/25 17:00	NA
1,2,4-Trimethylbenzene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 17:00	NA
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 17:00	NA
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<0.410	U	µg/L	0.410	1.00	1	12/17/25 17:00	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<0.320	U	µg/L	0.320	1.00	1	12/17/25 17:00	NA
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 17:00	NA
1,2-Dichloropropane	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 17:00	NA
1,3,5-Trimethylbenzene	EPA 8260D	<0.650	U	µg/L	0.650	1.00	1	12/17/25 17:00	NA
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 17:00	NA
1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	2.00	1	12/17/25 17:00	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 17:00	NA
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<2.43	U	µg/L	2.43	5.00	1	12/17/25 17:00	NA
2-Hexanone	EPA 8260D	<0.590	U	µg/L	0.590	5.00	1	12/17/25 17:00	NA
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 17:00	NA
Acetone	EPA 8260D	<4.53	U	µg/L	4.53	10.0	1	12/17/25 17:00	NA
Benzene	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 17:00	NA
Bromochloromethane	EPA 8260D	<0.450	SU	µg/L	0.450	1.00	1	12/17/25 17:00	NA
Bromodichloromethane	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 17:00	NA
Bromoform	EPA 8260D	<0.560	U	µg/L	0.560	1.00	1	12/17/25 17:00	NA
Carbon disulfide	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 17:00	NA
Carbon tetrachloride	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:00	NA
Chlorobenzene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:00	NA
Chlorodibromomethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:00	NA
Chloroethane (Ethyl chloride)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 17:00	NA
Chloroform	EPA 8260D	<0.460	SU	µg/L	0.460	1.00	1	12/17/25 17:00	NA
cis & trans-1,2-Dichloroethene	EPA 8260D	<0.480	U	µg/L	0.480	2.00	1	12/17/25 17:00	NA
cis-1,2-Dichloroethylene	EPA 8260D	<0.420	SU	µg/L	0.420	1.00	1	12/17/25 17:00	NA
cis-1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	1.00	1	12/17/25 17:00	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/09/25 16:45
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-46(4-9)_120925

Lab ID: HN2518802-003

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Cyclohexane	EPA 8260D	<0.630	U	µg/L	0.630	2.00	1	12/17/25 17:00	NA
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 17:00	NA
Ethylbenzene	EPA 8260D	<0.340	U	µg/L	0.340	1.00	1	12/17/25 17:00	NA
Isopropylbenzene	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 17:00	NA
m+p-Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 17:00	NA
Methyl acetate	EPA 8260D	<0.590	U	µg/L	0.590	2.00	1	12/17/25 17:00	NA
Methyl bromide (Bromomethane)	EPA 8260D	<0.900	U	µg/L	0.900	1.00	1	12/17/25 17:00	NA
Methyl chloride (Chloromethane)	EPA 8260D	<0.830	U	µg/L	0.830	5.00	1	12/17/25 17:00	NA
Methyl tert-butyl ether (MTBE)	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 17:00	NA
Methylcyclohexane	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 17:00	NA
Methylene chloride (Dichloromethane)	EPA 8260D	<0.860	U	µg/L	0.860	5.00	1	12/17/25 17:00	NA
o-Xylene	EPA 8260D	<0.310	U	µg/L	0.310	1.00	1	12/17/25 17:00	NA
Styrene	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 17:00	NA
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<0.390	U	µg/L	0.390	1.00	1	12/17/25 17:00	NA
Toluene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 17:00	NA
Total Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 17:00	NA
trans-1,2-Dichloroethylene	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 17:00	NA
trans-1,3-Dichloropropylene	EPA 8260D	<0.380	U	µg/L	0.380	1.00	1	12/17/25 17:00	NA
Trichloroethene (Trichloroethylene)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 17:00	NA
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 17:00	NA
Vinyl chloride (Chloroethene)	EPA 8260D	<0.530	U	µg/L	0.530	1.00	1	12/17/25 17:00	NA
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	110		%REC		80-120	1	12/17/25 17:00	NA
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	100.0		%REC		80-120	1	12/17/25 17:00	NA
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	98.7		%REC		80-120	1	12/17/25 17:00	NA
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	98.0		%REC		80-120	1	12/17/25 17:00	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
n-Hexane Extractable Material (O&G)	EPA 1664A	<1.37	U	mg/L	1.37	4.90	1	12/24/25 14:16	12/24/25 14:14
Bromide	EPA 9056A	0.103	J	mg/L	0.0319	0.200	1	12/22/25 15:32	12/22/25 12:16
Chloride	EPA 9056A	10.5		mg/L	0.310	1.00	1	12/22/25 15:32	12/22/25 12:16
Fluoride	EPA 9056A	0.276		mg/L	0.0670	0.100	1	12/22/25 15:32	12/22/25 12:16
Sulfate	EPA 9056A	4.94		mg/L	0.190	1.00	1	12/22/25 15:32	12/22/25 12:16
Dissolved Organic Carbon (DOC)	EPA 9060A	31.8	H	mg/L	1.39	5.00	10	12/17/25 13:11	12/15/25 15:01
Total Organic Carbon (TOC)	EPA 9060A	106		mg/L	10.3	20.0	40	12/15/25 17:40	12/15/25 11:27
Alkalinity as CaCO3	SM 2320 B-2021	334		mg/L	1.43	2.00	1	12/15/25 13:56	12/15/25 11:50
Alkalinity, Bicarbonate	SM 2320 B-2021	334		mg/L	1.43	2.00	1	12/15/25 13:56	12/15/25 11:50
Alkalinity, Carbonate	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:56	12/15/25 11:50
Alkalinity, Hydroxide	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:56	12/15/25 11:50
Alkalinity, Phenolphthalein	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	12/15/25 13:56	12/15/25 11:50
Total Hardness as CaCO3	SM 2340 C-2021	300		mg/L	2.17	5.00	1	12/23/25 10:15	NA
Residue-filterable (TDS)	SM 2540 C-2020	340		mg/L	36.9	50.0	1	12/16/25 13:18	12/14/25 15:10
Residue-nonfilterable (TSS)	SM 2540 D-2020	21.1		mg/L	0.380	1.00	1	12/18/25 14:32	12/17/25 10:35
Silica-dissolved	SM 4500-SiO2 C-2011	34.6		mg/L	2.50	2.50	50	12/17/25 16:33	12/17/25 15:05
Metals									
Mercury	EPA 245.1	<0.000160	SU	mg/L	0.000160	0.000195	1	12/22/25 16:31	12/22/25 14:24
Arsenic	EPA 6020B	0.000561	J	mg/L	0.000174	0.001000	1	12/30/25 14:19	12/30/25 11:33
Arsenic, dissolved	EPA 6020B	0.000939	J	mg/L	0.000174	0.001000	1	12/30/25 14:06	12/30/25 11:33
Barium	EPA 6020B	0.0724		mg/L	0.000396	0.00199	1	12/15/25 16:00	12/14/25 10:27
Barium, dissolved	EPA 6020B	0.0602	B	mg/L	0.000396	0.00199	1	12/18/25 14:15	12/18/25 12:42
Cadmium	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/15/25 16:00	12/14/25 10:27
Cadmium, dissolved	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	12/18/25 14:15	12/18/25 12:42
Calcium	EPA 6020B	68.1		mg/L	0.0686	0.200	1	12/30/25 14:19	12/30/25 11:33
Calcium, dissolved	EPA 6020B	98.3		mg/L	0.0686	0.200	1	12/30/25 14:06	12/30/25 11:33
Chromium	EPA 6020B	<0.000810	BU	mg/L	0.000810	0.001000	1	12/30/25 14:19	12/30/25 11:33
Chromium, dissolved	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	12/30/25 14:06	12/30/25 11:33

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Copper	EPA 6020B	<0.000560	BU	mg/L	0.000560	0.001000	1	12/30/25 14:19	12/30/25 11:33
Copper, dissolved	EPA 6020B	0.000866	J	mg/L	0.000560	0.001000	1	12/30/25 14:06	12/30/25 11:33
Iron	EPA 6020B	1.46		mg/L	0.0141	0.0200	1	12/15/25 16:00	12/14/25 10:27
Lead	EPA 6020B	0.000455	J	mg/L	0.000250	0.001000	1	12/15/25 16:00	12/14/25 10:27
Lead, dissolved	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	12/18/25 14:15	12/18/25 12:42
Magnesium	EPA 6020B	25.7		mg/L	0.0145	0.200	1	12/15/25 16:00	12/14/25 10:27
Magnesium, dissolved	EPA 6020B	20.3		mg/L	0.0145	0.200	1	12/18/25 14:15	12/18/25 12:42
Manganese	EPA 6020B	0.138		mg/L	0.00110	0.00199	1	12/30/25 14:19	12/30/25 11:33
Manganese, dissolved	EPA 6020B	0.427		mg/L	0.00110	0.00199	1	12/30/25 14:06	12/30/25 11:33
Potassium	EPA 6020B	23.6		mg/L	0.0344	0.1000	1	12/15/25 16:00	12/14/25 10:27
Potassium, dissolved	EPA 6020B	20.6		mg/L	0.0344	0.1000	1	12/18/25 14:15	12/18/25 12:42
Selenium	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/15/25 16:00	12/14/25 10:27
Selenium, dissolved	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	12/18/25 14:15	12/18/25 12:42
Silver	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/15/25 16:00	12/14/25 10:27
Silver, dissolved	EPA 6020B	<0.0000410	U	mg/L	0.0000410	0.000199	1	12/18/25 14:15	12/18/25 12:42
Sodium	EPA 6020B	43.7		mg/L	0.0468	0.200	1	12/15/25 16:00	12/14/25 10:27
Sodium, dissolved	EPA 6020B	28.2	B	mg/L	0.0468	0.200	1	12/18/25 14:15	12/18/25 12:42
Zinc	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/15/25 16:00	12/14/25 10:27
Zinc, dissolved	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	12/18/25 14:15	12/18/25 12:42

Per- and Polyfluorinated Alkyl Substances by LC-MS

11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	<0.478	U	ng/L	0.478	5.12	1	12/16/25 00:54	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	<1.16	U	ng/L	1.16	5.12	1	12/16/25 00:54	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	<0.958	U	ng/L	0.958	5.12	1	12/16/25 00:54	12/15/25 13:34
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	3.21	J	ng/L	1.97	5.12	1	12/16/25 00:54	12/15/25 13:34
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	<1.11	U	ng/L	1.11	5.12	1	12/16/25 00:54	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	4.72	JS	ng/L	3.09	5.12	1	12/16/25 00:54	12/15/25 13:34
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	84.4		ng/L	1.42	5.12	1	12/16/25 00:54	12/15/25 13:34
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	<0.575	U	ng/L	0.575	5.12	1	12/16/25 00:54	12/15/25 13:34
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	<0.459	U	ng/L	0.459	5.12	1	12/16/25 00:54	12/15/25 13:34
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	1.62	J	ng/L	1.20	5.12	1	12/16/25 00:54	12/15/25 13:34
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	1.87	J	ng/L	1.58	5.12	1	12/16/25 00:54	12/15/25 13:34
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	6.04		ng/L	0.659	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	176	J	ng/L	90.7	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	731		ng/L	35.9	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorobutanoic acid (PFBA)	EPA 537Mod	420		ng/L	2.66	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	654		ng/L	203	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	11.6		ng/L	1.40	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluorodecanoic acid (PFDA)	EPA 537Mod	26.6		ng/L	1.27	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	<0.707	U	ng/L	0.707	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	5630		ng/L	57.9	512	100	12/16/25 12:03	12/15/25 13:34
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	588		ng/L	177	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	65500		ng/L	924	5120	1000	12/16/25 11:49	12/15/25 13:34
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	46900		ng/L	89.9	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	6580		ng/L	123	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	461	J	ng/L	50.8	512	100	12/16/25 12:03	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorononanoic acid (PFNA)	EPA 537Mod	141		ng/L	0.890	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	131		ng/L	0.728	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	248000		ng/L	913	2050	1000	12/16/25 11:49	12/15/25 13:34
Perfluorooctanoic acid (PFOA)	EPA 537Mod	4950		ng/L	64.5	205	100	12/16/25 12:03	12/15/25 13:34
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	2690		ng/L	56.9	512	100	12/16/25 12:03	12/15/25 13:34
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	851		ng/L	131	512	100	12/16/25 12:03	12/15/25 13:34
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	<2.70	U	ng/L	2.70	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluorotridecanoic acid (PFTrDA)	EPA 537Mod	<1.98	U	ng/L	1.98	5.12	1	12/16/25 00:54	12/15/25 13:34
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	<0.997	U	ng/L	0.997	5.12	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-FtS 4:2	EPA 537Mod	271	S	%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-FtS 6:2	EPA 537Mod	62.8		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-FtS 8:2	EPA 537Mod	206	S	%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-PFDA	EPA 537Mod	129		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-PFDoA	EPA 537Mod	125		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-PFHxA	EPA 537Mod	50.3		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-PFTeA	EPA 537Mod	95.9		%REC		27-134	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C2-PFUnA	EPA 537Mod	127		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C3-HFPO-DA	EPA 537Mod	100.0		%REC		41-142	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C3-PFBS	EPA 537Mod	82.8		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C4-PFBA	EPA 537Mod	124		%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C4-PFHpA	EPA 537Mod	16.5	S	%REC		42-141	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C4-PFOA	EPA 537Mod	32.0	S	%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C4-PFOS	EPA 537Mod	8.04	S	%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C5-PFNA	EPA 537Mod	22.8	S	%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C5-PFPeA	EPA 537Mod	76.2		%REC		43-138	1	12/16/25 00:54	12/15/25 13:34
Surr: 13C8-FOSA	EPA 537Mod	90.2		%REC		30-122	1	12/16/25 00:54	12/15/25 13:34
Surr: 18O2-PFHxS	EPA 537Mod	16.0	S	%REC		50-150	1	12/16/25 00:54	12/15/25 13:34
Surr: d3-N-MeFOSAA	EPA 537Mod	90.1		%REC		35-136	1	12/16/25 00:54	12/15/25 13:34

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
<i>Surr: d5-N-EtFOSAA</i>	<i>EPA 537Mod</i>	97.1		%REC		34-142	1	12/16/25 00:54	12/15/25 13:34
Semivolatile Organic Compounds by GC-MS									
1,1'-Biphenyl (BZ-0)	EPA 8270E	<0.420	U	µg/L	0.420	1.00	1	12/16/25 18:35	12/15/25 14:48
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<1.71	U	µg/L	1.71	5.00	1	12/16/25 18:35	12/15/25 14:48
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<0.720	U	µg/L	0.720	5.00	1	12/16/25 18:35	12/15/25 14:48
1-Methylnaphthalene	EPA 8270E	0.0990	J	µg/L	0.0830	0.100	1	12/16/25 18:35	12/15/25 14:48
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<0.230	U	µg/L	0.230	1.00	1	12/16/25 18:35	12/15/25 14:48
2,3,4,6-Tetrachlorophenol	EPA 8270E	<0.450	U	µg/L	0.450	1.00	1	12/16/25 18:35	12/15/25 14:48
2,4,5-Trichlorophenol	EPA 8270E	<0.170	U	µg/L	0.170	1.00	1	12/16/25 18:35	12/15/25 14:48
2,4,6-Trichlorophenol	EPA 8270E	<0.250	U	µg/L	0.250	1.00	1	12/16/25 18:35	12/15/25 14:48
2,4-Dichlorophenol	EPA 8270E	<0.350	U	µg/L	0.350	1.00	1	12/16/25 18:35	12/15/25 14:48
2,4-Dimethylphenol	EPA 8270E	<0.360	U	µg/L	0.360	1.00	1	12/16/25 18:35	12/15/25 14:48
2,4-Dinitrophenol	EPA 8270E	<2.61	U	µg/L	2.61	5.00	1	12/16/25 18:35	12/15/25 14:48
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	<0.350	U	µg/L	0.350	1.00	1	12/16/25 18:35	12/15/25 14:48
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	<0.330	U	µg/L	0.330	1.00	1	12/16/25 18:35	12/15/25 14:48
2-Chloronaphthalene	EPA 8270E	<0.0750	U	µg/L	0.0750	0.100	1	12/16/25 18:35	12/15/25 14:48
2-Chlorophenol	EPA 8270E	<0.230	U	µg/L	0.230	1.00	1	12/16/25 18:35	12/15/25 14:48
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	<0.270	U	µg/L	0.270	1.00	1	12/16/25 18:35	12/15/25 14:48
2-Methylnaphthalene	EPA 8270E	<0.0650	U	µg/L	0.0650	0.100	1	12/16/25 18:35	12/15/25 14:48
2-Methylphenol (o-Cresol)	EPA 8270E	<0.250	U	µg/L	0.250	1.00	1	12/16/25 18:35	12/15/25 14:48
2-Nitroaniline	EPA 8270E	<0.210	U	µg/L	0.210	1.00	1	12/16/25 18:35	12/15/25 14:48
2-Nitrophenol	EPA 8270E	<0.340	U	µg/L	0.340	1.00	1	12/16/25 18:35	12/15/25 14:48
3&4-Methylphenol	EPA 8270E	<0.210	U	µg/L	0.210	1.00	1	12/16/25 18:35	12/15/25 14:48
3,3'-Dichlorobenzidine	EPA 8270E	<0.460	U	µg/L	0.460	5.00	1	12/16/25 18:35	12/15/25 14:48
3-Nitroaniline	EPA 8270E	<0.188	U	µg/L	0.188	1.00	1	12/16/25 18:35	12/15/25 14:48
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<0.330	U	µg/L	0.330	1.00	1	12/16/25 18:35	12/15/25 14:48
4-Chloro-3-methylphenol	EPA 8270E	<0.260	U	µg/L	0.260	1.00	1	12/16/25 18:35	12/15/25 14:48
4-Chloroaniline	EPA 8270E	<0.340	SU	µg/L	0.340	1.00	1	12/16/25 18:35	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
4-Chlorophenyl phenylether	EPA 8270E	<0.310	U	µg/L	0.310	1.00	1	12/16/25 18:35	12/15/25 14:48
4-Nitroaniline	EPA 8270E	<0.228	U	µg/L	0.228	1.00	1	12/16/25 18:35	12/15/25 14:48
4-Nitrophenol	EPA 8270E	<1.08	U	µg/L	1.08	5.00	1	12/16/25 18:35	12/15/25 14:48
Acenaphthene	EPA 8270E	0.148		µg/L	0.0810	0.100	1	12/16/25 18:35	12/15/25 14:48
Acenaphthylene	EPA 8270E	<0.0750	U	µg/L	0.0750	0.100	1	12/16/25 18:35	12/15/25 14:48
Acetophenone	EPA 8270E	<0.370	U	µg/L	0.370	1.00	1	12/16/25 18:35	12/15/25 14:48
Anthracene	EPA 8270E	<0.0810	U	µg/L	0.0810	0.100	1	12/16/25 18:35	12/15/25 14:48
Atrazine	EPA 8270E	<0.350	U	µg/L	0.350	1.00	1	12/16/25 18:35	12/15/25 14:48
Benzaldehyde	EPA 8270E	<0.520	U	µg/L	0.520	1.00	1	12/16/25 18:35	12/15/25 14:48
Benzo(a)anthracene	EPA 8270E	<0.0990	U	µg/L	0.0990	0.100	1	12/16/25 18:35	12/15/25 14:48
Benzo(a)pyrene	EPA 8270E	<0.0440	U	µg/L	0.0440	0.100	1	12/16/25 18:35	12/15/25 14:48
Benzo(b)fluoranthene	EPA 8270E	<0.0510	U	µg/L	0.0510	0.100	1	12/16/25 18:35	12/15/25 14:48
Benzo(g,h,i)perylene	EPA 8270E	<0.0890	U	µg/L	0.0890	0.100	1	12/16/25 18:35	12/15/25 14:48
Benzo(k)fluoranthene	EPA 8270E	<0.0480	U	µg/L	0.0480	0.100	1	12/16/25 18:35	12/15/25 14:48
bis(2-Chloroethoxy) methane	EPA 8270E	<0.290	U	µg/L	0.290	1.00	1	12/16/25 18:35	12/15/25 14:48
bis(2-Chloroethyl) ether	EPA 8270E	<0.370	U	µg/L	0.370	1.00	1	12/16/25 18:35	12/15/25 14:48
Butyl benzyl phthalate	EPA 8270E	<0.300	U	µg/L	0.300	1.00	1	12/16/25 18:35	12/15/25 14:48
Caprolactam	EPA 8270E	<0.960	U	µg/L	0.960	5.00	1	12/16/25 18:35	12/15/25 14:48
Carbazole	EPA 8270E	<0.240	U	µg/L	0.240	1.00	1	12/16/25 18:35	12/15/25 14:48
Chrysene	EPA 8270E	<0.0480	U	µg/L	0.0480	0.100	1	12/16/25 18:35	12/15/25 14:48
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	<0.400	U	µg/L	0.400	1.00	1	12/16/25 18:35	12/15/25 14:48
Dibenz(a,h) anthracene	EPA 8270E	<0.0730	U	µg/L	0.0730	0.100	1	12/16/25 18:35	12/15/25 14:48
Dibenzofuran	EPA 8270E	<0.230	U	µg/L	0.230	1.00	1	12/16/25 18:35	12/15/25 14:48
Diethyl phthalate	EPA 8270E	<0.350	U	µg/L	0.350	1.00	1	12/16/25 18:35	12/15/25 14:48
Dimethyl phthalate	EPA 8270E	<0.200	U	µg/L	0.200	1.00	1	12/16/25 18:35	12/15/25 14:48
Di-n-butyl phthalate	EPA 8270E	<0.210	U	µg/L	0.210	1.00	1	12/16/25 18:35	12/15/25 14:48
Di-n-octyl phthalate	EPA 8270E	<0.530	U	µg/L	0.530	1.00	1	12/16/25 18:35	12/15/25 14:48
Fluoranthene	EPA 8270E	<0.0827	U	µg/L	0.0827	0.100	1	12/16/25 18:35	12/15/25 14:48
Fluorene	EPA 8270E	0.109		µg/L	0.0510	0.100	1	12/16/25 18:35	12/15/25 14:48
Hexachlorobenzene	EPA 8270E	<0.440	U	µg/L	0.440	1.00	1	12/16/25 18:35	12/15/25 14:48

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Hexachlorobutadiene	EPA 8270E	<0.630	U	µg/L	0.630	1.00	1	12/16/25 18:35	12/15/25 14:48
Hexachlorocyclopentadiene	EPA 8270E	<1.09	U	µg/L	1.09	5.00	1	12/16/25 18:35	12/15/25 14:48
Hexachloroethane	EPA 8270E	<0.620	U	µg/L	0.620	1.00	1	12/16/25 18:35	12/15/25 14:48
Indeno(1,2,3-cd) pyrene	EPA 8270E	<0.0670	U	µg/L	0.0670	0.100	1	12/16/25 18:35	12/15/25 14:48
Isophorone	EPA 8270E	<0.340	U	µg/L	0.340	5.00	1	12/16/25 18:35	12/15/25 14:48
Methylphenol, Total	EPA 8270E	<0.460	U	µg/L	0.460	2.00	1	12/16/25 18:35	12/15/25 14:48
Naphthalene	EPA 8270E	0.188		µg/L	0.0670	0.100	1	12/16/25 18:35	12/15/25 14:48
Nitrobenzene	EPA 8270E	<0.260	U	µg/L	0.260	1.00	1	12/16/25 18:35	12/15/25 14:48
n-Nitrosodi-n-propylamine	EPA 8270E	<0.350	U	µg/L	0.350	1.00	1	12/16/25 18:35	12/15/25 14:48
N-Nitrosodiphenylamine	EPA 8270E	<0.490	U	µg/L	0.490	1.00	1	12/16/25 18:35	12/15/25 14:48
Pentachlorophenol	EPA 8270E	<0.970	U	µg/L	0.970	5.00	1	12/16/25 18:35	12/15/25 14:48
Phenanthrene	EPA 8270E	<0.0810	U	µg/L	0.0810	0.100	1	12/16/25 18:35	12/15/25 14:48
Phenol	EPA 8270E	<0.210	U	µg/L	0.210	1.00	1	12/16/25 18:35	12/15/25 14:48
Pyrene	EPA 8270E	<0.0872	U	µg/L	0.0872	0.100	1	12/16/25 18:35	12/15/25 14:48
Pyridine	EPA 8270E	<1.13	U	µg/L	1.13	10.0	1	12/16/25 18:35	12/15/25 14:48
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	64.0		%REC		38-103	1	12/16/25 18:35	12/15/25 14:48
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	48.9		%REC		36-96	1	12/16/25 18:35	12/15/25 14:48
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	26.2		%REC		20-73	1	12/16/25 18:35	12/15/25 14:48
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	64.6		%REC		44-114	1	12/16/25 18:35	12/15/25 14:48
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	48.3		%REC		33-100	1	12/16/25 18:35	12/15/25 14:48
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	14.1		%REC		10-48	1	12/16/25 18:35	12/15/25 14:48

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 17:23	NA
1,1,2,2-Tetrachloroethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:23	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 17:23	NA
1,1,2-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	12/17/25 17:23	NA
1,1-Dichloroethane	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 17:23	NA
1,1-Dichloroethylene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:23	NA
1,2,3-Trichlorobenzene	EPA 8260D	<2.99	U	µg/L	2.99	5.00	1	12/17/25 17:23	NA
1,2,3-Trichloropropane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:23	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2,4-Trichlorobenzene	EPA 8260D	<0.940	U	µg/L	0.940	1.00	1	12/17/25 17:23	NA
1,2,4-Trimethylbenzene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 17:23	NA
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 17:23	NA
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<0.410	U	µg/L	0.410	1.00	1	12/17/25 17:23	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<0.320	U	µg/L	0.320	1.00	1	12/17/25 17:23	NA
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	12/17/25 17:23	NA
1,2-Dichloropropane	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 17:23	NA
1,3,5-Trimethylbenzene	EPA 8260D	<0.650	U	µg/L	0.650	1.00	1	12/17/25 17:23	NA
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 17:23	NA
1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	2.00	1	12/17/25 17:23	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 17:23	NA
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<2.43	U	µg/L	2.43	5.00	1	12/17/25 17:23	NA
2-Hexanone	EPA 8260D	<0.590	U	µg/L	0.590	5.00	1	12/17/25 17:23	NA
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 17:23	NA
Acetone	EPA 8260D	<4.53	U	µg/L	4.53	10.0	1	12/17/25 17:23	NA
Benzene	EPA 8260D	15.2		µg/L	0.460	1.00	1	12/17/25 17:23	NA
Bromochloromethane	EPA 8260D	<0.450	SU	µg/L	0.450	1.00	1	12/17/25 17:23	NA
Bromodichloromethane	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 17:23	NA
Bromoform	EPA 8260D	<0.560	U	µg/L	0.560	1.00	1	12/17/25 17:23	NA
Carbon disulfide	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	12/17/25 17:23	NA
Carbon tetrachloride	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:23	NA
Chlorobenzene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:23	NA
Chlorodibromomethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	12/17/25 17:23	NA
Chloroethane (Ethyl chloride)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 17:23	NA
Chloroform	EPA 8260D	<0.460	SU	µg/L	0.460	1.00	1	12/17/25 17:23	NA
cis & trans-1,2-Dichloroethene	EPA 8260D	<0.480	U	µg/L	0.480	2.00	1	12/17/25 17:23	NA
cis-1,2-Dichloroethylene	EPA 8260D	<0.420	SU	µg/L	0.420	1.00	1	12/17/25 17:23	NA
cis-1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	1.00	1	12/17/25 17:23	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: GROUNDWATER

Work Order: HN2518802
Date Collected: 12/10/25 13:30
Date Received: 12/13/25 08:00

CLIENT ID: SB-04-49(13-18)_121025

Lab ID: HN2518802-004

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Cyclohexane	EPA 8260D	2.54		µg/L	0.630	2.00	1	12/17/25 17:23	NA
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	12/17/25 17:23	NA
Ethylbenzene	EPA 8260D	5.16		µg/L	0.340	1.00	1	12/17/25 17:23	NA
Isopropylbenzene	EPA 8260D	43.3		µg/L	0.350	1.00	1	12/17/25 17:23	NA
m+p-Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 17:23	NA
Methyl acetate	EPA 8260D	<0.590	U	µg/L	0.590	2.00	1	12/17/25 17:23	NA
Methyl bromide (Bromomethane)	EPA 8260D	<0.900	U	µg/L	0.900	1.00	1	12/17/25 17:23	NA
Methyl chloride (Chloromethane)	EPA 8260D	<0.830	U	µg/L	0.830	5.00	1	12/17/25 17:23	NA
Methyl tert-butyl ether (MTBE)	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	12/17/25 17:23	NA
Methylcyclohexane	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	12/17/25 17:23	NA
Methylene chloride (Dichloromethane)	EPA 8260D	<0.860	U	µg/L	0.860	5.00	1	12/17/25 17:23	NA
o-Xylene	EPA 8260D	<0.310	U	µg/L	0.310	1.00	1	12/17/25 17:23	NA
Styrene	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	12/17/25 17:23	NA
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<0.390	U	µg/L	0.390	1.00	1	12/17/25 17:23	NA
Toluene	EPA 8260D	0.800	J	µg/L	0.450	1.00	1	12/17/25 17:23	NA
Total Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	12/17/25 17:23	NA
trans-1,2-Dichloroethylene	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	12/17/25 17:23	NA
trans-1,3-Dichloropropylene	EPA 8260D	<0.380	U	µg/L	0.380	1.00	1	12/17/25 17:23	NA
Trichloroethene (Trichloroethylene)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	12/17/25 17:23	NA
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	12/17/25 17:23	NA
Vinyl chloride (Chloroethene)	EPA 8260D	<0.530	U	µg/L	0.530	1.00	1	12/17/25 17:23	NA
Surr: 1,2-Dichloroethane-d4	EPA 8260D	110		%REC		80-120	1	12/17/25 17:23	NA
Surr: 4-Bromofluorobenzene	EPA 8260D	105		%REC		80-120	1	12/17/25 17:23	NA
Surr: Dibromofluoromethane	EPA 8260D	99.0		%REC		80-120	1	12/17/25 17:23	NA
Surr: Toluene-d8	EPA 8260D	99.1		%REC		80-120	1	12/17/25 17:23	NA

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2384880

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775601

General Chemistry Parameters

MB	CLIENT ID: Method Blank							Lab ID: QC-2384880-001			

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:18
Prep Date: 12/14/25 15:11

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	<22.1	mg/L	22.1	30.0	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample							Lab ID: QC-2384880-002			

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:18
Prep Date: 12/14/25 15:11

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	466	mg/L	22.1	30.0	495		94.1	85-109			

DUP	CLIENT ID: Batch QC							Lab ID: QC-2384880-004			

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:18
Prep Date: 12/14/25 15:11

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	750	mg/L	36.9	50.0	0	747	NC	0-0	0.445	10	

DUP	CLIENT ID: Batch QC							Lab ID: QC-2384880-015			

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:18
Prep Date: 12/14/25 15:11

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	1490	mg/L	73.8	100	0	1470	NC	0-0	1.35	10	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385089

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3769249

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2385089-001

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/15/25 12:20
Prep Date: 12/14/25 16:48

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	<0.380	mg/L	0.380	1.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385089-002

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/15/25 12:20
Prep Date: 12/14/25 16:48

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	108	mg/L	3.80	10.0	100		108	75-111			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2385089-004

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/15/25 12:20
Prep Date: 12/14/25 16:48

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	132	mg/L	7.60	20.0	0	134	NC	0-0	1.50	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-2385089-015

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/15/25 12:20
Prep Date: 12/14/25 16:48

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	8510	mg/L	38.0	100	0	7450	NC	0-0	13.3	10	

The following samples were analyzed in this batch: HN2518802-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385539

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3770155

General Chemistry Parameters

MB	CLIENT ID: Method Blank							Lab ID: QC-2385539-001			

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 12/15/25 16:24
Prep Date: 12/15/25 11:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	<0.258	mg/L	0.258	0.500	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample							Lab ID: QC-2385539-002			

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 12/15/25 11:04
Prep Date: 12/15/25 11:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	4.86	mg/L	0.258	0.500	5		97.1	80-120			

MS	CLIENT ID: Batch QC							Lab ID: QC-2385539-004			

Method: EPA 9060A **Dilution:** 40 **Analysis Date:** 12/15/25 11:48
Prep Date: 12/15/25 11:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	318	mg/L	10.3	20.0	200	129	94.7	70-130			

MSD	CLIENT ID: Batch QC							Lab ID: QC-2385539-005			

Method: EPA 9060A **Dilution:** 40 **Analysis Date:** 12/15/25 12:01
Prep Date: 12/15/25 11:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	342	mg/L	10.3	20.0	200	129	107	70-130	7.29	20	

MS	CLIENT ID: Batch QC							Lab ID: QC-2385539-016			

Method: EPA 9060A **Dilution:** 4 **Analysis Date:** 12/15/25 14:45
Prep Date: 12/15/25 11:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	25.1	mg/L	1.03	2.00	20	6.38	93.6	70-130			

MSD	CLIENT ID: Batch QC							Lab ID: QC-2385539-017			

Method: EPA 9060A **Dilution:** 4 **Analysis Date:** 12/15/25 14:57
Prep Date: 12/15/25 11:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	25.1	mg/L	1.03	2.00	20	6.38	93.7	70-130	0.127	20	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385798

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3773121

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2385798-001

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 12/17/25 11:33
Prep Date: 12/15/25 15:02

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	<0.139	mg/L	0.139	0.500	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385798-002

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 12/17/25 11:46
Prep Date: 12/15/25 15:02

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	4.68	mg/L	0.139	0.500	5		93.6	80-120			

MS	CLIENT ID: MW-04-151(15-20)_120825	Lab ID: QC-2385798-004

Method: EPA 9060A **Dilution:** 10 **Analysis Date:** 12/17/25 12:16
Prep Date: 12/15/25 15:02

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	82.1	mg/L	1.39	5.00	50	55.4	53.4	70-130			S

MSD	CLIENT ID: MW-04-151(15-20)_120825	Lab ID: QC-2385798-005

Method: EPA 9060A **Dilution:** 10 **Analysis Date:** 12/17/25 12:35
Prep Date: 12/15/25 15:02

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	76.1	mg/L	1.39	5.00	50	55.4	41.5	70-130	7.55	20	S

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385842

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3769007

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2385842-001

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 12/15/25 12:19**Prep Date:** 12/15/25 11:51

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	1.90	mg/L	1.43	2.00	0		NC	0-0			J
Alkalinity, Bicarbonate	1.90	mg/L	1.43	2.00	0		NC	0-0			J
Alkalinity, Carbonate	<1.43	mg/L	1.43	2.00	0		NC	0-0			U
Alkalinity, Hydroxide	<1.43	mg/L	1.43	2.00	0		NC	0-0			U
Alkalinity, Phenolphthalein	<1.43	mg/L	1.43	2.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385842-002

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 12/15/25 12:17**Prep Date:** 12/15/25 11:51

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	1010	mg/L		2.00	1000		101	90-110			
Alkalinity, Carbonate	960	mg/L		2.00	925		104	90-110			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2385842-004

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 12/15/25 15:30**Prep Date:** 12/15/25 11:51

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	1600	mg/L	1.43	2.00	0	1600	NC	0-0	0.0664	10	
Alkalinity, Bicarbonate	<1.43	mg/L	1.43	2.00	0	<1.43	NC	0-0	NC		U
Alkalinity, Carbonate	61.6	mg/L	1.43	2.00	0	56.8	NC	0-0	8.06	10	
Alkalinity, Hydroxide	1530	mg/L	1.43	2.00	0	1540	NC	0-0	0.379	10	
Alkalinity, Phenolphthalein	1570	mg/L	1.43	2.00	0	1570	NC	0-0	0.220	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-2385842-015

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 12/15/25 13:29**Prep Date:** 12/15/25 11:51

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	317	mg/L	1.43	2.00	0	316	NC	0-0	0.408	10	
Alkalinity, Bicarbonate	317	mg/L	1.43	2.00	0	316	NC	0-0	0.408	10	
Alkalinity, Carbonate	<1.43	mg/L	1.43	2.00	0	<1.43	NC	0-0	NC		U
Alkalinity, Hydroxide	<1.43	mg/L	1.43	2.00	0	<1.43	NC	0-0	NC		U
Alkalinity, Phenolphthalein	<1.43	mg/L	1.43	2.00	0	<1.43	NC	0-0	NC		U

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2386087

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772582

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2386087-001

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:53
Prep Date: 12/15/25 15:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	<0.380	mg/L	0.380	1.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2386087-002

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:53
Prep Date: 12/15/25 15:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	86.0	mg/L	3.80	10.0	100		86.0	75-111			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2386087-004

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:53
Prep Date: 12/15/25 15:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	328	mg/L	15.2	40.0	0	332	NC	0-0	1.21	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-2386087-015

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/16/25 13:53
Prep Date: 12/15/25 15:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	976	mg/L	15.2	40.0	0	916	NC	0-0	6.34	10	

The following samples were analyzed in this batch: HN2518802-002, HN2518802-003

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2389028

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3779204

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2389028-001

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/18/25 14:32
Prep Date: 12/17/25 10:36

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	<0.380	mg/L	0.380	1.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2389028-002

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/18/25 14:32
Prep Date: 12/17/25 10:36

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	97.0	mg/L	3.80	10.0	100		97.0	75-111			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2389028-004

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/18/25 14:32
Prep Date: 12/17/25 10:36

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	16.7	mg/L	1.27	3.33	0	17.7	NC	0-0	5.83	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-2389028-015

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 12/18/25 14:32
Prep Date: 12/17/25 10:36

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	17.0	mg/L	0.950	2.50	0	18.0	NC	0-0	5.71	10	

The following samples were analyzed in this batch: HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2389223

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775989

General Chemistry Parameters

MB	CLIENT ID: Method Blank							Lab ID: QC-2389223-001			

Method: SM 4500-SiO2 C-2011 **Dilution:** 1 **Analysis Date:** 12/17/25 15:59
Prep Date: 12/17/25 15:05

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	<0.0500	mg/L	0.0500	0.0500	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample							Lab ID: QC-2389223-002			

Method: SM 4500-SiO2 C-2011 **Dilution:** 1 **Analysis Date:** 12/17/25 16:06
Prep Date: 12/17/25 15:05

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	1.3	mg/L	0.0500	0.0500	1.25		108	90-110			

MS	CLIENT ID: Batch QC							Lab ID: QC-2389223-004			

Method: SM 4500-SiO2 C-2011 **Dilution:** 10 **Analysis Date:** 12/17/25 16:04
Prep Date: 12/17/25 15:05

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	17.4	mg/L	0.500	0.500	1.25	5.4	NC	90-110			O

MSD	CLIENT ID: Batch QC							Lab ID: QC-2389223-005			

Method: SM 4500-SiO2 C-2011 **Dilution:** 10 **Analysis Date:** 12/17/25 16:05
Prep Date: 12/17/25 15:05

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	18.1	mg/L	0.500	0.500	1.25	5.4	NC	90-110	4.34	10	O

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2393549

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3783310

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2393549-001

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 12/19/25 19:25
Prep Date: 12/19/25 16:59

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	<0.0319	mg/L	0.0319	0.200	0		NC	0-0			U
Chloride	<0.310	mg/L	0.310	1.00	0		NC	0-0			U
Fluoride	<0.0670	mg/L	0.0670	0.100	0		NC	0-0			U
Sulfate	<0.190	mg/L	0.190	1.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2393549-002

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 12/19/25 19:15
Prep Date: 12/19/25 16:59

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	2.05	mg/L	0.0319	0.200	2		102	89-112			
Chloride	9.48	mg/L	0.310	1.00	10		94.8	88-110			
Fluoride	0.908	mg/L	0.0670	0.100	2		45.4	86-121			S
Sulfate	10.2	mg/L	0.190	1.00	10		102	90-110			

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2393549

Work Order: HN2518802
Date Collected: 12/11/25 10:40
Date Received: NA
Run ID: 3788998

General Chemistry Parameters

MS	CLIENT ID: Batch QC	Lab ID: QC-2393549-004

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 12/22/25 13:27
Prep Date: 12/22/25 12:17

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Fluoride	2.00	mg/L	0.0670	0.100	2	0.0990	94.8	86-121			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2393549-005

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 12/22/25 13:35
Prep Date: 12/22/25 12:17

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Fluoride	2.00	mg/L	0.0670	0.100	2	0.0990	94.8	86-121	0.0501	15	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2395614

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3788998

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2395614-001

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 12/22/25 13:11
Prep Date: 12/22/25 12:17

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	<0.0319	mg/L	0.0319	0.200	0		NC	0-0			U
Chloride	0.349	mg/L	0.310	1.00	0		NC	0-0			J
Fluoride	<0.0670	mg/L	0.0670	0.100	0		NC	0-0			U
Sulfate	<0.190	mg/L	0.190	1.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2395614-002

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 12/22/25 13:03
Prep Date: 12/22/25 12:17

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	1.96	mg/L	0.0319	0.200	2		98.2	89-112			
Chloride	9.54	mg/L	0.310	1.00	10		95.4	88-110			
Fluoride	1.99	mg/L	0.0670	0.100	2		99.6	86-121			
Sulfate	9.82	mg/L	0.190	1.00	10		98.2	90-110			

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2396860

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3787612

General Chemistry Parameters

MB	CLIENT ID: Method Blank							Lab ID: QC-2396860-001			

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 12/23/25 10:15
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	<2.17	mg/L	2.17	5.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample							Lab ID: QC-2396860-002			

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 12/23/25 10:15
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	102	mg/L	2.17	5.00	100		102	95-105			

DUP	CLIENT ID: MW-04-151(15-20)_120825							Lab ID: QC-2396860-004			

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 12/23/25 10:15
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	200	mg/L	2.17	5.00	0	200	NC	0-0	0.00	10	

DUP	CLIENT ID: Batch QC							Lab ID: QC-2396860-015			

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 12/23/25 10:15
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	60.0	mg/L	2.17	5.00	0	56.0	NC	0-0	6.90	10	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2398618

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3792073

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2398618-001

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 12/24/25 14:17
Prep Date: 12/24/25 14:15

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	<1.40	mg/L	1.40	5.00	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2398618-002

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 12/24/25 14:17
Prep Date: 12/24/25 14:15

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	37.9	mg/L	1.40	5.00	40		94.8	78-114			

MS	CLIENT ID: MW-04-151(15-20)_120825	Lab ID: QC-2398618-004

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 12/24/25 14:17
Prep Date: 12/24/25 14:15

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	150	mg/L	1.35	4.81	153.85	3.46	95.0	78-114			

DUP	CLIENT ID: MW-04-151(4-9)_120925	Lab ID: QC-2398618-007

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 12/24/25 14:17
Prep Date: 12/24/25 14:15

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	3.08	mg/L	1.35	4.81	0	3.46	NC	0-0	0		J

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2384762

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3769084

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2384762-001

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/15/25 15:38
Prep Date: 12/14/25 10:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.000174	mg/L	0.000174	0.00100	0		NC	0-0			U
Barium	<0.000396	mg/L	0.000396	0.00200	0		NC	0-0			U
Cadmium	<0.0000650	mg/L	0.0000650	0.000200	0		NC	0-0			U
Calcium	<0.0686	mg/L	0.0686	0.200	0		NC	0-0			U
Chromium	<0.000810	mg/L	0.000810	0.00100	0		NC	0-0			U
Copper	<0.000560	mg/L	0.000560	0.00100	0		NC	0-0			U
Iron	<0.0141	mg/L	0.0141	0.0200	0		NC	0-0			U
Lead	<0.000250	mg/L	0.000250	0.00100	0		NC	0-0			U
Magnesium	<0.0145	mg/L	0.0145	0.200	0		NC	0-0			U
Manganese	<0.00110	mg/L	0.00110	0.00200	0		NC	0-0			U
Potassium	<0.0344	mg/L	0.0344	0.100	0		NC	0-0			U
Selenium	<0.000669	mg/L	0.000669	0.00100	0		NC	0-0			U
Silver	<0.0000410	mg/L	0.0000410	0.000200	0		NC	0-0			U
Sodium	<0.0468	mg/L	0.0468	0.200	0		NC	0-0			U
Zinc	<0.00494	mg/L	0.00494	0.0100	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2384762-002

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/15/25 15:40
Prep Date: 12/14/25 10:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.0997	mg/L	0.000174	0.00100	0.1		99.7	80-120			
Barium	0.0927	mg/L	0.000396	0.00200	0.1		92.7	80-120			
Cadmium	0.101	mg/L	0.0000650	0.000200	0.1		101	80-120			
Calcium	10.3	mg/L	0.0686	0.200	10		103	80-120			
Chromium	0.0959	mg/L	0.000810	0.00100	0.1		95.9	80-120			
Copper	0.0954	mg/L	0.000560	0.00100	0.1		95.4	80-120			
Iron	9.99	mg/L	0.0141	0.0200	10		99.9	80-120			
Lead	0.0985	mg/L	0.000250	0.00100	0.1		98.5	80-120			
Magnesium	10.3	mg/L	0.0145	0.200	10		103	80-120			
Manganese	0.0996	mg/L	0.00110	0.00200	0.1		99.6	80-120			
Potassium	9.95	mg/L	0.0344	0.100	10		99.5	80-120			
Selenium	0.0999	mg/L	0.000669	0.00100	0.1		99.9	80-120			
Silver	0.102	mg/L	0.0000410	0.000200	0.1		102	80-120			
Sodium	10.1	mg/L	0.0468	0.200	10		101	80-120			
Zinc	0.107	mg/L	0.00494	0.0100	0.1		107	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2384762-004

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/15/25 15:46
Prep Date: 12/14/25 10:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.107	mg/L	0.000174	0.00500	0.1	0.00321	104	75-125			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2384762

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3769084

MS	CLIENT ID: Batch QC	Lab ID: QC-2384762-004

Method: EPA 6020B

Dilution: 1

Analysis Date: 12/15/25 15:46

Prep Date: 12/14/25 10:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	0.0963	mg/L	0.000396	0.00200	0.1	0.000796	95.6	75-125			
Cadmium	0.101	mg/L	0.0000650	0.00100	0.1	<0.0000650	101	75-125			
Calcium	10.6	mg/L	0.0686	0.200	10	0.168	104	75-125			
Chromium	0.0987	mg/L	0.000810	0.00100	0.1	<0.000810	98.2	75-125			
Copper	0.103	mg/L	0.000560	0.00100	0.1	0.00685	95.7	75-125			
Iron	10.3	mg/L	0.0141	0.0800	10	0.124	101	75-125			
Lead	0.0995	mg/L	0.000250	0.00300	0.1	0.000455	99.1	75-125			
Magnesium	10.4	mg/L	0.0145	0.200	10	0.0308	103	75-125			
Manganese	0.104	mg/L	0.00110	0.00500	0.1	0.00221	102	75-125			
Potassium	10.5	mg/L	0.0344	0.100	10	0.311	102	75-125			
Selenium	0.102	mg/L	0.000669	0.00100	0.1	<0.000669	102	75-125			
Silver	0.0986	mg/L	0.0000410	0.000200	0.1	<0.0000410	98.6	75-125			
Sodium	266	mg/L	0.0468	0.200	10	266	NC	75-125			EO
Zinc	0.127	mg/L	0.00494	0.0100	0.1	0.0227	104	75-125			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2384762-005

Method: EPA 6020B

Dilution: 1

Analysis Date: 12/15/25 15:48

Prep Date: 12/14/25 10:28

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.101	mg/L	0.000174	0.00500	0.1	0.00321	97.4	75-125	6.32	20	
Barium	0.0892	mg/L	0.000396	0.00200	0.1	0.000796	88.4	75-125	7.76	20	
Cadmium	0.0944	mg/L	0.0000650	0.00100	0.1	<0.0000650	94.4	75-125	6.63	20	
Calcium	9.89	mg/L	0.0686	0.200	10	0.168	97.2	75-125	6.85	20	
Chromium	0.0921	mg/L	0.000810	0.00100	0.1	<0.000810	91.6	75-125	6.94	20	
Copper	0.0959	mg/L	0.000560	0.00100	0.1	0.00685	89.1	75-125	6.64	20	
Iron	9.57	mg/L	0.0141	0.0800	10	0.124	94.5	75-125	6.91	20	
Lead	0.0930	mg/L	0.000250	0.00300	0.1	0.000455	92.6	75-125	6.75	20	
Magnesium	9.57	mg/L	0.0145	0.200	10	0.0308	95.4	75-125	7.88	20	
Manganese	0.0984	mg/L	0.00110	0.00500	0.1	0.00221	96.2	75-125	5.36	20	
Potassium	9.77	mg/L	0.0344	0.100	10	0.311	94.6	75-125	6.88	20	
Selenium	0.0969	mg/L	0.000669	0.00100	0.1	<0.000669	96.8	75-125	5.31	20	
Silver	0.0872	mg/L	0.0000410	0.000200	0.1	<0.0000410	87.2	75-125	12.3	20	
Sodium	264	mg/L	0.0468	0.200	10	266	NC	75-125	0.662	20	EO
Zinc	0.121	mg/L	0.00494	0.0100	0.1	0.0227	98.7	75-125	4.59	20	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2390841

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3778921

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2390841-001

Method: EPA 6020B**Dilution:** 1**Analysis Date:** 12/18/25 13:50**Prep Date:** 12/18/25 12:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	<0.000174	mg/L	0.000174	0.00100	0		NC	0-0			U
Barium, dissolved	0.00292	mg/L	0.000396	0.00200	0		NC	0-0			B
Cadmium, dissolved	<0.0000650	mg/L	0.0000650	0.000200	0		NC	0-0			U
Calcium, dissolved	<0.0686	mg/L	0.0686	0.200	0		NC	0-0			U
Chromium, dissolved	<0.000810	mg/L	0.000810	0.00100	0		NC	0-0			U
Copper, dissolved	<0.000560	mg/L	0.000560	0.00100	0		NC	0-0			U
Lead, dissolved	<0.000250	mg/L	0.000250	0.00100	0		NC	0-0			U
Magnesium, dissolved	<0.0145	mg/L	0.0145	0.200	0		NC	0-0			U
Manganese, dissolved	<0.00110	mg/L	0.00110	0.00200	0		NC	0-0			U
Potassium, dissolved	0.0493	mg/L	0.0344	0.100	0		NC	0-0			J
Selenium, dissolved	<0.000669	mg/L	0.000669	0.00100	0		NC	0-0			U
Silver, dissolved	<0.0000410	mg/L	0.0000410	0.000200	0		NC	0-0			U
Sodium, dissolved	0.348	mg/L	0.0468	0.200	0		NC	0-0			B
Zinc, dissolved	<0.00494	mg/L	0.00494	0.0100	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2390841-002

Method: EPA 6020B**Dilution:** 1**Analysis Date:** 12/18/25 13:51**Prep Date:** 12/18/25 12:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.104	mg/L	0.000174	0.00100	0.1		104	80-120			
Barium, dissolved	0.0969	mg/L	0.000396	0.00200	0.1		96.9	80-120			
Cadmium, dissolved	0.105	mg/L	0.0000650	0.000200	0.1		105	80-120			
Calcium, dissolved	10.6	mg/L	0.0686	0.200	10		106	80-120			
Chromium, dissolved	0.103	mg/L	0.000810	0.00100	0.1		103	80-120			
Copper, dissolved	0.101	mg/L	0.000560	0.00100	0.1		101	80-120			
Lead, dissolved	0.108	mg/L	0.000250	0.00100	0.1		108	80-120			
Magnesium, dissolved	10.8	mg/L	0.0145	0.200	10		108	80-120			
Manganese, dissolved	0.105	mg/L	0.00110	0.00200	0.1		105	80-120			
Potassium, dissolved	10.4	mg/L	0.0344	0.100	10		104	80-120			
Selenium, dissolved	0.101	mg/L	0.000669	0.00100	0.1		101	80-120			
Silver, dissolved	0.110	mg/L	0.0000410	0.000200	0.1		110	80-120			
Sodium, dissolved	10.9	mg/L	0.0468	0.200	10		109	80-120			
Zinc, dissolved	0.108	mg/L	0.00494	0.0100	0.1		108	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2390841-004

Method: EPA 6020B**Dilution:** 1**Analysis Date:** 12/18/25 13:55**Prep Date:** 12/18/25 12:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.108	mg/L	0.000174	0.00100	0.1	0.00221	106	75-125			
Barium, dissolved	0.179	mg/L	0.000396	0.00200	0.1	0.0630	116	75-125			
Cadmium, dissolved	0.105	mg/L	0.0000650	0.000200	0.1	<0.0000650	105	75-125			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2390841

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3778921

MS	CLIENT ID: Batch QC	Lab ID: QC-2390841-004

Method: EPA 6020B**Dilution:** 1**Analysis Date:** 12/18/25 13:55**Prep Date:** 12/18/25 12:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Calcium, dissolved	103	mg/L	0.0686	0.200	10	96.3	NC	75-125			O
Chromium, dissolved	0.104	mg/L	0.000810	0.00200	0.1	<0.000810	104	75-125			
Copper, dissolved	0.0996	mg/L	0.000560	0.00200	0.1	<0.000560	99.3	75-125			
Lead, dissolved	0.110	mg/L	0.000250	0.00100	0.1	<0.000250	110	75-125			
Magnesium, dissolved	50.0	mg/L	0.0145	1.00	10	40.5	NC	75-125			O
Manganese, dissolved	0.123	mg/L	0.00110	0.00250	0.1	0.0192	104	75-125			
Potassium, dissolved	11.5	mg/L	0.0344	0.100	10	1.19	103	75-125			
Selenium, dissolved	0.104	mg/L	0.000669	0.00100	0.1	<0.000669	104	75-125			
Silver, dissolved	0.109	mg/L	0.0000410	0.000840	0.1	<0.0000410	109	75-125			
Sodium, dissolved	18.1	mg/L	0.0468	0.200	10	7.56	106	75-125			
Zinc, dissolved	0.108	mg/L	0.00494	0.0100	0.1	<0.00494	104	75-125			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2390841-005

Method: EPA 6020B**Dilution:** 1**Analysis Date:** 12/18/25 13:56**Prep Date:** 12/18/25 12:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.109	mg/L	0.000174	0.00100	0.1	0.00221	106	75-125	0.644	20	
Barium, dissolved	0.178	mg/L	0.000396	0.00200	0.1	0.0630	115	75-125	0.876	20	
Cadmium, dissolved	0.105	mg/L	0.0000650	0.000200	0.1	<0.0000650	105	75-125	0.701	20	
Calcium, dissolved	103	mg/L	0.0686	0.200	10	96.3	NC	75-125	0.161	20	O
Chromium, dissolved	0.106	mg/L	0.000810	0.00200	0.1	<0.000810	106	75-125	1.62	20	
Copper, dissolved	0.101	mg/L	0.000560	0.00200	0.1	<0.000560	100	75-125	1.08	20	
Lead, dissolved	0.109	mg/L	0.000250	0.00100	0.1	<0.000250	108	75-125	1.26	20	
Magnesium, dissolved	50.8	mg/L	0.0145	1.00	10	40.5	NC	75-125	1.48	20	O
Manganese, dissolved	0.124	mg/L	0.00110	0.00250	0.1	0.0192	104	75-125	0.157	20	
Potassium, dissolved	11.7	mg/L	0.0344	0.100	10	1.19	105	75-125	1.99	20	
Selenium, dissolved	0.105	mg/L	0.000669	0.00100	0.1	<0.000669	104	75-125	0.430	20	
Silver, dissolved	0.110	mg/L	0.0000410	0.000840	0.1	<0.0000410	110	75-125	1.04	20	
Sodium, dissolved	18.3	mg/L	0.0468	0.200	10	7.56	108	75-125	1.12	20	
Zinc, dissolved	0.111	mg/L	0.00494	0.0100	0.1	<0.00494	106	75-125	2.19	20	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2395543

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3786221

Metals

MB	CLIENT ID: Method Blank					Lab ID: QC-2395543-001				

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 12/22/25 16:13
Prep Date: 12/22/25 14:25

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	<0.000160	mg/L	0.000160	0.000200	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample					Lab ID: QC-2395543-002				

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 12/22/25 16:21
Prep Date: 12/22/25 14:25

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.00232	mg/L	0.000160	0.000200	0.002		116	85-115			S

MS	CLIENT ID: MW-04-151(15-20)_120825					Lab ID: QC-2395543-004				

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 12/22/25 16:24
Prep Date: 12/22/25 14:25

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.00246	mg/L	0.000160	0.000195	0.002	<0.000160	125	80-120			S

MSD	CLIENT ID: MW-04-151(15-20)_120825					Lab ID: QC-2395543-005				

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 12/22/25 16:26
Prep Date: 12/22/25 14:25

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.00212	mg/L	0.000160	0.000200	0.002	<0.000160	108	80-120	15.1	20	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2402034

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3796878

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2402034-001

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 14:09
Prep Date: 12/30/25 11:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.000174	mg/L	0.000174	0.00100	0		NC	0-0			U
Barium	<0.000396	mg/L	0.000396	0.00200	0		NC	0-0			U
Calcium	<0.0686	mg/L	0.0686	0.200	0		NC	0-0			U
Magnesium	<0.0145	mg/L	0.0145	0.200	0		NC	0-0			U
Manganese	<0.00110	mg/L	0.00110	0.00200	0		NC	0-0			U
Potassium	<0.0344	mg/L	0.0344	0.100	0		NC	0-0			U
Sodium	<0.0468	mg/L	0.0468	0.200	0		NC	0-0			U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2402034-002

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 14:11
Prep Date: 12/30/25 11:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.100	mg/L	0.000174	0.00100	0.1		100	80-120			
Chromium	0.102	mg/L	0.000810	0.00100	0.1		102	80-120			
Copper	0.107	mg/L	0.000560	0.00100	0.1		107	80-120			
Magnesium	10.4	mg/L	0.0145	0.200	10		104	80-120			
Manganese	0.120	mg/L	0.00110	0.00200	0.1		120	80-120			
Potassium	10.3	mg/L	0.0344	0.100	10		103	80-120			
Sodium	10.6	mg/L	0.0468	0.200	10		106	80-120			

MS	CLIENT ID: MW-04-151(4-9)_120925	Lab ID: QC-2402034-004

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 14:14
Prep Date: 12/30/25 11:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Potassium	23.4	mg/L	0.0344	0.1000	10	13.9	94.8	75-125			

MSD	CLIENT ID: MW-04-151(4-9)_120925	Lab ID: QC-2402034-005

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 14:15
Prep Date: 12/30/25 11:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Potassium	23.4	mg/L	0.0344	0.100	10	13.9	94.4	75-125	0.196	20	

The following samples were analyzed in this batch: HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2402034

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3797406

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2402034-001

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 15:28
Prep Date: 12/30/25 11:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chromium	0.00111	mg/L	0.000810	0.00100	0		NC	0-0			B
Copper	0.0109	mg/L	0.000560	0.00100	0		NC	0-0			B

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2402034-002

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 15:30
Prep Date: 12/30/25 11:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	0.103	mg/L	0.000396	0.00200	0.1		103	80-120			
Calcium	10.6	mg/L	0.0686	0.200	10		106	80-120			

The following samples were analyzed in this batch: HN2518802-002, HN2518802-003, HN2518802-004

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2402037

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3796881

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2402037-001

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 13:53
Prep Date: 12/30/25 11:34

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	<0.000174	mg/L	0.000174	0.00100	0		NC	0-0			U
Barium, dissolved	0.000461	mg/L	0.000396	0.00200	0		NC	0-0			J
Calcium, dissolved	<0.0686	mg/L	0.0686	0.200	0		NC	0-0			U
Chromium, dissolved	<0.000810	mg/L	0.000810	0.00100	0		NC	0-0			U
Copper, dissolved	<0.000560	mg/L	0.000560	0.00100	0		NC	0-0			U
Magnesium, dissolved	<0.0145	mg/L	0.0145	0.200	0		NC	0-0			U
Manganese, dissolved	<0.00110	mg/L	0.00110	0.00200	0		NC	0-0			U
Potassium, dissolved	0.0551	mg/L	0.0344	0.100	0		NC	0-0			J
Sodium, dissolved	0.187	mg/L	0.0468	0.200	0		NC	0-0			J

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2402037-002

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 13:55
Prep Date: 12/30/25 11:34

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.100	mg/L	0.000174	0.00100	0.1		100	80-120			
Barium, dissolved	0.0997	mg/L	0.000396	0.00200	0.1		99.7	80-120			
Calcium, dissolved	10.3	mg/L	0.0686	0.200	10		103	80-120			
Chromium, dissolved	0.100	mg/L	0.000810	0.00100	0.1		100.0	80-120			
Copper, dissolved	0.102	mg/L	0.000560	0.00100	0.1		102	80-120			
Magnesium, dissolved	10.3	mg/L	0.0145	0.200	10		103	80-120			
Manganese, dissolved	0.0981	mg/L	0.00110	0.00200	0.1		98.1	80-120			
Potassium, dissolved	10.1	mg/L	0.0344	0.100	10		101	80-120			
Sodium, dissolved	10.4	mg/L	0.0468	0.200	10		104	80-120			

MS	CLIENT ID: MW-04-151(4-9)_120925	Lab ID: QC-2402037-004

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 13:58
Prep Date: 12/30/25 11:34

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Potassium, dissolved	32.6	mg/L	0.0344	0.1000	10	23.0	95.9	75-125			

MSD	CLIENT ID: MW-04-151(4-9)_120925	Lab ID: QC-2402037-005

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 12/30/25 14:00
Prep Date: 12/30/25 11:34

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Potassium, dissolved	32.3	mg/L	0.0344	0.100	10	23.0	92.7	75-125	0.963	20	

The following samples were analyzed in this batch: HN2518802-002, HN2518802-003, HN2518802-004



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385421

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772641

Per- and Polyfluorinated Alkyl Substances by LC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2385421-001

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 12/16/25 09:50**Prep Date:** 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	<0.467	ng/L	0.467	5.00	0		NC	0-0			U
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	<1.13	ng/L	1.13	5.00	0		NC	0-0			U
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	<0.936	ng/L	0.936	5.00	0		NC	0-0			U
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	<1.92	ng/L	1.92	5.00	0		NC	0-0			U
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	<1.08	ng/L	1.08	5.00	0		NC	0-0			U
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	<3.02	ng/L	3.02	5.00	0		NC	0-0			U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	<1.39	ng/L	1.39	5.00	0		NC	0-0			U
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<0.562	ng/L	0.562	5.00	0		NC	0-0			U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	<0.448	ng/L	0.448	5.00	0		NC	0-0			U
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	<1.17	ng/L	1.17	5.00	0		NC	0-0			U
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	<1.54	ng/L	1.54	5.00	0		NC	0-0			U
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	<0.644	ng/L	0.644	5.00	0		NC	0-0			U
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	<0.886	ng/L	0.886	5.00	0		NC	0-0			U
Perfluorobutane sulfonic acid (PFBS)	<0.351	ng/L	0.351	5.00	0		NC	0-0			U
Perfluorobutanoic acid (PFBA)	<2.60	ng/L	2.60	5.00	0		NC	0-0			U
Perfluorobutylsulfonamide (PFBSA)	<1.98	ng/L	1.98	5.00	0		NC	0-0			U
Perfluorodecane sulfonic acid (PFDS)	<1.37	ng/L	1.37	5.00	0		NC	0-0			U
Perfluorodecanoic acid (PFDA)	<1.24	ng/L	1.24	5.00	0		NC	0-0			U
Perfluorododecanoic acid (PFDOA)	<0.691	ng/L	0.691	5.00	0		NC	0-0			U
Perfluoroheptane sulfonic acid (PFHpS)	<0.566	ng/L	0.566	5.00	0		NC	0-0			U
Perfluoroheptanoic acid (PFHpA)	<1.73	ng/L	1.73	5.00	0		NC	0-0			U
Perfluorohexane sulfonic acid (PFHxS)	<0.903	ng/L	0.903	5.00	0		NC	0-0			U
Perfluorohexanesulfonamide (PFHxSA)	<0.878	ng/L	0.878	5.00	0		NC	0-0			U
Perfluorohexanoic acid (PFHxA)	<1.20	ng/L	1.20	5.00	0		NC	0-0			U
Perfluorononane sulfonic acid (PFNS)	<0.496	ng/L	0.496	5.00	0		NC	0-0			U
Perfluorononanoic acid (PFNA)	<0.870	ng/L	0.870	5.00	0		NC	0-0			U
Perfluorooctane sulfonamide (PFOSAm)	<0.711	ng/L	0.711	5.00	0		NC	0-0			U
Perfluorooctane sulfonic acid (PFOS)	<0.892	ng/L	0.892	2.00	0		NC	0-0			U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385421

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772641

MB	CLIENT ID: Method Blank	Lab ID: QC-2385421-001

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 12/16/25 09:50**Prep Date:** 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorooctanoic acid (PFOA)	<0.630	ng/L	0.630	2.00	0		NC	0-0			U
Perfluoropentane sulfonic acid (PFPeS)	<0.556	ng/L	0.556	5.00	0		NC	0-0			U
Perfluoropentanoic acid (PFPeA)	<1.28	ng/L	1.28	5.00	0		NC	0-0			U
Perfluorotetradecanoic acid (PFTDA)	<2.64	ng/L	2.64	5.00	0		NC	0-0			U
Perfluorotridecanoic acid (PFTrDA)	<1.93	ng/L	1.93	5.00	0		NC	0-0			U
Perfluoroundecanoic acid (PFUnDA)	<0.974	ng/L	0.974	5.00	0		NC	0-0			U
Surr: 13C2-FtS 4:2	140	ng/L			149.44		93.8	50-150			
Surr: 13C2-FtS 6:2	135	ng/L			152		89.1	50-150			
Surr: 13C2-FtS 8:2	143	ng/L			153.28		93.5	50-150			
Surr: 13C2-PFDA	146	ng/L			160		91.2	50-150			
Surr: 13C2-PFDoA	139	ng/L			160		86.7	50-150			
Surr: 13C2-PFHxA	148	ng/L			160		92.3	50-150			
Surr: 13C2-PFTeA	121	ng/L			160		75.3	27-134			
Surr: 13C2-PFUnA	137	ng/L			160		85.9	50-150			
Surr: 13C3-HFPO-DA	150	ng/L			160		93.9	41-142			
Surr: 13C3-PFBS	131	ng/L			148.8		87.9	50-150			
Surr: 13C4-PFBA	159	ng/L			160		99.4	50-150			
Surr: 13C4-PFHpA	143	ng/L			160		89.5	42-141			
Surr: 13C4-PFOA	143	ng/L			160		89.1	50-150			
Surr: 13C4-PFOS	130	ng/L			152.8		84.8	50-150			
Surr: 13C5-PFNA	149	ng/L			160		93.1	50-150			
Surr: 13C5-PFPeA	145	ng/L			160		90.4	43-138			
Surr: 13C8-FOSA	131	ng/L			160		81.8	30-122			
Surr: 18O2-PFHxS	129	ng/L			151.2		85.2	50-150			
Surr: d3-N-MeFOSAA	127	ng/L			160		79.1	35-136			
Surr: d5-N-EtFOSAA	134	ng/L			160		84.0	34-142			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385421-002

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 12/16/25 10:04**Prep Date:** 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	34.1	ng/L	0.467	5.00	30.1		113	61-128			
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	37.3	ng/L	1.13	5.00	30.7		121	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	39.0	ng/L	0.936	5.00	29.9		130	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	43.8	ng/L	1.92	5.00	30.3		145	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	30.2	ng/L	1.08	5.00	32		94.3	39-117			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385421

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772641

LCS		CLIENT ID: Laboratory Control Sample					Lab ID: QC-2385421-002				
Method: EPA 537Mod			Dilution: 1			Analysis Date: 12/16/25 10:04					
						Prep Date: 12/15/25 13:35					
Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	50.1	ng/L	3.02	5.00	32		157	71-138			S
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	36.3	ng/L	1.39	5.00	32		113	64-134			
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	35.4	ng/L	0.562	5.00	30.1		118	74-135			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	34.6	ng/L	0.448	5.00	29.8		116	69-133			
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	36.9	ng/L	1.17	5.00	32		115	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	38.7	ng/L	1.54	5.00	32		121	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	40.1	ng/L	0.644	5.00	32		125	67-133			
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	37.4	ng/L	0.886	5.00	28.8		130	74-131			
Perfluorobutane sulfonic acid (PFBS)	40.1	ng/L	0.351	5.00	28.3		142	69-131			S
Perfluorobutanoic acid (PFBA)	39.9	ng/L	2.60	5.00	32		125	73-139			
Perfluorobutylsulfonamide (PFBSA)	45.5	ng/L	1.98	5.00	32		142	68-164			
Perfluorodecane sulfonic acid (PFDS)	30.6	ng/L	1.37	5.00	30.8		99.4	64-128			
Perfluorodecanoic acid (PFDA)	37.1	ng/L	1.24	5.00	32		116	77-135			
Perfluorododecanoic acid (PFDOA)	36.3	ng/L	0.691	5.00	32		114	77-137			
Perfluoroheptane sulfonic acid (PFHpS)	37.5	ng/L	0.566	5.00	30.5		123	70-137			
Perfluoroheptanoic acid (PFHpA)	40.0	ng/L	1.73	5.00	32		125	67-130			
Perfluorohexane sulfonic acid (PFHxS)	34.1	ng/L	0.903	5.00	29.1		117	68-131			
Perfluorohexanesulfonamide (PFHxSA)	36.0	ng/L	0.878	5.00	32		112	69-135			
Perfluorohexanoic acid (PFHxA)	36.7	ng/L	1.20	5.00	32		115	72-129			
Perfluorononane sulfonic acid (PFNS)	31.4	ng/L	0.496	5.00	30.7		102	70-132			
Perfluorononanoic acid (PFNA)	36.5	ng/L	0.870	5.00	32		114	75-131			
Perfluorooctane sulfonamide (PFOSAm)	41.8	ng/L	0.711	5.00	32		131	66-140			
Perfluorooctane sulfonic acid (PFOS)	33.7	ng/L	0.892	2.00	29.7		114	72-133			
Perfluorooctanoic acid (PFOA)	38.5	ng/L	0.630	2.00	32		120	71-133			
Perfluoropentane sulfonic acid (PFPeS)	37.6	ng/L	0.556	5.00	30		125	73-137			
Perfluoropentanoic acid (PFPeA)	44.2	ng/L	1.28	5.00	32		138	72-129			S
Perfluorotetradecanoic acid (PFTDA)	40.4	ng/L	2.64	5.00	32		126	62-139			
Perfluorotridecanoic acid (PFTrDA)	41.4	ng/L	1.93	5.00	32		130	47-147			
Perfluoroundecanoic acid (PFUnDA)	37.7	ng/L	0.974	5.00	32		118	80-135			
Surr: 13C2-FtS 4:2	129	ng/L			149.44		86.4	50-150			
Surr: 13C2-FtS 6:2	131	ng/L			152		86.2	50-150			
Surr: 13C2-FtS 8:2	148	ng/L			153.28		96.4	50-150			
Surr: 13C2-PFDA	145	ng/L			160		90.7	50-150			
Surr: 13C2-PFDoA	151	ng/L			160		94.4	50-150			
Surr: 13C2-PFHxA	147	ng/L			160		92.0	50-150			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385421

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772641

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385421-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 12/16/25 10:04
Prep Date: 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 13C2-PFTeA	120	ng/L			160		74.7	27-134			
Surr: 13C2-PFUnA	155	ng/L			160		97.1	50-150			
Surr: 13C3-HFPO-DA	150	ng/L			160		93.8	41-142			
Surr: 13C3-PFBS	117	ng/L			148.8		78.7	50-150			
Surr: 13C4-PFBA	155	ng/L			160		96.6	50-150			
Surr: 13C4-PFHpA	130	ng/L			160		81.5	42-141			
Surr: 13C4-PFOA	140	ng/L			160		87.8	50-150			
Surr: 13C4-PFOS	135	ng/L			152.8		88.2	50-150			
Surr: 13C5-PFNA	147	ng/L			160		92.1	50-150			
Surr: 13C5-PFPeA	130	ng/L			160		81.5	43-138			
Surr: 13C8-FOSA	124	ng/L			160		77.4	30-122			
Surr: 18O2-PFHxS	128	ng/L			151.2		84.7	50-150			
Surr: d3-N-MeFOSAA	121	ng/L			160		75.4	35-136			
Surr: d5-N-EtFOSAA	125	ng/L			160		78.3	34-142			

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2385421-003

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 12/16/25 10:22
Prep Date: 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	23.8	ng/L	0.467	5.00	30.1		78.9	61-128	35.8	30	
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	35.1	ng/L	1.13	5.00	30.7		114	61-148	6.16	30	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	31.6	ng/L	0.936	5.00	29.9		106	67-143	21.0	30	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	37.3	ng/L	1.92	5.00	30.3		123	66-151	16.1	30	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	28.4	ng/L	1.08	5.00	32		88.6	39-117	6.22	30	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	38.6	ng/L	3.02	5.00	32		121	71-138	25.8	30	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	32.0	ng/L	1.39	5.00	32		100	64-134	12.5	30	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	33.2	ng/L	0.562	5.00	30.1		110	74-135	6.24	30	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	29.9	ng/L	0.448	5.00	29.8		100	69-133	14.8	30	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	34.5	ng/L	1.17	5.00	32		108	65-139	6.63	30	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	32.6	ng/L	1.54	5.00	32		102	67-140	17.2	30	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	34.0	ng/L	0.644	5.00	32		106	67-133	16.4	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385421

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772641

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2385421-003

Method: EPA 537Mod

Dilution: 1

Analysis Date: 12/16/25 10:22

Prep Date: 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	32.2	ng/L	0.886	5.00	28.8		112	74-131	15.2	30	
Perfluorobutane sulfonic acid (PFBS)	32.8	ng/L	0.351	5.00	28.3		116	69-131	20.1	30	
Perfluorobutanoic acid (PFBA)	34.7	ng/L	2.60	5.00	32		109	73-139	13.9	30	
Perfluorobutylsulfonamide (PFBSA)	37.7	ng/L	1.98	5.00	32		118	68-164	18.7	30	
Perfluorodecane sulfonic acid (PFDS)	21.9	ng/L	1.37	5.00	30.8		71.1	64-128	33.2	30	
Perfluorodecanoic acid (PFDA)	33.8	ng/L	1.24	5.00	32		106	77-135	9.15	30	
Perfluorododecanoic acid (PFDOA)	33.9	ng/L	0.691	5.00	32		106	77-137	7.07	30	
Perfluoroheptane sulfonic acid (PFHpS)	32.7	ng/L	0.566	5.00	30.5		107	70-137	13.6	30	
Perfluoroheptanoic acid (PFHpA)	33.3	ng/L	1.73	5.00	32		104	67-130	18.4	30	
Perfluorohexane sulfonic acid (PFHxS)	30.9	ng/L	0.903	5.00	29.1		106	68-131	9.95	30	
Perfluorohexanesulfonamide (PFHxSA)	33.7	ng/L	0.878	5.00	32		105	69-135	6.43	30	
Perfluorohexanoic acid (PFHxA)	33.8	ng/L	1.20	5.00	32		106	72-129	8.17	30	
Perfluorononane sulfonic acid (PFNS)	28.8	ng/L	0.496	5.00	30.7		93.7	70-132	8.85	30	
Perfluorononanoic acid (PFNA)	35.3	ng/L	0.870	5.00	32		110	75-131	3.21	30	
Perfluorooctane sulfonamide (PFOSAm)	35.0	ng/L	0.711	5.00	32		109	66-140	17.8	30	
Perfluorooctane sulfonic acid (PFOS)	30.1	ng/L	0.892	2.00	29.7		101	72-133	11.5	30	
Perfluorooctanoic acid (PFOA)	34.0	ng/L	0.630	2.00	32		106	71-133	12.3	30	
Perfluoropentane sulfonic acid (PFPeS)	33.6	ng/L	0.556	5.00	30		112	73-137	11.3	30	
Perfluoropentanoic acid (PFPeA)	37.6	ng/L	1.28	5.00	32		117	72-129	16.1	30	
Perfluorotetradecanoic acid (PFTDA)	35.1	ng/L	2.64	5.00	32		110	62-139	14.1	30	
Perfluorotridecanoic acid (PFTrDA)	37.1	ng/L	1.93	5.00	32		116	47-147	11.1	30	
Perfluoroundecanoic acid (PFUnDA)	34.1	ng/L	0.974	5.00	32		106	80-135	10.1	30	
Surr: 13C2-FtS 4:2	145	ng/L			149.44		96.7	50-150	11.3	30	
Surr: 13C2-FtS 6:2	148	ng/L			152		97.1	50-150	11.9	30	
Surr: 13C2-FtS 8:2	160	ng/L			153.28		104	50-150	7.88	30	
Surr: 13C2-PFDA	141	ng/L			160		87.9	50-150	3.05	30	
Surr: 13C2-PFDoA	128	ng/L			160		79.7	50-150	16.8	30	
Surr: 13C2-PFHxA	148	ng/L			160		92.2	50-150	0.193	30	
Surr: 13C2-PFTeA	90.5	ng/L			160		56.6	27-134	27.7	30	
Surr: 13C2-PFUnA	151	ng/L			160		94.5	50-150	2.69	30	
Surr: 13C3-HFPO-DA	157	ng/L			160		98.0	41-142	4.37	30	
Surr: 13C3-PFBS	134	ng/L			148.8		90.0	50-150	13.4	30	
Surr: 13C4-PFBA	167	ng/L			160		104	50-150	7.75	30	
Surr: 13C4-PFHpA	147	ng/L			160		92.2	42-141	12.2	30	
Surr: 13C4-PFOA	145	ng/L			160		90.7	50-150	3.26	30	
Surr: 13C4-PFOS	148	ng/L			152.8		96.6	50-150	9.06	30	
Surr: 13C5-PFNA	144	ng/L			160		90.3	50-150	2.01	30	
Surr: 13C5-PFPeA	147	ng/L			160		92.2	43-138	12.3	30	
Surr: 13C8-FOSA	139	ng/L			160		86.9	30-122	11.6	30	
Surr: 18O2-PFHxS	134	ng/L			151.2		88.7	50-150	4.61	30	
Surr: d3-N-MeFOSAA	132	ng/L			160		82.3	35-136	8.82	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385421

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3772641

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2385421-003

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 12/16/25 10:22
Prep Date: 12/15/25 13:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: d5-N-EtFOSAA	140	ng/L			160		87.2	34-142	10.8	30	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385380

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775729

Semivolatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2385380-001

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 12/16/25 16:30**Prep Date:** 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	<0.420	µg/L	0.420	1.00	0		NC	0-0			U
1,2,4,5-Tetrachlorobenzene	<1.71	µg/L	1.71	5.00	0		NC	0-0			U
1,4-Dioxane (1,4- Diethyleneoxide)	0.920	µg/L	0.720	5.00	0		NC	0-0			J
1-Methylnaphthalene	<0.0830	µg/L	0.0830	0.100	0		NC	0-0			U
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	<0.230	µg/L	0.230	1.00	0		NC	0-0			U
2,3,4,6-Tetrachlorophenol	<0.450	µg/L	0.450	1.00	0		NC	0-0			U
2,4,5-Trichlorophenol	<0.170	µg/L	0.170	1.00	0		NC	0-0			U
2,4,6-Trichlorophenol	<0.250	µg/L	0.250	1.00	0		NC	0-0			U
2,4-Dichlorophenol	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
2,4-Dimethylphenol	<0.360	µg/L	0.360	1.00	0		NC	0-0			U
2,4-Dinitrophenol	<2.61	µg/L	2.61	5.00	0		NC	0-0			U
2,4-Dinitrotoluene (2,4-DNT)	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
2,6-Dinitrotoluene (2,6-DNT)	<0.330	µg/L	0.330	1.00	0		NC	0-0			U
2-Chloronaphthalene	<0.0750	µg/L	0.0750	0.100	0		NC	0-0			U
2-Chlorophenol	<0.230	µg/L	0.230	1.00	0		NC	0-0			U
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	<0.270	µg/L	0.270	1.00	0		NC	0-0			U
2-Methylnaphthalene	<0.0650	µg/L	0.0650	0.100	0		NC	0-0			U
2-Methylphenol (o-Cresol)	<0.250	µg/L	0.250	1.00	0		NC	0-0			U
2-Nitroaniline	<0.210	µg/L	0.210	1.00	0		NC	0-0			U
2-Nitrophenol	<0.340	µg/L	0.340	1.00	0		NC	0-0			U
3&4-Methylphenol	<0.210	µg/L	0.210	1.00	0		NC	0-0			U
3,3'-Dichlorobenzidine	<0.460	µg/L	0.460	5.00	0		NC	0-0			U
3-Nitroaniline	<0.188	µg/L	0.188	1.00	0		NC	0-0			U
4-Bromophenyl phenyl ether (BDE-3)	<0.330	µg/L	0.330	1.00	0		NC	0-0			U
4-Chloro-3-methylphenol	<0.260	µg/L	0.260	1.00	0		NC	0-0			U
4-Chloroaniline	0.490	µg/L	0.340	1.00	0		NC	0-0			J
4-Chlorophenyl phenylether	<0.310	µg/L	0.310	1.00	0		NC	0-0			U
4-Nitroaniline	<0.228	µg/L	0.228	1.00	0		NC	0-0			U
4-Nitrophenol	<1.08	µg/L	1.08	5.00	0		NC	0-0			U
Acenaphthene	<0.0810	µg/L	0.0810	0.100	0		NC	0-0			U
Acenaphthylene	<0.0750	µg/L	0.0750	0.100	0		NC	0-0			U
Acetophenone	<0.370	µg/L	0.370	1.00	0		NC	0-0			U
Anthracene	<0.0810	µg/L	0.0810	0.100	0		NC	0-0			U
Atrazine	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
Benzaldehyde	<0.520	µg/L	0.520	1.00	0		NC	0-0			U
Benzo(a)anthracene	<0.0990	µg/L	0.0990	0.100	0		NC	0-0			U
Benzo(a)pyrene	<0.0440	µg/L	0.0440	0.100	0		NC	0-0			U
Benzo(b)fluoranthene	<0.0510	µg/L	0.0510	0.100	0		NC	0-0			U
Benzo(g,h,i)perylene	<0.0890	µg/L	0.0890	0.100	0		NC	0-0			U
Benzo(k)fluoranthene	<0.0480	µg/L	0.0480	0.100	0		NC	0-0			U
bis(2-Chloroethoxy)methane	<0.290	µg/L	0.290	1.00	0		NC	0-0			U
bis(2-Chloroethyl) ether	<0.370	µg/L	0.370	1.00	0		NC	0-0			U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385380

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775729

MB	CLIENT ID: Method Blank	Lab ID: QC-2385380-001

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 12/16/25 16:30**Prep Date:** 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Butyl benzyl phthalate	0.330	µg/L	0.300	1.00	0		NC	0-0			J
Caprolactam	<0.960	µg/L	0.960	5.00	0		NC	0-0			U
Carbazole	<0.240	µg/L	0.240	1.00	0		NC	0-0			U
Chrysene	<0.0480	µg/L	0.0480	0.100	0		NC	0-0			U
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
Dibenz(a,h) anthracene	<0.0730	µg/L	0.0730	0.100	0		NC	0-0			U
Dibenzofuran	<0.230	µg/L	0.230	1.00	0		NC	0-0			U
Diethyl phthalate	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
Dimethyl phthalate	<0.650	µg/L	0.650	1.00	0		NC	0-0			U
Di-n-butyl phthalate	<0.200	µg/L	0.200	1.00	0		NC	0-0			U
Di-n-octyl phthalate	<0.530	µg/L	0.530	1.00	0		NC	0-0			U
Fluoranthene	<0.0827	µg/L	0.0827	0.100	0		NC	0-0			U
Fluorene	<0.0510	µg/L	0.0510	0.100	0		NC	0-0			U
Hexachlorobenzene	<0.440	µg/L	0.440	1.00	0		NC	0-0			U
Hexachlorobutadiene	<0.630	µg/L	0.630	1.00	0		NC	0-0			U
Hexachlorocyclopentadiene	<1.09	µg/L	1.09	5.00	0		NC	0-0			U
Hexachloroethane	<0.620	µg/L	0.620	1.00	0		NC	0-0			U
Indeno(1,2,3-cd) pyrene	<0.0670	µg/L	0.0670	0.100	0		NC	0-0			U
Isophorone	<0.340	µg/L	0.340	5.00	0		NC	0-0			U
Methylphenol, Total	<0.460	µg/L	0.460	2.00	0		NC	0-0			U
Naphthalene	<0.0670	µg/L	0.0670	0.100	0		NC	0-0			U
Nitrobenzene	<0.260	µg/L	0.260	1.00	0		NC	0-0			U
n-Nitrosodi-n-propylamine	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
N-Nitrosodiphenylamine	<0.490	µg/L	0.490	1.00	0		NC	0-0			U
Pentachlorophenol	<0.970	µg/L	0.970	5.00	0		NC	0-0			U
Phenanthrene	<0.0810	µg/L	0.0810	0.100	0		NC	0-0			U
Phenol	<0.210	µg/L	0.210	1.00	0		NC	0-0			U
Pyrene	<0.0872	µg/L	0.0872	0.100	0		NC	0-0			U
Pyridine	1.62	µg/L	1.13	10.0	0		NC	0-0			J
Surr: 2,4,6-Tribromophenol	34.9	µg/L			50		69.7	38-103			
Surr: 2-Fluorobiphenyl	34.5	µg/L			50		69.0	36-96			
Surr: 2-Fluorophenol	24.2	µg/L			50		48.5	20-73			
Surr: 4-Terphenyl-d14	39.7	µg/L			50		79.3	44-114			
Surr: Nitrobenzene-d5	34.3	µg/L			50		68.6	33-100			
Surr: Phenol-d6	13.9	µg/L			50		27.8	10-48			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385380-002

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 12/16/25 16:51**Prep Date:** 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	13.4	µg/L	0.420	1.00	20		66.8	24-111			
1,2,4,5-Tetrachlorobenzene	12.5	µg/L	1.71	5.00	20		62.4	14-110			
1-Methylnaphthalene	13.2	µg/L	0.0830	0.100	20		65.8	17-114			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385380

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775729

LCS		CLIENT ID: Laboratory Control Sample				Lab ID: QC-2385380-002				
Method: EPA 8270E		Dilution: 1				Analysis Date: 12/16/25 16:51				
						Prep Date: 12/15/25 14:49				
Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit Qual
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	12.7	µg/L	0.230	1.00	20		63.6	31-104		
2,3,4,6-Tetrachlorophenol	14.7	µg/L	0.450	1.00	20		73.4	33-110		
2,4,5-Trichlorophenol	15.1	µg/L	0.170	1.00	20		75.6	33-114		
2,4,6-Trichlorophenol	13.4	µg/L	0.250	1.00	20		67.2	36-113		
2,4-Dichlorophenol	14.3	µg/L	0.350	1.00	20		71.4	30-111		
2,4-Dimethylphenol	12.7	µg/L	0.360	1.00	20		63.6	36-109		
2,4-Dinitrophenol	12.4	µg/L	2.61	5.00	20		61.8	36-109		
2,4-Dinitrotoluene (2,4-DNT)	14.3	µg/L	0.350	1.00	20		71.4	51-107		
2,6-Dinitrotoluene (2,6-DNT)	14.3	µg/L	0.330	1.00	20		71.4	51-105		
2-Chloronaphthalene	12.6	µg/L	0.0750	0.100	20		63.1	22-112		
2-Chlorophenol	14.1	µg/L	0.230	1.00	20		70.6	35-108		
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	13.9	µg/L	0.270	1.00	20		69.6	28-121		
2-Methylnaphthalene	12.6	µg/L	0.0650	0.100	20		63.2	12-119		
2-Methylphenol (o-Cresol)	11.4	µg/L	0.250	1.00	20		57.2	31-100		
2-Nitroaniline	14.0	µg/L	0.210	1.00	20		69.9	46-106		
2-Nitrophenol	14.4	µg/L	0.340	1.00	20		72.0	26-111		
3&4-Methylphenol	9.75	µg/L	0.210	1.00	20		48.8	24-95		
3,3'-Dichlorobenzidine	15.0	µg/L	0.460	5.00	20		75.2	48-101		
3-Nitroaniline	15.0	µg/L	0.188	1.00	20		75.1	52-105		
4-Bromophenyl phenyl ether (BDE-3)	14.5	µg/L	0.330	1.00	20		72.4	49-107		
4-Chloro-3-methylphenol	14.6	µg/L	0.260	1.00	20		73.0	35-105		
4-Chloroaniline	13.6	µg/L	0.340	1.00	20		68.2	46-101		
4-Chlorophenyl phenylether	13.5	µg/L	0.310	1.00	20		67.4	40-107		
4-Nitroaniline	14.4	µg/L	0.228	1.00	20		72.0	49-110		
4-Nitrophenol	5.70	µg/L	1.08	5.00	20		28.5	10-64		
Acenaphthene	13.2	µg/L	0.0810	0.100	20		65.9	32-108		
Acenaphthylene	13.7	µg/L	0.0750	0.100	20		68.4	34-107		
Acetophenone	13.2	µg/L	0.370	1.00	20		65.8	41-102		
Anthracene	14.3	µg/L	0.0810	0.100	20		71.4	53-105		
Atrazine	14.2	µg/L	0.350	1.00	20		71.0	53-112		
Benzaldehyde	14.7	µg/L	0.520	1.00	20		73.4	32-111		
Benzo(a)anthracene	14.7	µg/L	0.0990	0.100	20		73.6	57-106		
Benzo(a)pyrene	15.0	µg/L	0.0440	0.100	20		75.2	54-107		
Benzo(b)fluoranthene	14.6	µg/L	0.0510	0.100	20		73.2	53-109		
Benzo(g,h,i)perylene	14.7	µg/L	0.0890	0.100	20		73.4	50-114		
Benzo(k)fluoranthene	15.0	µg/L	0.0480	0.100	20		74.9	53-110		
bis(2-Chloroethoxy)methane	12.7	µg/L	0.290	1.00	20		63.6	42-101		
bis(2-Chloroethyl) ether	13.4	µg/L	0.370	1.00	20		66.8	39-100		
Butyl benzyl phthalate	14.8	µg/L	0.300	1.00	20		73.9	45-112		
Carbazole	14.3	µg/L	0.240	1.00	20		71.5	55-106		
Chrysene	14.6	µg/L	0.0480	0.100	20		73.0	57-108		
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	15.9	µg/L	0.400	1.00	20		79.4	53-116		
Dibenz(a,h) anthracene	15.4	µg/L	0.0730	0.100	20		77.1	51-112		

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385380

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775729

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2385380-002

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 12/16/25 16:51**Prep Date:** 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dibenzofuran	13.5	µg/L	0.230	1.00	20		67.6	37-107			
Diethyl phthalate	14.6	µg/L	0.350	1.00	20		73.1	44-114			
Dimethyl phthalate	14.2	µg/L	0.200	1.00	20		71.0	40-115			
Di-n-butyl phthalate	14.9	µg/L	0.210	1.00	20		74.4	49-112			
Di-n-octyl phthalate	17.4	µg/L	0.530	1.00	20		86.9	47-120			
Fluoranthene	14.5	µg/L	0.0827	0.100	20		72.4	54-107			
Fluorene	13.8	µg/L	0.0510	0.100	20		68.8	42-107			
Hexachlorobenzene	14.6	µg/L	0.440	1.00	20		73.2	50-105			
Hexachlorobutadiene	9.87	µg/L	0.630	1.00	20		49.4	10-112			
Hexachlorocyclopentadiene	3.93	µg/L	1.09	5.00	20		19.6	10-102			J
Hexachloroethane	9.42	µg/L	0.620	1.00	20		47.1	10-115			
Indeno(1,2,3-cd) pyrene	15.6	µg/L	0.0670	0.100	20		77.8	49-113			
Isophorone	14.4	µg/L	0.340	5.00	20		71.8	42-103			
Methylphenol, Total	21.2	µg/L	0.460	2.00	40		53.0	24-100			
Naphthalene	12.1	µg/L	0.0670	0.100	20		60.6	18-109			
Nitrobenzene	13.6	µg/L	0.260	1.00	20		68.0	38-101			
n-Nitrosodi-n-propylamine	14.0	µg/L	0.350	1.00	20		69.9	40-104			
N-Nitrosodiphenylamine	14.7	µg/L	0.490	1.00	20		73.4	49-105			
Pentachlorophenol	11.6	µg/L	0.970	5.00	20		58.0	22-109			
Phenanthrene	14.7	µg/L	0.0810	0.100	20		73.6	51-103			
Phenol	4.91	µg/L	0.210	1.00	20		24.6	10-63			
Pyrene	14.8	µg/L	0.0872	0.100	20		74.0	50-105			
Pyridine	6.52	µg/L	1.13	10.0	20		32.6	11-77			J
Surr: 2,4,6-Tribromophenol	37.3	µg/L			50		74.7	38-103			
Surr: 2-Fluorobiphenyl	33.6	µg/L			50		67.2	36-96			
Surr: 2-Fluorophenol	19.6	µg/L			50		39.3	20-73			
Surr: 4-Terphenyl-d14	38.6	µg/L			50		77.2	44-114			
Surr: Nitrobenzene-d5	33.8	µg/L			50		67.6	33-100			
Surr: Phenol-d6	11.3	µg/L			50		22.5	10-48			

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2385380-003

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 12/16/25 17:12**Prep Date:** 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	13.8	µg/L	0.420	1.00	20		69.2	24-111	3.38	30	
1,2,4,5-Tetrachlorobenzene	12.7	µg/L	1.71	5.00	20		63.7	14-110	2.14	30	
1-Methylnaphthalene	13.5	µg/L	0.0830	0.100	20		67.4	17-114	2.40	30	
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	13.2	µg/L	0.230	1.00	20		66.0	31-104	3.70	30	
2,3,4,6-Tetrachlorophenol	15.9	µg/L	0.450	1.00	20		79.4	33-110	7.85	30	
2,4,5-Trichlorophenol	15.4	µg/L	0.170	1.00	20		76.8	33-114	1.64	30	
2,4,6-Trichlorophenol	14.2	µg/L	0.250	1.00	20		70.9	36-113	5.28	30	
2,4-Dichlorophenol	15.0	µg/L	0.350	1.00	20		75.0	30-111	4.85	30	
2,4-Dimethylphenol	13.3	µg/L	0.360	1.00	20		66.3	36-109	4.08	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385380

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775729

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2385380-003

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 12/16/25 17:12**Prep Date:** 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4-Dinitrophenol	12.9	µg/L	2.61	5.00	20		64.6	36-109	4.43	30	
2,4-Dinitrotoluene (2,4-DNT)	15.2	µg/L	0.350	1.00	20		75.8	51-107	5.98	30	
2,6-Dinitrotoluene (2,6-DNT)	14.9	µg/L	0.330	1.00	20		74.4	51-105	4.18	30	
2-Chloronaphthalene	13.2	µg/L	0.0750	0.100	20		66.2	22-112	4.80	30	
2-Chlorophenol	14.7	µg/L	0.230	1.00	20		73.6	35-108	4.16	30	
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	14.4	µg/L	0.270	1.00	20		72.0	28-121	3.32	30	
2-Methylnaphthalene	13.2	µg/L	0.0650	0.100	20		65.9	12-119	4.26	30	
2-Methylphenol (o-Cresol)	13.0	µg/L	0.250	1.00	20		64.8	31-100	12.5	30	
2-Nitroaniline	15.0	µg/L	0.210	1.00	20		75.2	46-106	7.24	30	
2-Nitrophenol	15.2	µg/L	0.340	1.00	20		76.1	26-111	5.47	30	
3&4-Methylphenol	11.9	µg/L	0.210	1.00	20		59.7	24-95	20.2	30	
3,3'-Dichlorobenzidine	15.2	µg/L	0.460	5.00	20		76.2	48-101	1.32	30	
3-Nitroaniline	12.0	µg/L	0.188	1.00	20		59.8	52-105	22.6	30	
4-Bromophenyl phenyl ether (BDE-3)	15.0	µg/L	0.330	1.00	20		75.0	49-107	3.66	30	
4-Chloro-3-methylphenol	15.6	µg/L	0.260	1.00	20		77.8	35-105	6.43	30	
4-Chloroaniline	3.31	µg/L	0.340	1.00	20		16.6	46-101	122	30	S
4-Chlorophenyl phenylether	14.6	µg/L	0.310	1.00	20		72.8	40-107	7.85	30	
4-Nitroaniline	14.4	µg/L	0.228	1.00	20		72.2	49-110	0.347	30	
4-Nitrophenol	6.85	µg/L	1.08	5.00	20		34.2	10-64	18.3	30	
Acenaphthene	14.2	µg/L	0.0810	0.100	20		70.8	32-108	7.10	30	
Acenaphthylene	14.5	µg/L	0.0750	0.100	20		72.5	34-107	5.89	30	
Acetophenone	14.0	µg/L	0.370	1.00	20		69.8	41-102	5.90	30	
Anthracene	15.0	µg/L	0.0810	0.100	20		75.2	53-105	5.18	30	
Atrazine	15.0	µg/L	0.350	1.00	20		74.8	53-112	5.28	30	
Benzaldehyde	15.7	µg/L	0.520	1.00	20		78.4	32-111	6.58	30	
Benzo(a)anthracene	15.1	µg/L	0.0990	0.100	20		75.5	57-106	2.48	30	
Benzo(a)pyrene	15.5	µg/L	0.0440	0.100	20		77.6	54-107	3.01	30	
Benzo(b)fluoranthene	15.6	µg/L	0.0510	0.100	20		77.8	53-109	6.16	30	
Benzo(g,h,i)perylene	14.9	µg/L	0.0890	0.100	20		74.4	50-114	1.35	30	
Benzo(k)fluoranthene	14.9	µg/L	0.0480	0.100	20		74.4	53-110	0.603	30	
bis(2-Chloroethoxy)methane	14.7	µg/L	0.290	1.00	20		73.4	42-101	14.2	30	
bis(2-Chloroethyl) ether	14.9	µg/L	0.370	1.00	20		74.7	39-100	11.2	30	
Butyl benzyl phthalate	15.2	µg/L	0.300	1.00	20		76.0	45-112	2.80	30	
Carbazole	14.7	µg/L	0.240	1.00	20		73.6	55-106	2.89	30	
Chrysene	15.2	µg/L	0.0480	0.100	20		76.2	57-108	4.29	30	
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	16.3	µg/L	0.400	1.00	20		81.6	53-116	2.61	30	
Dibenz(a,h) anthracene	15.8	µg/L	0.0730	0.100	20		78.8	51-112	2.18	30	
Dibenzofuran	14.2	µg/L	0.230	1.00	20		71.0	37-107	5.05	30	
Diethyl phthalate	15.3	µg/L	0.350	1.00	20		76.4	44-114	4.41	30	
Dimethyl phthalate	15.0	µg/L	0.200	1.00	20		74.9	40-115	5.28	30	
Di-n-butyl phthalate	15.3	µg/L	0.210	1.00	20		76.6	49-112	2.85	30	
Di-n-octyl phthalate	17.8	µg/L	0.530	1.00	20		89.0	47-120	2.33	30	
Fluoranthene	14.9	µg/L	0.0827	0.100	20		74.6	54-107	2.93	30	
Fluorene	14.5	µg/L	0.0510	0.100	20		72.5	42-107	5.16	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2385380

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3775729

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2385380-003

Method: EPA 8270E

Dilution: 1

Analysis Date: 12/16/25 17:12

Prep Date: 12/15/25 14:49

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Hexachlorobenzene	14.9	µg/L	0.440	1.00	20		74.5	50-105	1.69	30	
Hexachlorobutadiene	9.69	µg/L	0.630	1.00	20		48.4	10-112	1.84	30	
Hexachlorocyclopentadiene	4.04	µg/L	1.09	5.00	20		20.2	10-102	NC		J
Hexachloroethane	9.35	µg/L	0.620	1.00	20		46.8	10-115	0.746	30	
Indeno(1,2,3-cd) pyrene	15.8	µg/L	0.0670	0.100	20		79.2	49-113	1.85	30	
Isophorone	15.2	µg/L	0.340	5.00	20		75.8	42-103	5.56	30	
Methylphenol, Total	24.9	µg/L	0.460	2.00	40		62.2	24-100	16.1	30	
Naphthalene	12.8	µg/L	0.0670	0.100	20		64.0	18-109	5.30	30	
Nitrobenzene	14.2	µg/L	0.260	1.00	20		70.9	38-101	4.10	30	
n-Nitrosodi-n-propylamine	14.3	µg/L	0.350	1.00	20		71.6	40-104	2.47	30	
N-Nitrosodiphenylamine	14.9	µg/L	0.490	1.00	20		74.5	49-105	1.56	30	
Pentachlorophenol	11.7	µg/L	0.970	5.00	20		58.4	22-109	0.601	30	
Phenanthrene	14.7	µg/L	0.0810	0.100	20		73.4	51-103	0.272	30	
Phenol	6.26	µg/L	0.210	1.00	20		31.3	10-63	24.2	30	
Pyrene	15.4	µg/L	0.0872	0.100	20		77.0	50-105	3.97	30	
Pyridine	4.67	µg/L	1.13	10.0	20		23.4	11-77	NC		J
Surr: 2,4,6-Tribromophenol	37.4	µg/L			50		74.7	38-103	0.0803	30	
Surr: 2-Fluorobiphenyl	34.4	µg/L			50		68.7	36-96	2.18	30	
Surr: 2-Fluorophenol	25.4	µg/L			50		50.7	20-73	25.5	30	
Surr: 4-Terphenyl-d14	38.7	µg/L			50		77.4	44-114	0.285	30	
Surr: Nitrobenzene-d5	35.4	µg/L			50		70.7	33-100	4.54	30	
Surr: Phenol-d6	15.3	µg/L			50		30.7	10-48	30.6	30	R

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2391029

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3777789

Volatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2391029-001

Method: EPA 8260D

Dilution: 1

Analysis Date: 12/17/25 14:17

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	<0.460	µg/L	0.460	1.00	0		NC	0-0			U
1,1,2,2-Tetrachloroethane	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.520	µg/L	0.520	1.00	0		NC	0-0			U
1,1,2-Trichloroethane	<0.460	µg/L	0.460	1.00	0		NC	0-0			U
1,1-Dichloroethane	<0.440	µg/L	0.440	1.00	0		NC	0-0			U
1,1-Dichloroethylene	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
1,2,3-Trichlorobenzene	<2.99	µg/L	2.99	5.00	0		NC	0-0			U
1,2,3-Trichloropropane	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
1,2,4-Trichlorobenzene	<0.940	µg/L	0.940	1.00	0		NC	0-0			U
1,2,4-Trimethylbenzene	<0.450	µg/L	0.450	1.00	0		NC	0-0			U
1,2-Dibromo-3-chloropropane (DBCP)	<0.430	µg/L	0.430	1.00	0		NC	0-0			U
1,2-Dibromoethane (EDB, Ethylene dibromide)	<0.410	µg/L	0.410	1.00	0		NC	0-0			U
1,2-Dichlorobenzene (o-Dichlorobenzene)	<0.320	µg/L	0.320	1.00	0		NC	0-0			U
1,2-Dichloroethane (Ethylene dichloride)	<0.440	µg/L	0.440	1.00	0		NC	0-0			U
1,2-Dichloropropane	<0.480	µg/L	0.480	1.00	0		NC	0-0			U
1,3,5-Trimethylbenzene	<0.650	µg/L	0.650	1.00	0		NC	0-0			U
1,3-Dichlorobenzene (m-Dichlorobenzene)	<0.330	µg/L	0.330	1.00	0		NC	0-0			U
1,3-Dichloropropene	<0.570	µg/L	0.570	2.00	0		NC	0-0			U
1,4-Dichlorobenzene (p-Dichlorobenzene)	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
2-Butanone (Methyl ethyl ketone, MEK)	<2.43	µg/L	2.43	5.00	0		NC	0-0			U
2-Hexanone	<0.590	µg/L	0.590	5.00	0		NC	0-0			U
4-Methyl-2-pentanone (MIBK)	<0.520	µg/L	0.520	1.00	0		NC	0-0			U
Acetone	<4.53	µg/L	4.53	10.0	0		NC	0-0			U
Benzene	<0.460	µg/L	0.460	1.00	0		NC	0-0			U
Bromochloromethane	<0.450	µg/L	0.450	1.00	0		NC	0-0			U
Bromodichloromethane	<0.490	µg/L	0.490	1.00	0		NC	0-0			U
Bromoform	<0.560	µg/L	0.560	1.00	0		NC	0-0			U
Carbon disulfide	<0.490	µg/L	0.490	1.00	0		NC	0-0			U
Carbon tetrachloride	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
Chlorobenzene	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
Chlorodibromomethane	<0.400	µg/L	0.400	1.00	0		NC	0-0			U
Chloroethane (Ethyl chloride)	<0.680	µg/L	0.680	1.00	0		NC	0-0			U
Chloroform	<0.460	µg/L	0.460	1.00	0		NC	0-0			U
cis & trans-1,2-Dichloroethene	<0.480	µg/L	0.480	2.00	0		NC	0-0			U
cis-1,2-Dichloroethylene	<0.420	µg/L	0.420	1.00	0		NC	0-0			U
cis-1,3-Dichloropropene	<0.570	µg/L	0.570	1.00	0		NC	0-0			U
Cyclohexane	<0.630	µg/L	0.630	2.00	0		NC	0-0			U
Dichlorodifluoromethane (Freon-12)	<0.680	µg/L	0.680	1.00	0		NC	0-0			U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2391029

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3777789

MB	CLIENT ID: Method Blank	Lab ID: QC-2391029-001

Method: EPA 8260D

Dilution: 1

Analysis Date: 12/17/25 14:17

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Ethylbenzene	<0.340	µg/L	0.340	1.00	0		NC	0-0			U
Isopropylbenzene	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
m+p-Xylene	<0.810	µg/L	0.810	2.00	0		NC	0-0			U
Methyl acetate	<0.590	µg/L	0.590	2.00	0		NC	0-0			U
Methyl bromide (Bromomethane)	<0.900	µg/L	0.900	1.00	0		NC	0-0			U
Methyl chloride (Chloromethane)	<0.830	µg/L	0.830	5.00	0		NC	0-0			U
Methyl tert-butyl ether (MTBE)	<0.450	µg/L	0.450	1.00	0		NC	0-0			U
Methylcyclohexane	<0.350	µg/L	0.350	1.00	0		NC	0-0			U
Methylene chloride (Dichloromethane)	<0.860	µg/L	0.860	5.00	0		NC	0-0			U
o-Xylene	<0.310	µg/L	0.310	1.00	0		NC	0-0			U
Styrene	<0.330	µg/L	0.330	1.00	0		NC	0-0			U
Tetrachloroethylene (Perchloroethylene)	<0.390	µg/L	0.390	1.00	0		NC	0-0			U
Toluene	<0.450	µg/L	0.450	1.00	0		NC	0-0			U
Total Xylene	<0.810	µg/L	0.810	2.00	0		NC	0-0			U
trans-1,2-Dichloroethylene	<0.480	µg/L	0.480	1.00	0		NC	0-0			U
trans-1,3-Dichloropropylene	<0.380	µg/L	0.380	1.00	0		NC	0-0			U
Trichloroethene (Trichloroethylene)	<0.430	µg/L	0.430	1.00	0		NC	0-0			U
Trichlorofluoromethane	<0.520	µg/L	0.520	1.00	0		NC	0-0			U
(Fluorotrichloromethane, Freon 11)											
Vinyl chloride (Chloroethene)	<0.530	µg/L	0.530	1.00	0		NC	0-0			U
Surr: 1,2-Dichloroethane-d4	21.8	µg/L			20		109	80-120			
Surr: 4-Bromofluorobenzene	20.4	µg/L			20		102	80-120			
Surr: Dibromofluoromethane	20.4	µg/L			20		102	80-120			
Surr: Toluene-d8	19.7	µg/L			20		98.6	80-120			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2391029-002

Method: EPA 8260D

Dilution: 1

Analysis Date: 12/17/25 13:08

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.9	µg/L		1.00	20		104	75-119			
1,1,2,2-Tetrachloroethane	22.6	µg/L		1.00	20		113	80-123			
1,1,2-Trichloroethane	21.1	µg/L		1.00	20		105	83-118			
1,1-Dichloroethane	22.5	µg/L		1.00	20		113	73-122			
1,1-Dichloroethylene	21.3	µg/L		1.00	20		106	66-131			
1,2,3-Trichlorobenzene	18.8	µg/L		5.00	20		94.2	65-140			
1,2,3-Trichloropropane	21.3	µg/L		1.00	20		107	78-119			
1,2,4-Trichlorobenzene	18.7	µg/L		1.00	20		93.4	73-127			
1,2,4-Trimethylbenzene	20.7	µg/L		1.00	20		104	74-118			
1,2-Dibromo-3-chloropropane (DBCP)	18.0	µg/L		1.00	20		90.1	52-141			
1,2-Dibromoethane (EDB, Ethylene dibromide)	21.0	µg/L		1.00	20		105	60-159			
1,2-Dichlorobenzene (o-Dichlorobenzene)	19.3	µg/L		1.00	20		96.4	80-119			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2391029

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3777789

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2391029-002

Method: EPA 8260D

Dilution: 1

Analysis Date: 12/17/25 13:08

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2-Dichloroethane (Ethylene dichloride)	23.1	µg/L		1.00	20		116	78-121			
1,2-Dichloropropane	20.6	µg/L		1.00	20		103	78-120			
1,3,5-Trimethylbenzene	21.9	µg/L		1.00	20		110	76-120			
1,3-Dichlorobenzene (m-Dichlorobenzene)	19.1	µg/L		1.00	20		95.5	80-120			
1,3-Dichloropropene	39.2	µg/L		2.00	40		98.1	67-120			
1,4-Dichlorobenzene (p-Dichlorobenzene)	19.4	µg/L		1.00	20		96.8	81-119			
2-Butanone (Methyl ethyl ketone, MEK)	22.4	µg/L		5.00	20		112	69-147			
2-Hexanone	22.9	µg/L		5.00	20		115	67-140			
4-Methyl-2-pentanone (MIBK)	29.7	µg/L		1.00	20		148	68-199			
Acetone	24.2	µg/L		10.0	20		121	70-166			
Benzene	21.8	µg/L		1.00	20		109	78-120			
Bromochloromethane	24.9	µg/L		1.00	20		125	70-125			
Bromodichloromethane	22.9	µg/L		1.00	20		115	73-126			
Bromoform	21.4	µg/L		1.00	20		107	60-124			
Carbon disulfide	22.0	µg/L		1.00	20		110	67-159			
Carbon tetrachloride	21.1	µg/L		1.00	20		106	69-124			
Chlorobenzene	20.0	µg/L		1.00	20		100	80-118			
Chlorodibromomethane	18.5	µg/L		1.00	20		92.4	63-117			
Chloroethane (Ethyl chloride)	14.9	µg/L		1.00	20		74.3	35-136			
Chloroform	22.7	µg/L		1.00	20		113	75-119			
cis & trans-1,2-Dichloroethene	44.4	µg/L		2.00	40		111	73-124			
cis-1,2-Dichloroethylene	23.1	µg/L		1.00	20		116	75-123			
cis-1,3-Dichloropropene	20.9	µg/L		1.00	20		105	69-120			
Cyclohexane	19.2	µg/L		2.00	20		95.8	66-128			
Dichlorodifluoromethane (Freon-12)	8.93	µg/L		1.00	20		44.6	36-133			
Ethylbenzene	21.0	µg/L		1.00	20		105	76-116			
Isopropylbenzene	21.0	µg/L		1.00	20		105	77-118			
m+p-Xylene	42.1	µg/L		2.00	40		105	76-119			
Methyl acetate	19.3	µg/L		2.00	20		96.5	70-130			
Methyl bromide (Bromomethane)	15.5	µg/L		1.00	20		77.4	20-183			
Methyl chloride (Chloromethane)	10.6	µg/L		5.00	20		53.2	26-117			
Methyl tert-butyl ether (MTBE)	22.9	µg/L		1.00	20		114	77-137			
Methylcyclohexane	19.2	µg/L		1.00	20		96.2	66-125			
Methylene chloride (Dichloromethane)	23.7	µg/L		5.00	20		119	68-125			
o-Xylene	21.0	µg/L		1.00	20		105	77-116			
Styrene	20.9	µg/L		1.00	20		104	76-123			
Tetrachloroethylene (Perchloroethylene)	19.8	µg/L		1.00	20		99.1	80-124			
Toluene	20.0	µg/L		1.00	20		100	78-116			
Total Xylene	63.0	µg/L		2.00	60		105	77-119			
trans-1,2-Dichloroethylene	21.3	µg/L		1.00	20		107	73-124			
trans-1,3-Dichloropropylene	18.3	µg/L		1.00	20		91.5	67-118			
Trichloroethene (Trichloroethylene)	20.1	µg/L		1.00	20		101	75-122			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2391029

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3777789

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2391029-002

Method: EPA 8260D **Dilution:** 1 **Analysis Date:** 12/17/25 13:08
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	17.2	µg/L		1.00	20		85.8	52-115			
Vinyl chloride (Chloroethene)	12.9	µg/L		1.00	20		64.3	49-122			
Surr: 1,2-Dichloroethane-d4	21.1	µg/L			20		106	80-120			
Surr: 4-Bromofluorobenzene	20.8	µg/L			20		104	80-120			
Surr: Dibromofluoromethane	21.3	µg/L			20		106	80-120			
Surr: Toluene-d8	19.4	µg/L			20		97.0	80-120			

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2391029-003

Method: EPA 8260D **Dilution:** 1 **Analysis Date:** 12/17/25 13:31
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21.9	µg/L		1.00	20		109	75-119	4.72	30	
1,1,2,2-Tetrachloroethane	21.7	µg/L		1.00	20		108	80-123	4.11	30	
1,1,2-Trichloroethane	20.8	µg/L		1.00	20		104	83-118	1.00	30	
1,1-Dichloroethane	23.9	µg/L		1.00	20		120	73-122	5.90	30	
1,1-Dichloroethylene	24.6	µg/L		1.00	20		123	66-131	14.6	30	
1,2,3-Trichlorobenzene	19.0	µg/L		5.00	20		94.8	65-140	0.635	30	
1,2,3-Trichloropropane	21.2	µg/L		1.00	20		106	78-119	0.706	30	
1,2,4-Trichlorobenzene	18.8	µg/L		1.00	20		93.8	73-127	0.374	30	
1,2,4-Trimethylbenzene	20.9	µg/L		1.00	20		104	74-118	0.818	30	
1,2-Dibromo-3-chloropropane (DBCP)	17.6	µg/L		1.00	20		87.8	52-141	2.59	30	
1,2-Dibromoethane (EDB, Ethylene dibromide)	20.8	µg/L		1.00	20		104	60-159	0.812	30	
1,2-Dichlorobenzene (o-Dichlorobenzene)	19.1	µg/L		1.00	20		95.6	80-119	0.833	30	
1,2-Dichloroethane (Ethylene dichloride)	23.0	µg/L		1.00	20		115	78-121	0.737	30	
1,2-Dichloropropane	21.3	µg/L		1.00	20		106	78-120	2.96	30	
1,3,5-Trimethylbenzene	21.9	µg/L		1.00	20		109	76-120	0.0457	30	
1,3-Dichlorobenzene (m-Dichlorobenzene)	19.2	µg/L		1.00	20		96.0	80-120	0.470	30	
1,3-Dichloropropene	39.5	µg/L		2.00	40		98.8	67-120	0.737	30	
1,4-Dichlorobenzene (p-Dichlorobenzene)	19.7	µg/L		1.00	20		98.4	81-119	1.59	30	
2-Butanone (Methyl ethyl ketone, MEK)	22.4	µg/L		5.00	20		112	69-147	0.134	30	
2-Hexanone	23.1	µg/L		5.00	20		116	67-140	0.912	30	
4-Methyl-2-pentanone (MIBK)	29.7	µg/L		1.00	20		148	68-199	0.00	30	
Acetone	22.0	µg/L		10.0	20		110	70-166	9.31	30	
Benzene	23.4	µg/L		1.00	20		117	78-120	6.82	30	
Bromochloromethane	25.6	µg/L		1.00	20		128	70-125	2.50	30	
Bromodichloromethane	23.2	µg/L		1.00	20		116	73-126	1.26	30	
Bromoform	20.7	µg/L		1.00	20		104	60-124	3.27	30	
Carbon disulfide	25.3	µg/L		1.00	20		127	67-159	13.9	30	
Carbon tetrachloride	22.4	µg/L		1.00	20		112	69-124	5.61	30	

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QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSST (30280115)
Matrix: WATER
QC Lot: 2391029

Work Order: HN2518802
Date Collected: NA
Date Received: NA
Run ID: 3777789

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2391029-003

Method: EPA 8260D

Dilution: 1

Analysis Date: 12/17/25 13:31

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chlorobenzene	20.7	µg/L		1.00	20		103	80-118	3.00	30	
Chlorodibromomethane	17.9	µg/L		1.00	20		89.3	63-117	3.47	30	
Chloroethane (Ethyl chloride)	17.9	µg/L		1.00	20		89.7	35-136	18.8	30	
Chloroform	24.0	µg/L		1.00	20		120	75-119	5.65	30	S
cis & trans-1,2-Dichloroethene	48.2	µg/L		2.00	40		121	73-124	8.14	30	
cis-1,2-Dichloroethylene	24.7	µg/L		1.00	20		124	75-123	6.65	30	S
cis-1,3-Dichloropropene	21.3	µg/L		1.00	20		106	69-120	1.66	30	
Cyclohexane	21.4	µg/L		2.00	20		107	66-128	11.2	30	
Dichlorodifluoromethane (Freon-12)	13.1	µg/L		1.00	20		65.3	36-133	37.6	30	
Ethylbenzene	21.7	µg/L		1.00	20		108	76-116	2.95	30	
Isopropylbenzene	21.9	µg/L		1.00	20		110	77-118	4.10	30	
m+p-Xylene	44.0	µg/L		2.00	40		110	76-119	4.51	30	
Methyl acetate	19.3	µg/L		2.00	20		96.4	70-130	0.156	30	
Methyl bromide (Bromomethane)	17.1	µg/L		1.00	20		85.3	20-183	9.71	30	
Methyl chloride (Chloromethane)	14.8	µg/L		5.00	20		74.1	26-117	32.7	30	
Methyl tert-butyl ether (MTBE)	23.5	µg/L		1.00	20		117	77-137	2.59	30	
Methylcyclohexane	20.9	µg/L		1.00	20		104	66-125	8.23	30	
Methylene chloride (Dichloromethane)	25.1	µg/L		5.00	20		125	68-125	5.62	30	
o-Xylene	21.4	µg/L		1.00	20		107	77-116	2.12	30	
Styrene	21.4	µg/L		1.00	20		107	76-123	2.55	30	
Tetrachloroethylene (Perchloroethylene)	20.9	µg/L		1.00	20		104	80-124	5.16	30	
Toluene	21.0	µg/L		1.00	20		105	78-116	4.49	30	
Total Xylene	65.4	µg/L		2.00	60		109	77-119	3.72	30	
trans-1,2-Dichloroethylene	23.5	µg/L		1.00	20		118	73-124	9.72	30	
trans-1,3-Dichloropropylene	18.2	µg/L		1.00	20		91.2	67-118	0.328	30	
Trichloroethene (Trichloroethylene)	21.4	µg/L		1.00	20		107	75-122	6.35	30	
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	20.2	µg/L		1.00	20		101	52-115	16.2	30	
Vinyl chloride (Chloroethene)	17.6	µg/L		1.00	20		87.8	49-122	31.0	30	
Surr: 1,2-Dichloroethane-d4	21.4	µg/L			20		107	80-120	1.32	30	
Surr: 4-Bromofluorobenzene	20.6	µg/L			20		103	80-120	1.35	30	
Surr: Dibromofluoromethane	20.9	µg/L			20		104	80-120	2.04	30	
Surr: Toluene-d8	19.4	µg/L			20		96.8	80-120	0.206	30	

The following samples were analyzed in this batch: HN2518802-001, HN2518802-002, HN2518802-003, HN2518802-004

February 06, 2026

Kasey Matteson
Arcadis US, Inc.
120 N. Washington Square
Suite 300
Lansing, MI 48933

Re: **RACER Buick City RSSCT**

Date Received: **01/23/2026**

Work Order: **HN2601120**

Dear Kasey,

Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Kathy Jones-Gronda

/S/ KATHY JONES-GRONDA

Project Manager



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT

Work Order: HN2601120
Date Received: 23-Jan-2026

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

1 water sample was received for analysis at ALS Environmental on 23-Jan-2026. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organics

EPA 8260D-FULL HN-W

Run ID: 3846257

The Continuing Calibration Verification did not meet acceptance criteria with low bias. Instrument sensitivity was verified as sufficient through the analysis of a low-level standard. The following non-detects are reported without qualification:

Chloroethane, dichlorodifluoromethane, bromomethane, chloromethane, vinyl chloride

The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: vinyl acetate

EPA 537 Mod-W

Run ID: 3862234

The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: NMeFOSA

HN2601120-001: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low. See attached QC report.

HN2601120-001: The MS recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: See attached QC report.

HN2601120-001: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See attached QC report.

HN2601120-001: The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: See attached QC report.

HN2601120-001: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601120-001: 13C2-PFHxDA - The Continuing Calibration Verification did not meet method acceptance criteria for the following analytes, results are to be considered estimated: (surrogate within range in sample)

HN2601120-001: 13C2-PFHxDA - The Continuing Calibration Verification for the MS did not meet method acceptance criteria for the following analytes, results are to be considered estimated: (surrogate within range in MS)

HN2601120-001: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601120-001: N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) - The Continuing Calibration Verification did not meet method acceptance criteria for the following analytes, results are to be considered estimated:

HN2601120-001: N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) - The Continuing Calibration Verification for the MS did not meet method acceptance criteria for the following analytes, results are to be considered estimated:

HN2601120-001: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT

Work Order: HN2601120
Date Received: 23-Jan-2026

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Run ID: 3865489

HN2601120-001: Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent. See attached QC report.

Run ID: 3865654

HN2601120-001: Perfluorooctane sulfonic acid (PFOS) - Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.

HN2601120-001: Perfluorohexane sulfonic acid (PFHxS) - Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.

EPA 8270E-FULL HN-3510-W

Run ID: 3847191

The LCS recovery was below the lower control limit. The sample results for this batch may be biased low for this analyte: See QC report.

The Continuing Calibration Verification did not meet acceptance criteria with low bias. Instrument sensitivity was verified as sufficient through the analysis of a low-level standard. The following non-detects are reported without qualification: Aniline; Benzaldehyde.

The LCSD recovery was below the lower control limit. The sample results may be biased low for this analyte: See QC report.

Batch LCS/LCSD recieved incorrect spike during extraction. The method blank has 2,4,6-Tribromophenol, 2-Fluorobiphenyl, 4-Terphenyl-d14, and Nitrobenzene-d5 failing low, biasing sample results low. Insufficient sample volume left for re-extraction.

The Continuing Calibration Verification did not meet acceptance criteria with high bias, however, the sample results were non-detect for the following analytes: 2,3,4,6-Tetrachlorophenol.

Inorganics

SM 4500-SiO2 C (Low)

Run ID: 3851708

Matrix spike value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.

Matrix spike duplicate value was outside upper limit of calibration. Processed at equivalent dilution level as the parent.

SM 2540 D (Low)

Run ID: 3844485

HN2601120-001: Insufficient sample volume provided to obtain the method specified minimum level of 2.5 mg residue.

EPA 9060A-TOC (Low)

Run ID: 3839857

HN2601120-001: Sample holding time expired before receipt by laboratory.

Metals

EPA 6020B LL-3015A-T

Run ID: 3854621

The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca, Mn, Na Batch 2437294

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ca, Mn, Na Batch 2437294

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: BCGW			Lab ID: HN2601120-001			
Analyte	Results	Flag	MDL	MRL	Units	Method
1-Methylnaphthalene	0.110	S	0.0830	0.100	µg/L	EPA 8270E
2,4-Dinitrotoluene (2,4-DNT)	0.600	JS	0.350	1.00	µg/L	EPA 8270E
2,6-Dinitrotoluene (2,6-DNT)	0.580	JS	0.330	1.00	µg/L	EPA 8270E
2-Chloronaphthalene	0.1000	JS	0.0750	0.100	µg/L	EPA 8270E
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	27.9		1.45	5.22	ng/L	EPA 537Mod
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	0.610	JS	0.270	1.00	µg/L	EPA 8270E
2-Methylnaphthalene	0.110	S	0.0650	0.100	µg/L	EPA 8270E
4-Nitroaniline	0.410	JS	0.228	1.00	µg/L	EPA 8270E
Acenaphthene	0.120	S	0.0810	0.100	µg/L	EPA 8270E
Acenaphthylene	0.130	S	0.0750	0.100	µg/L	EPA 8270E
Alkalinity as CaCO ₃	405		1.43	2.00	mg/L	SM 2320 B-2021
Alkalinity, Bicarbonate	405		1.43	2.00	mg/L	SM 2320 B-2021
Anthracene	0.300	S	0.0810	0.100	µg/L	EPA 8270E
Arsenic	0.000992	J	0.000174	0.001000	mg/L	EPA 6020B
Arsenic, dissolved	0.000927	J	0.000174	0.001000	mg/L	EPA 6020B
Atrazine	0.430	JS	0.350	1.00	µg/L	EPA 8270E
Barium	0.0837		0.000396	0.00199	mg/L	EPA 6020B
Barium, dissolved	0.0791		0.000396	0.00199	mg/L	EPA 6020B
Benzo(a)anthracene	0.370	S	0.0990	0.100	µg/L	EPA 8270E
Benzo(a)pyrene	0.420	S	0.0440	0.100	µg/L	EPA 8270E
Benzo(b)fluoranthene	0.410	S	0.0510	0.100	µg/L	EPA 8270E
Benzo(g,h,i)perylene	0.420	S	0.0890	0.100	µg/L	EPA 8270E
Benzo(k)fluoranthene	0.360	S	0.0480	0.100	µg/L	EPA 8270E
Bromide	0.128	J	0.0319	0.200	mg/L	EPA 9056A
Butyl benzyl phthalate	0.790	JS	0.300	1.00	µg/L	EPA 8270E
Calcium	103		0.0686	0.200	mg/L	EPA 6020B
Calcium, dissolved	99.8		0.0686	0.200	mg/L	EPA 6020B
Chloride	17.9		3.10	10.0	mg/L	EPA 9056A
Chrysene	0.380	S	0.0480	0.100	µg/L	EPA 8270E
Copper	0.00246		0.000560	0.001000	mg/L	EPA 6020B
Copper, dissolved	0.00135		0.000560	0.001000	mg/L	EPA 6020B
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl) phthalate, DEHP)	0.810	JS	0.400	1.00	µg/L	EPA 8270E
Dibenz(a,h) anthracene	0.410	S	0.0730	0.100	µg/L	EPA 8270E
Di-n-butyl phthalate	0.620	JS	0.210	1.00	µg/L	EPA 8270E
Di-n-octyl phthalate	0.780	JS	0.530	1.00	µg/L	EPA 8270E
Dissolved Organic Carbon (DOC)	6.10	H	0.139	0.500	mg/L	EPA 9060A
Fluoranthene	0.420	S	0.0827	0.100	µg/L	EPA 8270E
Fluorene	0.230	S	0.0510	0.100	µg/L	EPA 8270E
Fluoride	0.147		0.0670	0.100	mg/L	EPA 9056A

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: BCGW		Lab ID: HN2601120-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Indeno(1,2,3-cd) pyrene	0.430	S	0.0670	0.100	µg/L	EPA 8270E
Iron	0.0352		0.0141	0.0200	mg/L	EPA 6020B
Magnesium	21.7		0.0145	0.200	mg/L	EPA 6020B
Magnesium, dissolved	21.2		0.0145	0.200	mg/L	EPA 6020B
Manganese	0.820		0.00110	0.00199	mg/L	EPA 6020B
Manganese, dissolved	0.774		0.00110	0.00199	mg/L	EPA 6020B
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	2.04	J	1.61	5.22	ng/L	EPA 537Mod
n-Hexane Extractable Material (O&G)	6.92		1.35	4.81	mg/L	EPA 1664A
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	1.68	J	0.672	5.22	ng/L	EPA 537Mod
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	161		0.924	5.22	ng/L	EPA 537Mod
Perfluorobutane sulfonic acid (PFBS)	440		0.366	5.22	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	142		2.71	5.22	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	186		2.07	5.22	ng/L	EPA 537Mod
Perfluorodecane sulfonic acid (PFDS)	4.88	JS	1.43	5.22	ng/L	EPA 537Mod
Perfluorodecanoic acid (PFDA)	35.3		1.29	5.22	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	945		11.8	104	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	342		1.80	5.22	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	13500		283	1560	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	5080		18.3	104	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	1700		25.0	104	ng/L	EPA 537Mod
Perfluorononane sulfonic acid (PFNS)	344		0.517	5.22	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	113	S	0.908	5.22	ng/L	EPA 537Mod
Perfluorooctane sulfonamide (PFOSAm)	19.9		0.742	5.22	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	39600		279	626	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1150		13.1	41.7	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	898		11.6	104	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	365		1.34	5.22	ng/L	EPA 537Mod
Perfluoroundecanoic acid (PFUnDA)	1.29	J	1.02	5.22	ng/L	EPA 537Mod
Phenanthrene	0.300	S	0.0810	0.100	µg/L	EPA 8270E
Potassium	18.3		0.0344	0.1000	mg/L	EPA 6020B
Potassium, dissolved	17.3		0.0344	0.1000	mg/L	EPA 6020B
Pyrene	0.370	S	0.0872	0.100	µg/L	EPA 8270E
Residue-filterable (TDS)	617		36.9	50.0	mg/L	SM 2540 C-2020
Residue-nonfilterable (TSS)	1.20	J	0.507	1.33	mg/L	SM 2540 D-2020
Silica-dissolved	21.8		0.500	0.500	mg/L	SM 4500-SiO2 C-2011
Silver	0.000304		0.0000410	0.000199	mg/L	EPA 6020B
Sodium	72.9		0.0468	0.200	mg/L	EPA 6020B
Sodium, dissolved	70.6		0.0468	0.200	mg/L	EPA 6020B
Sulfate	29.8		1.90	10.0	mg/L	EPA 9056A

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: BCGW		Lab ID: HN2601120-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Total Hardness as CaCO ₃	340		2.17	5.00	mg/L	SM 2340 C-2021
Total Organic Carbon (TOC)	15.0		0.517	1.00	mg/L	EPA 9060A

SAMPLE SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Workorder: HN2601120

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2601120-001	BCGW	WATER	01/20/26 14:00	01/23/26 11:00



Simi Valley, CA
+1 805 526 7161
Cincinnati, OH
+1 513 733 5336
Fort Collins, CO
+1 970 490 1511
Kelso, WA
+1 360 577 7222
Everett, WA
+1 425 356 2600
Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1
COC ID: **081883**

Houston, TX
+1 281 530 5656
Valparaiso, IN
+1 219 299 8427
South Charleston, WV
+1 304 356 3168
Middletown, PA
+1 717 944 5541
Salt Lake City, UT
+1 801 266 7700
Rochester, NY
+1 585 288 5380

Customer Information			Project Information			Parameter/Method Request for Analysis													
Purchase Order	Quote #	Company Name	Send Report To	Address	City/State/Zip	Phone	Fax	e-Mail Address	Project Name	Project Number	Bill To Company	Invoice Attn	Address	City/State/Zip	Phone	Fax	e-Mail Address	ALS Project Manager:	ALS Work Order #:
US3460028280	11708	Xylem	Kasey Matteson	28550 Cabot Dr Suite 500	Novi, MI 48377	248-994-2244		Kasey.Matteson@arcadis.com	Racer Buick City RSSM										
									Organic Carbon, Dissolved										
									TSS										
									SVOL										
									Oil & Grease										
									Hardness / Metals										
									Metals (dissolved)										
									EPA 537 M										
									TDC										
									VOL										
									TDS, Anions, LL, Alk, Silica										
No.	Sample Description	Com	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold	
1	BC GUD		1/20/26	1400	water	12.3	17	X	X	X	X	X	X	X	X	X	X		
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler(s) Please Print & Sign

Relinquished by: Kyle E Trevis Date: 1/21/26 Time: 12:00

Relinquished by: [Signature] Date: 1/23/26 Time: 11:00

Logged by (Laboratory): BC Date: 1/24/26 Time: 12:40

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Shipment Method: FedEx

Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD

Notes: 1.8% 1.47

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW646/CLP ☐ Other

Results Due Date:

Environmental Division
Holland
Work Order Reference
HN2601120

Barcode:

Telephone: +1 616 399 8070

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ALS-COC-2022-R00

ALS Group, USA

3352 128th Ave
Holland, Michigan 49424
TEL: (616) 399-6070
FAX: (616) 399-6185

BOTTLE ORDER

59577

02-Dec-25

SHIPPED TO:

Company: Xylem
Contact: Kasey Matteson
Address: 201 South Potter St

Phone: Bellefonte, PA 16823
(248) 662-6406 eMail:

Ship By: 12/12/2025
VIA: FedEx
Due to Client: 12/17/2025
Quote ID: 11708
Project:

Bottle Code	Bottle Type	Bottle Lot	Preserve Lot	TEST(s)	QTY
125MLAMGNEAT	125 mL amber glass, Neat <i>To be lab filtered</i>			Organic Carbon, Dissolved	1
1LPNEAT	1-L plastic, Neat			Total Suspended Solids	1
1LAMGNEAT	1-liter amber glass, Neat			Semi-Volatile Organic Compounds	1
250AMGH2SO4	250 mL amber glass, H2SO4 to pH <2 <i>2-bottles per sample</i>			Oil and Grease	1
250PHNO3	250 mL plastic, HNO3 to pH <2			Hardness Metals by ICP-MS Mercury by CVAA	1
250PNEAT	250 mL plastic, Neat <i>To be lab filtered</i>			Metals by ICP-MS (dissolved)	1
250PNEAT	250 mL plastic, Neat <i>3 bottles per sample</i>			PFAS by EPA 537 Modified	1
VOAH2SO4	40 mL VOA vial, H2SO4 to pH <2			Organic Carbon, Total	1
VOAHCL	40 mL VOA vial, HCl to pH <2 <i>3 Vials per sample</i>			Volatile Organic Compounds	1
500PNEAT	500 mL plastic, Neat			Total Dissolved Solids Low Level Alkalinity Anions by Ion Chromatography Silica, Reactive	1
Cooler ID	Description	Trip Blank			

Notes:

Coolers ATTN :
Patrick Labadie,
Include Coolers, COCs, labels, fedex
return label

Relinquished: _____

Received: _____



ALS Holland
3352 128th Ave., Holland MI 49424

ALS Holland Sample Receiving Checklist

Received by: BC

Date/Time: 1/23/26

Carrier Name: FedEx

Shipping container/cooler in good condition? Yes / No / Not Present

Custody seals intact on shipping container/cooler? Yes / No / Not Present

Custody seals intact on sample bottles? Yes / No / Not Present

Chain of Custody present? Yes / No

COC signed when relinquished and received? Yes / No

COC agrees with sample labels? Yes / No

Samples in proper container/bottle? Yes / No

Sample containers intact? Yes / No

Sufficient sample volume for indicated test? Yes / No

All samples received within holding time? Yes / No

Container/Temp Blank temperature in compliance? Yes / No

Temperature(s) (°C): 1.8°C

Thermometer(s): 1P7

Sample(s) received on ice? Yes / No

Matrix/Matrices: water

Cooler(s)/Kit(s): 1

Date/Time sample(s) sent to storage: 1/23/26

Water – VOA vials have zero headspace? Yes / No / No Vials

Water – pH acceptable upon receipt? Yes / No / N/A

pH strip lot #: 44 < 2 ✓ > 12 _____ Other _____

pH adjusted (note adjustments below)? Yes / No / N/A

pH adjusted by: _____

Login Notes:

HN-SHT-160-R01, Sample Receipt Checklist

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Method criteria
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

LABORATORY CERTIFICATIONS¹

Agency	Type	ID	Issued	Expires
Colorado	UST		07/01/2025	06/30/2026
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2025	06/30/2026
Illinois	NELAP (Secondary)	200076	12/08/2025	12/31/2026
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/01/2025	09/01/2027
Kansas	NELAP (Secondary)	E-10411	08/01/2025	07/31/2026
Kentucky	Waste Water	KY98004	1/1/2026	12/31/2026
Kentucky	UST	120474	07/07/2025	06/30/2026
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/10/2025	12/31/2026
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2025	6/30/2026
New York	NELAP (Secondary)	12128	04/01/2025	04/01/2026
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/26/2025	6/30/2026
Pennsylvania	NELAP (Secondary)	68-03827	11/25/2025	07/31/2026
Texas	NELAP (Secondary)	T104704494	02/01/2026	01/31/2027
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572R1	01/28/2026	03/03/2029
West Virginia	State Specific	355	06/07/2025	08/31/2026
Wisconsin	State Specific	399084510	08/08/2025	08/31/2026

1 – Scope available upon request

ANALYST SUMMARY



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT

Work Order: HN2601120

Sample Name: BCGW
Laboratory Code: HN2601120-001
Sample Matrix: WATER

Date Collected: 01/20/26
Date Received: 01/23/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 1664A	EPA 1664A	001-AJ	2442335	Nicole Whan	3863984	Nicole Whan
EPA 245.1	Method	001-AG	2437771	Maxx Richey	3855644	Maxx Richey
EPA 537Mod	EPA 537Mod	001-AD	2441045	Emily Schaaf	3862234	Morgan Morehouse
EPA 537Mod	EPA 537Mod	001-AD	2441045	Emily Schaaf	3865489	Morgan Morehouse
EPA 537Mod	EPA 537Mod	001-AD	2441045	Emily Schaaf	3865654	Morgan Morehouse
EPA 6020B	EPA 3015A	001-AC	2429863	Chloe Patrick	3842407	Hunter Johnson
EPA 6020B	EPA 3015A	001-AC	2429863	Chloe Patrick	3843819	Hunter Johnson
EPA 6020B	EPA 3015A	001-AG	2437294	Nicolee Allen	3854621	Hunter Johnson
EPA 8260D		001-AO	2432684		3846257	Quoc Nguyen
EPA 8270E	EPA 3510C	001-AH	2431037	Mara Norton	3847191	Sam Marcotte
EPA 9056A	Method	001-AA	2429981	Sage Hansen	3846428	Sage Hansen
EPA 9056A	Method	001-AA	2433185	Kelsey Beaudette	3847766	Sage Hansen
EPA 9060A	Method	001-AI	2428464	Kelsey Beaudette	3844657	Kelsey Beaudette
EPA 9060A	Method	001-AL	2432895	Kelsey Beaudette	3847124	Kelsey Beaudette
SM 2320 B-2021	SM 2320 B-2021	001-AA	2430152	Kelsey Beaudette	3842110	Kelsey Beaudette
SM 2340 C-2021		001-AG	2432650		3846199	Kelsey Beaudette
SM 2540 C-2020	SM 2540 C-2020	001-AB	2429950	Karen Hernandez	3846823	Jenna Vargo
SM 2540 D-2020	SM 2540 D-2020	001-AA	2430044	Laci Anderson	3844485	Laci Anderson
SM 4500-SiO2 C-2011	Method	001-AB	2434797	Dylan Launiere	3851708	Dylan Launiere

Analytical Report



Client: Arcadis US, Inc.
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Matrix: WATER

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00

CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
n-Hexane Extractable Material (O&G)	EPA 1664A	6.92		mg/L	1.35	4.81	1	02/05/26 19:30	02/05/26 19:28
Bromide	EPA 9056A	0.128	J	mg/L	0.0319	0.200	1	01/28/26 20:33	01/28/26 16:32
Chloride	EPA 9056A	17.9		mg/L	3.10	10.0	10	01/27/26 17:15	01/27/26 16:56
Fluoride	EPA 9056A	0.147		mg/L	0.0670	0.100	1	01/28/26 20:33	01/28/26 16:32
Sulfate	EPA 9056A	29.8		mg/L	1.90	10.0	10	01/27/26 17:15	01/27/26 16:56
Dissolved Organic Carbon (DOC)	EPA 9060A	6.10	H	mg/L	0.139	0.500	1	01/27/26 19:13	01/23/26 16:42
Total Organic Carbon (TOC)	EPA 9060A	15.0		mg/L	0.517	1.00	2	01/28/26 13:53	01/28/26 12:25
Alkalinity as CaCO3	SM 2320 B-2021	405		mg/L	1.43	2.00	1	01/26/26 15:08	01/26/26 11:28
Alkalinity, Bicarbonate	SM 2320 B-2021	405		mg/L	1.43	2.00	1	01/26/26 15:08	01/26/26 11:28
Alkalinity, Carbonate	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	01/26/26 15:08	01/26/26 11:28
Alkalinity, Hydroxide	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	01/26/26 15:08	01/26/26 11:28
Alkalinity, Phenolphthalein	SM 2320 B-2021	<1.43	U	mg/L	1.43	2.00	1	01/26/26 15:08	01/26/26 11:28
Total Hardness as CaCO3	SM 2340 C-2021	340		mg/L	2.17	5.00	1	01/28/26 14:30	NA
Residue-filterable (TDS)	SM 2540 C-2020	617		mg/L	36.9	50.0	1	01/28/26 12:40	01/26/26 17:29
Residue-nonfilterable (TSS)	SM 2540 D-2020	1.20	J	mg/L	0.507	1.33	1	01/27/26 12:24	01/26/26 14:07
Silica-dissolved	SM 4500-SiO2 C-2011	21.8		mg/L	0.500	0.500	10	01/30/26 13:06	01/30/26 11:45
Metals									
Mercury	EPA 245.1	<0.000160	U	mg/L	0.000160	0.000195	1	02/02/26 15:27	02/02/26 14:54
Arsenic	EPA 6020B	0.000992	J	mg/L	0.000174	0.001000	1	02/02/26 14:19	02/01/26 13:56
Arsenic, dissolved	EPA 6020B	0.000927	J	mg/L	0.000174	0.001000	1	01/26/26 15:09	01/26/26 11:34
Barium	EPA 6020B	0.0837		mg/L	0.000396	0.00199	1	02/02/26 14:19	02/01/26 13:56
Barium, dissolved	EPA 6020B	0.0791		mg/L	0.000396	0.00199	1	01/26/26 15:09	01/26/26 11:34
Cadmium	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	02/02/26 14:19	02/01/26 13:56
Cadmium, dissolved	EPA 6020B	<0.0000650	U	mg/L	0.0000650	0.000199	1	01/26/26 15:09	01/26/26 11:34
Calcium	EPA 6020B	103		mg/L	0.0686	0.200	1	02/02/26 14:19	02/01/26 13:56
Calcium, dissolved	EPA 6020B	99.8		mg/L	0.0686	0.200	1	01/26/26 15:09	01/26/26 11:34
Chromium	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	02/02/26 14:19	02/01/26 13:56
Chromium, dissolved	EPA 6020B	<0.000810	U	mg/L	0.000810	0.001000	1	01/26/26 15:09	01/26/26 11:34

Analytical Report



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Matrix: WATER

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00

CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Copper	EPA 6020B	0.00246		mg/L	0.000560	0.001000	1	02/02/26 14:19	02/01/26 13:56
Copper, dissolved	EPA 6020B	0.00135		mg/L	0.000560	0.001000	1	01/26/26 15:09	01/26/26 11:34
Iron	EPA 6020B	0.0352		mg/L	0.0141	0.0200	1	02/02/26 14:19	02/01/26 13:56
Lead	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	02/02/26 14:19	02/01/26 13:56
Lead, dissolved	EPA 6020B	<0.000250	U	mg/L	0.000250	0.001000	1	01/26/26 15:09	01/26/26 11:34
Magnesium	EPA 6020B	21.7		mg/L	0.0145	0.200	1	02/02/26 14:19	02/01/26 13:56
Magnesium, dissolved	EPA 6020B	21.2		mg/L	0.0145	0.200	1	01/26/26 15:09	01/26/26 11:34
Manganese	EPA 6020B	0.820		mg/L	0.00110	0.00199	1	02/02/26 14:19	02/01/26 13:56
Manganese, dissolved	EPA 6020B	0.774		mg/L	0.00110	0.00199	1	01/26/26 15:09	01/26/26 11:34
Potassium	EPA 6020B	18.3		mg/L	0.0344	0.1000	1	02/02/26 14:19	02/01/26 13:56
Potassium, dissolved	EPA 6020B	17.3		mg/L	0.0344	0.1000	1	01/26/26 15:09	01/26/26 11:34
Selenium	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	02/02/26 14:19	02/01/26 13:56
Selenium, dissolved	EPA 6020B	<0.000669	U	mg/L	0.000669	0.001000	1	01/26/26 15:09	01/26/26 11:34
Silver	EPA 6020B	0.000304		mg/L	0.000041 0	0.000199	1	02/02/26 14:19	02/01/26 13:56
Silver, dissolved	EPA 6020B	<0.0000410	U	mg/L	0.000041 0	0.000199	1	01/26/26 15:09	01/26/26 11:34
Sodium	EPA 6020B	72.9		mg/L	0.0468	0.200	1	02/02/26 14:19	02/01/26 13:56
Sodium, dissolved	EPA 6020B	70.6		mg/L	0.0468	0.200	1	01/27/26 11:21	01/26/26 11:34
Zinc	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	02/02/26 14:19	02/01/26 13:56
Zinc, dissolved	EPA 6020B	<0.00494	U	mg/L	0.00494	0.01000	1	01/26/26 15:09	01/26/26 11:34

Per- and Polyfluorinated Alkyl Substances by LC-MS

11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	<0.487	SU	ng/L	0.487	5.22	1	02/05/26 01:34	02/04/26 14:30
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	<1.18	U	ng/L	1.18	5.22	1	02/05/26 01:34	02/04/26 14:30
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	<0.977	U	ng/L	0.977	5.22	1	02/05/26 01:34	02/04/26 14:30
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	<2.00	U	ng/L	2.00	5.22	1	02/05/26 01:34	02/04/26 14:30
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	<1.13	SU	ng/L	1.13	5.22	1	02/05/26 01:34	02/04/26 14:30

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CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	<3.15	U	ng/L	3.15	5.22	1	02/05/26 01:34	02/04/26 14:30
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	27.9		ng/L	1.45	5.22	1	02/05/26 01:34	02/04/26 14:30
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	<0.586	SU	ng/L	0.586	5.22	1	02/05/26 01:34	02/04/26 14:30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	<0.467	SU	ng/L	0.467	5.22	1	02/05/26 01:34	02/04/26 14:30
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	<1.22	U	ng/L	1.22	5.22	1	02/05/26 01:34	02/04/26 14:30
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	2.04	J	ng/L	1.61	5.22	1	02/05/26 01:34	02/04/26 14:30
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	1.68	J	ng/L	0.672	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	161		ng/L	0.924	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	440		ng/L	0.366	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorobutanoic acid (PFBA)	EPA 537Mod	142		ng/L	2.71	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	186		ng/L	2.07	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	4.88	JS	ng/L	1.43	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorodecanoic acid (PFDA)	EPA 537Mod	35.3		ng/L	1.29	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	<0.721	U	ng/L	0.721	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	945		ng/L	11.8	104	20	02/06/26 03:44	02/04/26 14:30
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	342		ng/L	1.80	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	13500		ng/L	283	1560	300	02/06/26 03:14	02/04/26 14:30
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	5080		ng/L	18.3	104	20	02/06/26 03:44	02/04/26 14:30
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	1700		ng/L	25.0	104	20	02/06/26 03:44	02/04/26 14:30
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	344		ng/L	0.517	5.22	1	02/05/26 01:34	02/04/26 14:30

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Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorononanoic acid (PFNA)	EPA 537Mod	113	S	ng/L	0.908	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	19.9		ng/L	0.742	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	39600		ng/L	279	626	300	02/06/26 03:14	02/04/26 14:30
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1150		ng/L	13.1	41.7	20	02/06/26 03:44	02/04/26 14:30
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	898		ng/L	11.6	104	20	02/06/26 03:44	02/04/26 14:30
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	365		ng/L	1.34	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	<2.75	U	ng/L	2.75	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluorotridecanoic acid (PFTrDA)	EPA 537Mod	<2.01	U	ng/L	2.01	5.22	1	02/05/26 01:34	02/04/26 14:30
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	1.29	J	ng/L	1.02	5.22	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-FtS 4:2	EPA 537Mod	326	S	%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-FtS 6:2	EPA 537Mod	177	S	%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-FtS 8:2	EPA 537Mod	220	S	%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-PFDA	EPA 537Mod	103		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-PFDoA	EPA 537Mod	85.8		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-PFHxA	EPA 537Mod	67.7		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-PFTeA	EPA 537Mod	82.9		%REC		27-134	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C2-PFUnA	EPA 537Mod	99.7		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C3-HFPO-DA	EPA 537Mod	76.5		%REC		41-142	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C3-PFBS	EPA 537Mod	88.3		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C4-PFBA	EPA 537Mod	90.4		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C4-PFHpA	EPA 537Mod	32.6	S	%REC		42-141	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C4-PFOA	EPA 537Mod	53.9		%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C4-PFOS	EPA 537Mod	19.2	S	%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C5-PFNA	EPA 537Mod	30.1	S	%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C5-PFPeA	EPA 537Mod	77.0		%REC		43-138	1	02/05/26 01:34	02/04/26 14:30
Surr: 13C8-FOSA	EPA 537Mod	80.6		%REC		30-122	1	02/05/26 01:34	02/04/26 14:30
Surr: 18O2-PFHxS	EPA 537Mod	25.1	S	%REC		50-150	1	02/05/26 01:34	02/04/26 14:30
Surr: d3-N-MeFOSAA	EPA 537Mod	79.9		%REC		35-136	1	02/05/26 01:34	02/04/26 14:30

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Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
<i>Surr: d5-N-EtFOSAA</i>	<i>EPA 537Mod</i>	84.8		%REC		34-142	1	02/05/26 01:34	02/04/26 14:30
Semivolatile Organic Compounds by GC-MS									
1,1'-Biphenyl (BZ-0)	EPA 8270E	<0.420	SU	µg/L	0.420	1.00	1	01/28/26 17:59	01/27/26 08:37
1,2,4,5-Tetrachlorobenzene	EPA 8270E	<1.71	SU	µg/L	1.71	5.00	1	01/28/26 17:59	01/27/26 08:37
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270E	<0.720	U	µg/L	0.720	5.00	1	01/28/26 17:59	01/27/26 08:37
1-Methylnaphthalene	EPA 8270E	0.110	S	µg/L	0.0830	0.100	1	01/28/26 17:59	01/27/26 08:37
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	EPA 8270E	<0.230	SU	µg/L	0.230	1.00	1	01/28/26 17:59	01/27/26 08:37
2,3,4,6-Tetrachlorophenol	EPA 8270E	<0.450	SU	µg/L	0.450	1.00	1	01/28/26 17:59	01/27/26 08:37
2,4,5-Trichlorophenol	EPA 8270E	<0.170	SU	µg/L	0.170	1.00	1	01/28/26 17:59	01/27/26 08:37
2,4,6-Trichlorophenol	EPA 8270E	<0.250	SU	µg/L	0.250	1.00	1	01/28/26 17:59	01/27/26 08:37
2,4-Dichlorophenol	EPA 8270E	<0.350	SU	µg/L	0.350	1.00	1	01/28/26 17:59	01/27/26 08:37
2,4-Dimethylphenol	EPA 8270E	<0.360	SU	µg/L	0.360	1.00	1	01/28/26 17:59	01/27/26 08:37
2,4-Dinitrophenol	EPA 8270E	<2.61	SU	µg/L	2.61	5.00	1	01/28/26 17:59	01/27/26 08:37
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270E	0.600	JS	µg/L	0.350	1.00	1	01/28/26 17:59	01/27/26 08:37
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270E	0.580	JS	µg/L	0.330	1.00	1	01/28/26 17:59	01/27/26 08:37
2-Chloronaphthalene	EPA 8270E	0.1000	JS	µg/L	0.0750	0.100	1	01/28/26 17:59	01/27/26 08:37
2-Chlorophenol	EPA 8270E	<0.230	SU	µg/L	0.230	1.00	1	01/28/26 17:59	01/27/26 08:37
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270E	0.610	JS	µg/L	0.270	1.00	1	01/28/26 17:59	01/27/26 08:37
2-Methylnaphthalene	EPA 8270E	0.110	S	µg/L	0.0650	0.100	1	01/28/26 17:59	01/27/26 08:37
2-Methylphenol (o-Cresol)	EPA 8270E	<0.250	U	µg/L	0.250	1.00	1	01/28/26 17:59	01/27/26 08:37
2-Nitroaniline	EPA 8270E	<0.210	SU	µg/L	0.210	1.00	1	01/28/26 17:59	01/27/26 08:37
2-Nitrophenol	EPA 8270E	<0.340	SU	µg/L	0.340	1.00	1	01/28/26 17:59	01/27/26 08:37
3&4-Methylphenol	EPA 8270E	<0.210	U	µg/L	0.210	1.00	1	01/28/26 17:59	01/27/26 08:37
3,3'-Dichlorobenzidine	EPA 8270E	<0.460	SU	µg/L	0.460	5.00	1	01/28/26 17:59	01/27/26 08:37
3-Nitroaniline	EPA 8270E	<0.188	SU	µg/L	0.188	1.00	1	01/28/26 17:59	01/27/26 08:37
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270E	<0.330	SU	µg/L	0.330	1.00	1	01/28/26 17:59	01/27/26 08:37
4-Chloro-3-methylphenol	EPA 8270E	<0.260	SU	µg/L	0.260	1.00	1	01/28/26 17:59	01/27/26 08:37
4-Chloroaniline	EPA 8270E	<0.340	U	µg/L	0.340	1.00	1	01/28/26 17:59	01/27/26 08:37

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00

CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
4-Chlorophenyl phenylether	EPA 8270E	<0.310	SU	µg/L	0.310	1.00	1	01/28/26 17:59	01/27/26 08:37
4-Nitroaniline	EPA 8270E	0.410	JS	µg/L	0.228	1.00	1	01/28/26 17:59	01/27/26 08:37
4-Nitrophenol	EPA 8270E	<1.08	U	µg/L	1.08	5.00	1	01/28/26 17:59	01/27/26 08:37
Acenaphthene	EPA 8270E	0.120	S	µg/L	0.0810	0.100	1	01/28/26 17:59	01/27/26 08:37
Acenaphthylene	EPA 8270E	0.130	S	µg/L	0.0750	0.100	1	01/28/26 17:59	01/27/26 08:37
Acetophenone	EPA 8270E	<0.370	SU	µg/L	0.370	1.00	1	01/28/26 17:59	01/27/26 08:37
Anthracene	EPA 8270E	0.300	S	µg/L	0.0810	0.100	1	01/28/26 17:59	01/27/26 08:37
Atrazine	EPA 8270E	0.430	JS	µg/L	0.350	1.00	1	01/28/26 17:59	01/27/26 08:37
Benzaldehyde	EPA 8270E	<0.520	SU	µg/L	0.520	1.00	1	01/28/26 17:59	01/27/26 08:37
Benzo(a)anthracene	EPA 8270E	0.370	S	µg/L	0.0990	0.100	1	01/28/26 17:59	01/27/26 08:37
Benzo(a)pyrene	EPA 8270E	0.420	S	µg/L	0.0440	0.100	1	01/28/26 17:59	01/27/26 08:37
Benzo(b)fluoranthene	EPA 8270E	0.410	S	µg/L	0.0510	0.100	1	01/28/26 17:59	01/27/26 08:37
Benzo(g,h,i)perylene	EPA 8270E	0.420	S	µg/L	0.0890	0.100	1	01/28/26 17:59	01/27/26 08:37
Benzo(k)fluoranthene	EPA 8270E	0.360	S	µg/L	0.0480	0.100	1	01/28/26 17:59	01/27/26 08:37
bis(2-Chloroethoxy) methane	EPA 8270E	<0.290	SU	µg/L	0.290	1.00	1	01/28/26 17:59	01/27/26 08:37
bis(2-Chloroethyl) ether	EPA 8270E	<0.370	SU	µg/L	0.370	1.00	1	01/28/26 17:59	01/27/26 08:37
Butyl benzyl phthalate	EPA 8270E	0.790	JS	µg/L	0.300	1.00	1	01/28/26 17:59	01/27/26 08:37
Caprolactam	EPA 8270E	<0.960	U	µg/L	0.960	5.00	1	01/28/26 17:59	01/27/26 08:37
Carbazole	EPA 8270E	<0.240	SU	µg/L	0.240	1.00	1	01/28/26 17:59	01/27/26 08:37
Chrysene	EPA 8270E	0.380	S	µg/L	0.0480	0.100	1	01/28/26 17:59	01/27/26 08:37
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270E	0.810	JS	µg/L	0.400	1.00	1	01/28/26 17:59	01/27/26 08:37
Dibenz(a,h) anthracene	EPA 8270E	0.410	S	µg/L	0.0730	0.100	1	01/28/26 17:59	01/27/26 08:37
Dibenzofuran	EPA 8270E	<0.230	SU	µg/L	0.230	1.00	1	01/28/26 17:59	01/27/26 08:37
Diethyl phthalate	EPA 8270E	<0.350	SU	µg/L	0.350	1.00	1	01/28/26 17:59	01/27/26 08:37
Dimethyl phthalate	EPA 8270E	<0.200	SU	µg/L	0.200	1.00	1	01/28/26 17:59	01/27/26 08:37
Di-n-butyl phthalate	EPA 8270E	0.620	JS	µg/L	0.210	1.00	1	01/28/26 17:59	01/27/26 08:37
Di-n-octyl phthalate	EPA 8270E	0.780	JS	µg/L	0.530	1.00	1	01/28/26 17:59	01/27/26 08:37
Fluoranthene	EPA 8270E	0.420	S	µg/L	0.0827	0.100	1	01/28/26 17:59	01/27/26 08:37
Fluorene	EPA 8270E	0.230	S	µg/L	0.0510	0.100	1	01/28/26 17:59	01/27/26 08:37
Hexachlorobenzene	EPA 8270E	<0.440	SU	µg/L	0.440	1.00	1	01/28/26 17:59	01/27/26 08:37

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00

CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Hexachlorobutadiene	EPA 8270E	<0.630	SU	µg/L	0.630	1.00	1	01/28/26 17:59	01/27/26 08:37
Hexachlorocyclopentadiene	EPA 8270E	<1.09	SU	µg/L	1.09	5.00	1	01/28/26 17:59	01/27/26 08:37
Hexachloroethane	EPA 8270E	<0.620	SU	µg/L	0.620	1.00	1	01/28/26 17:59	01/27/26 08:37
Indeno(1,2,3-cd) pyrene	EPA 8270E	0.430	S	µg/L	0.0670	0.100	1	01/28/26 17:59	01/27/26 08:37
Isophorone	EPA 8270E	<0.340	SU	µg/L	0.340	5.00	1	01/28/26 17:59	01/27/26 08:37
Methylphenol, Total	EPA 8270E	<0.460	U	µg/L	0.460	2.00	1	01/28/26 17:59	01/27/26 08:37
Naphthalene	EPA 8270E	<0.0670	SU	µg/L	0.0670	0.100	1	01/28/26 17:59	01/27/26 08:37
Nitrobenzene	EPA 8270E	<0.260	SU	µg/L	0.260	1.00	1	01/28/26 17:59	01/27/26 08:37
n-Nitrosodi-n-propylamine	EPA 8270E	<0.350	SU	µg/L	0.350	1.00	1	01/28/26 17:59	01/27/26 08:37
N-Nitrosodiphenylamine	EPA 8270E	<0.490	SU	µg/L	0.490	1.00	1	01/28/26 17:59	01/27/26 08:37
Pentachlorophenol	EPA 8270E	<0.970	SU	µg/L	0.970	5.00	1	01/28/26 17:59	01/27/26 08:37
Phenanthrene	EPA 8270E	0.300	S	µg/L	0.0810	0.100	1	01/28/26 17:59	01/27/26 08:37
Phenol	EPA 8270E	<0.210	U	µg/L	0.210	1.00	1	01/28/26 17:59	01/27/26 08:37
Pyrene	EPA 8270E	0.370	S	µg/L	0.0872	0.100	1	01/28/26 17:59	01/27/26 08:37
Pyridine	EPA 8270E	<1.13	U	µg/L	1.13	10.0	1	01/28/26 17:59	01/27/26 08:37
<i>Surr: 2,4,6-Tribromophenol</i>	<i>EPA 8270E</i>	71.2		%REC		38-103	1	01/28/26 17:59	01/27/26 08:37
<i>Surr: 2-Fluorobiphenyl</i>	<i>EPA 8270E</i>	48.5		%REC		36-96	1	01/28/26 17:59	01/27/26 08:37
<i>Surr: 2-Fluorophenol</i>	<i>EPA 8270E</i>	42.1		%REC		20-73	1	01/28/26 17:59	01/27/26 08:37
<i>Surr: 4-Terphenyl-d14</i>	<i>EPA 8270E</i>	70.0		%REC		44-114	1	01/28/26 17:59	01/27/26 08:37
<i>Surr: Nitrobenzene-d5</i>	<i>EPA 8270E</i>	53.3		%REC		33-100	1	01/28/26 17:59	01/27/26 08:37
<i>Surr: Phenol-d6</i>	<i>EPA 8270E</i>	26.6		%REC		10-48	1	01/28/26 17:59	01/27/26 08:37

Volatile Organic Compounds by GC-MS

1,1,1-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	01/27/26 17:25	NA
1,1,2,2-Tetrachloroethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	01/27/26 17:25	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	01/27/26 17:25	NA
1,1,2-Trichloroethane	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	01/27/26 17:25	NA
1,1-Dichloroethane	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	01/27/26 17:25	NA
1,1-Dichloroethylene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	01/27/26 17:25	NA
1,2,3-Trichlorobenzene	EPA 8260D	<2.99	U	µg/L	2.99	5.00	1	01/27/26 17:25	NA
1,2,3-Trichloropropane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	01/27/26 17:25	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00

CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
1,2,4-Trichlorobenzene	EPA 8260D	<0.940	U	µg/L	0.940	1.00	1	01/27/26 17:25	NA
1,2,4-Trimethylbenzene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	01/27/26 17:25	NA
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	01/27/26 17:25	NA
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260D	<0.410	U	µg/L	0.410	1.00	1	01/27/26 17:25	NA
1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 8260D	<0.320	U	µg/L	0.320	1.00	1	01/27/26 17:25	NA
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260D	<0.440	U	µg/L	0.440	1.00	1	01/27/26 17:25	NA
1,2-Dichloropropane	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	01/27/26 17:25	NA
1,3,5-Trimethylbenzene	EPA 8260D	<0.650	U	µg/L	0.650	1.00	1	01/27/26 17:25	NA
1,3-Dichlorobenzene (m-Dichlorobenzene)	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	01/27/26 17:25	NA
1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	2.00	1	01/27/26 17:25	NA
1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	01/27/26 17:25	NA
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260D	<2.43	U	µg/L	2.43	5.00	1	01/27/26 17:25	NA
2-Hexanone	EPA 8260D	<0.590	U	µg/L	0.590	5.00	1	01/27/26 17:25	NA
4-Methyl-2-pentanone (MIBK)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	01/27/26 17:25	NA
Acetone	EPA 8260D	<4.53	U	µg/L	4.53	10.0	1	01/27/26 17:25	NA
Benzene	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	01/27/26 17:25	NA
Bromochloromethane	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	01/27/26 17:25	NA
Bromodichloromethane	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	01/27/26 17:25	NA
Bromoform	EPA 8260D	<0.560	U	µg/L	0.560	1.00	1	01/27/26 17:25	NA
Carbon disulfide	EPA 8260D	<0.490	U	µg/L	0.490	1.00	1	01/27/26 17:25	NA
Carbon tetrachloride	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	01/27/26 17:25	NA
Chlorobenzene	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	01/27/26 17:25	NA
Chlorodibromomethane	EPA 8260D	<0.400	U	µg/L	0.400	1.00	1	01/27/26 17:25	NA
Chloroethane (Ethyl chloride)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	01/27/26 17:25	NA
Chloroform	EPA 8260D	<0.460	U	µg/L	0.460	1.00	1	01/27/26 17:25	NA
cis & trans-1,2-Dichloroethene	EPA 8260D	<0.480	U	µg/L	0.480	2.00	1	01/27/26 17:25	NA
cis-1,2-Dichloroethylene	EPA 8260D	<0.420	U	µg/L	0.420	1.00	1	01/27/26 17:25	NA
cis-1,3-Dichloropropene	EPA 8260D	<0.570	U	µg/L	0.570	1.00	1	01/27/26 17:25	NA

Analytical Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00

CLIENT ID: BCGW

Lab ID: HN2601120-001

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
Cyclohexane	EPA 8260D	<0.630	U	µg/L	0.630	2.00	1	01/27/26 17:25	NA
Dichlorodifluoromethane (Freon-12)	EPA 8260D	<0.680	U	µg/L	0.680	1.00	1	01/27/26 17:25	NA
Ethylbenzene	EPA 8260D	<0.340	U	µg/L	0.340	1.00	1	01/27/26 17:25	NA
Isopropylbenzene	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	01/27/26 17:25	NA
m+p-Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	01/27/26 17:25	NA
Methyl acetate	EPA 8260D	<0.590	U	µg/L	0.590	2.00	1	01/27/26 17:25	NA
Methyl bromide (Bromomethane)	EPA 8260D	<0.900	U	µg/L	0.900	1.00	1	01/27/26 17:25	NA
Methyl chloride (Chloromethane)	EPA 8260D	<0.830	U	µg/L	0.830	5.00	1	01/27/26 17:25	NA
Methyl tert-butyl ether (MTBE)	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	01/27/26 17:25	NA
Methylcyclohexane	EPA 8260D	<0.350	U	µg/L	0.350	1.00	1	01/27/26 17:25	NA
Methylene chloride (Dichloromethane)	EPA 8260D	<0.860	U	µg/L	0.860	5.00	1	01/27/26 17:25	NA
o-Xylene	EPA 8260D	<0.310	U	µg/L	0.310	1.00	1	01/27/26 17:25	NA
Styrene	EPA 8260D	<0.330	U	µg/L	0.330	1.00	1	01/27/26 17:25	NA
Tetrachloroethylene (Perchloroethylene)	EPA 8260D	<0.390	U	µg/L	0.390	1.00	1	01/27/26 17:25	NA
Toluene	EPA 8260D	<0.450	U	µg/L	0.450	1.00	1	01/27/26 17:25	NA
Total Xylene	EPA 8260D	<0.810	U	µg/L	0.810	2.00	1	01/27/26 17:25	NA
trans-1,2-Dichloroethylene	EPA 8260D	<0.480	U	µg/L	0.480	1.00	1	01/27/26 17:25	NA
trans-1,3-Dichloropropylene	EPA 8260D	<0.380	U	µg/L	0.380	1.00	1	01/27/26 17:25	NA
Trichloroethene (Trichloroethylene)	EPA 8260D	<0.430	U	µg/L	0.430	1.00	1	01/27/26 17:25	NA
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260D	<0.520	U	µg/L	0.520	1.00	1	01/27/26 17:25	NA
Vinyl chloride (Chloroethene)	EPA 8260D	<0.530	U	µg/L	0.530	1.00	1	01/27/26 17:25	NA
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>EPA 8260D</i>	98.8		%REC		80-120	1	01/27/26 17:25	NA
<i>Surr: 4-Bromofluorobenzene</i>	<i>EPA 8260D</i>	101		%REC		80-120	1	01/27/26 17:25	NA
<i>Surr: Dibromofluoromethane</i>	<i>EPA 8260D</i>	96.7		%REC		80-120	1	01/27/26 17:25	NA
<i>Surr: Toluene-d8</i>	<i>EPA 8260D</i>	93.3		%REC		80-120	1	01/27/26 17:25	NA

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2428464

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3844657

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2428464-001

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/27/26 16:35
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	<0.139	mg/L	0.139	0.500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2428464-002

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/27/26 17:07
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	4.50	mg/L	0.139	0.500	5		90.0	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2428464-004

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/27/26 18:10
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	11.1	mg/L	0.139	0.500	5	5.87	105	70-130			E

MSD	CLIENT ID: Batch QC	Lab ID: QC-2428464-005

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/27/26 18:42
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dissolved Organic Carbon (DOC)	11.0	mg/L	0.139	0.500	5	5.87	102	70-130	1.43	20	E

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2428479

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3839857

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2428479-001

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/24/26 10:59
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	<0.258	mg/L	0.258	0.500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2428479-002

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/24/26 11:29
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	5.32	mg/L	0.258	0.500	5		106	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2428479-004

Method: EPA 9060A **Dilution:** 200 **Analysis Date:** 01/24/26 12:31
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	1290	mg/L	51.7	100	5	192	NC	70-130			O

MSD	CLIENT ID: Batch QC	Lab ID: QC-2428479-005

Method: EPA 9060A **Dilution:** 200 **Analysis Date:** 01/24/26 13:02
Prep Date: 01/23/26 16:43

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	1320	mg/L	51.7	100	5	192	NC	70-130	2.19	20	O

The following samples were analyzed in this batch:

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2429950

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846823

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2429950-001

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 01/28/26 12:40
Prep Date: 01/26/26 17:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	<22.1	mg/L	22.1	30.0							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2429950-002

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 01/28/26 12:40
Prep Date: 01/26/26 17:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	472	mg/L	22.1	30.0	495		95.4	85-109			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2429950-004

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 01/28/26 12:40
Prep Date: 01/26/26 17:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	493	mg/L	36.9	50.0		500			1.34	10	

DUP	CLIENT ID: BCGW	Lab ID: QC-2429950-015

Method: SM 2540 C-2020 **Dilution:** 1 **Analysis Date:** 01/28/26 12:40
Prep Date: 01/26/26 17:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-filterable (TDS)	667	mg/L	36.9	50.0		617			7.79	10	

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2429981

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846428

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2429981-001

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 01/28/26 10:45
Prep Date: 01/27/26 16:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	<0.0319	mg/L	0.0319	0.200							U
Chloride	<0.310	mg/L	0.310	1.00							U
Fluoride	<0.0670	mg/L	0.0670	0.100							U
Sulfate	<0.190	mg/L	0.190	1.00							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2429981-002

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 01/28/26 10:45
Prep Date: 01/27/26 16:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	1.89	mg/L	0.0319	0.200	2		94.7	89-112			
Chloride	9.65	mg/L	0.310	1.00	10		96.5	88-110			
Fluoride	2.02	mg/L	0.0670	0.100	2		101	86-121			
Sulfate	9.94	mg/L	0.190	1.00	10		99.4	90-110			

MS	CLIENT ID: Batch QC	Lab ID: QC-2429981-004

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 01/27/26 17:32
Prep Date: 01/27/26 16:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	1.27	mg/L	0.0319	0.200	2	<0.0319	63.6	89-112			S
Chloride	19.7	mg/L	0.310	1.00	10	20.0	NC	88-110			
Fluoride	1.19	mg/L	0.0670	0.100	2	<0.0670	61.4	86-121			S
Sulfate	7.02	mg/L	0.190	1.00	10	<0.190	69.4	90-110			S

MSD	CLIENT ID: Batch QC	Lab ID: QC-2429981-005

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 01/27/26 17:40
Prep Date: 01/27/26 16:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	1.89	mg/L	0.0319	0.200	2	<0.0319	94.5	89-112	39.0	15	R
Chloride	30.5	mg/L	0.310	1.00	10	20.0	105	88-110	43.0	15	ER
Fluoride	2.05	mg/L	0.0670	0.100	2	<0.0670	105	86-121	53.5	15	R
Sulfate	9.82	mg/L	0.190	1.00	10	<0.190	97.4	90-110	33.3	15	R

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2430044

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3844485

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2430044-001

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 01/27/26 12:24
Prep Date: 01/26/26 14:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	<0.380	mg/L	0.380	1.00							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2430044-002

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 01/27/26 12:24
Prep Date: 01/26/26 14:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	104	mg/L	3.80	10.0	100		104	75-111			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2430044-004

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 01/27/26 12:24
Prep Date: 01/26/26 14:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	50.3	mg/L	1.27	3.33		51.0			1.32	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-2430044-015

Method: SM 2540 D-2020 **Dilution:** 1 **Analysis Date:** 01/27/26 12:24
Prep Date: 01/26/26 14:08

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Residue-nonfilterable (TSS)	65.0	mg/L	1.90	5.00		67.0			3.03	10	

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2430152

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3842110

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2430152-001

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 01/26/26 14:37**Prep Date:** 01/26/26 11:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	1.53	mg/L	1.43	2.00							J
Alkalinity, Bicarbonate	1.53	mg/L	1.43	2.00							J
Alkalinity, Carbonate	<1.43	mg/L	1.43	2.00							U
Alkalinity, Hydroxide	<1.43	mg/L	1.43	2.00							U
Alkalinity, Phenolphthalein	<1.43	mg/L	1.43	2.00							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2430152-002

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 01/26/26 13:19**Prep Date:** 01/26/26 11:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	1000	mg/L		2.00	1000		100	90-110			
Alkalinity, Carbonate	967	mg/L		2.00	925		105	90-110			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2430152-004

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 01/26/26 14:52**Prep Date:** 01/26/26 11:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	137	mg/L	1.43	2.00		137			0.256	10	
Alkalinity, Bicarbonate	137	mg/L	1.43	2.00		137			0.256	10	
Alkalinity, Carbonate	<1.43	mg/L	1.43	2.00		<1.43			NC		U
Alkalinity, Hydroxide	<1.43	mg/L	1.43	2.00		<1.43			NC		U
Alkalinity, Phenolphthalein	<1.43	mg/L	1.43	2.00		<1.43			NC		U

DUP	CLIENT ID: Batch QC	Lab ID: QC-2430152-015

Method: SM 2320 B-2021**Dilution:** 1**Analysis Date:** 01/26/26 15:31**Prep Date:** 01/26/26 11:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Alkalinity as CaCO ₃	281	mg/L	1.43	2.00		291			3.37	10	
Alkalinity, Bicarbonate	281	mg/L	1.43	2.00		291			3.37	10	
Alkalinity, Carbonate	<1.43	mg/L	1.43	2.00		<1.43			NC		U
Alkalinity, Hydroxide	<1.43	mg/L	1.43	2.00		<1.43			NC		U
Alkalinity, Phenolphthalein	<1.43	mg/L	1.43	2.00		<1.43			NC		U

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2430513

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3844657

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2430513-001

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/27/26 21:25
Prep Date: 01/26/26 15:45

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	<0.258	mg/L	0.258	0.500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2430513-002

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/27/26 21:58
Prep Date: 01/26/26 15:45

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	5.09	mg/L	0.258	0.500	5		102	80-120			

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WASTEWATER
QC Lot: 2430513

Work Order: HN2601120
Date Collected: 01/22/26 09:00
Date Received: 01/22/26 16:14
Run ID: 3847124

General Chemistry Parameters

MS	CLIENT ID: Batch QC	Lab ID: QC-2430513-004

Method: EPA 9060A **Dilution:** 4000 **Analysis Date:** 01/28/26 14:31
Prep Date: 01/28/26 12:26

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	28300	mg/L	1030	2000	20000	9070	96.2	70-130			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2430513-005

Method: EPA 9060A **Dilution:** 4000 **Analysis Date:** 01/28/26 14:44
Prep Date: 01/28/26 12:26

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	28000	mg/L	1030	2000	20000	9070	94.6	70-130	1.11	20	

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432650

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846199

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2432650-001

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 01/28/26 14:30
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	<2.17	mg/L	2.17	5.00							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2432650-002

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 01/28/26 14:30
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	100	mg/L	2.17	5.00	100		100	95-105			

DUP	CLIENT ID: BCGW	Lab ID: QC-2432650-004

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 01/28/26 14:30
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	320	mg/L	2.17	5.00		340			6.06	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-2432650-015

Method: SM 2340 C-2021 **Dilution:** 1 **Analysis Date:** 01/28/26 14:30
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Hardness as CaCO ₃	120	mg/L	2.17	5.00		120			0.00	10	

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432895

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847124

General Chemistry Parameters

MB	CLIENT ID: Method Blank				Lab ID: QC-2432895-001				

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/28/26 13:18
Prep Date: 01/28/26 12:26

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	<0.258	mg/L	0.258	0.500							U

LCS	CLIENT ID: Laboratory Control Sample				Lab ID: QC-2432895-002				

Method: EPA 9060A **Dilution:** 1 **Analysis Date:** 01/28/26 13:30
Prep Date: 01/28/26 12:26

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Total Organic Carbon (TOC)	4.78	mg/L	0.258	0.500	5		95.7	80-120			

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2433185

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847766

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2433185-001

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 01/28/26 20:25
Prep Date: 01/28/26 16:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	<0.0319	mg/L	0.0319	0.200							U
Chloride	<0.310	mg/L	0.310	1.00							U
Fluoride	<0.0670	mg/L	0.0670	0.100							U
Sulfate	0.216	mg/L	0.190	1.00							J

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2433185-002

Method: EPA 9056A **Dilution:** 1 **Analysis Date:** 01/28/26 20:16
Prep Date: 01/28/26 16:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Bromide	1.84	mg/L	0.0319	0.200	2		92.0	89-112			
Chloride	9.40	mg/L	0.310	1.00	10		94.0	88-110			
Fluoride	1.97	mg/L	0.0670	0.100	2		98.4	86-121			
Sulfate	9.78	mg/L	0.190	1.00	10		97.8	90-110			

MS	CLIENT ID: Batch QC	Lab ID: QC-2433185-004

Method: EPA 9056A **Dilution:** 400 **Analysis Date:** 01/28/26 20:48
Prep Date: 01/28/26 16:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	7820	mg/L	124	400	4000	3590	106	88-110			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2433185-005

Method: EPA 9056A **Dilution:** 400 **Analysis Date:** 01/28/26 20:56
Prep Date: 01/28/26 16:33

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chloride	7790	mg/L	124	400	4000	3590	105	88-110	0.430	15	

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2434797

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3851708

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2434797-001

Method: SM 4500-SiO₂ C-2011 **Dilution:** 1 **Analysis Date:** 01/30/26 13:04
Prep Date: 01/30/26 11:46

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	<0.0500	mg/L	0.0500	0.0500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2434797-002

Method: SM 4500-SiO₂ C-2011 **Dilution:** 1 **Analysis Date:** 01/30/26 13:05
Prep Date: 01/30/26 11:46

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	1.2	mg/L	0.0500	0.0500	1.25		94.8	90-110			

MS	CLIENT ID: BCGW	Lab ID: QC-2434797-004

Method: SM 4500-SiO₂ C-2011 **Dilution:** 10 **Analysis Date:** 01/30/26 13:07
Prep Date: 01/30/26 11:46

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	31.3	mg/L	0.500	0.500	1.25	21.8	NC	90-110			EO

MSD	CLIENT ID: BCGW	Lab ID: QC-2434797-005

Method: SM 4500-SiO₂ C-2011 **Dilution:** 10 **Analysis Date:** 01/30/26 13:08
Prep Date: 01/30/26 11:46

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Silica-dissolved	31.7	mg/L	0.500	0.500	1.25	21.8	NC	90-110	1.37	10	EO

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2442335

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3863984

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-2442335-001

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 02/05/26 19:31
Prep Date: 02/05/26 19:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	<1.40	mg/L	1.40	5.00							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2442335-002

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 02/05/26 19:31
Prep Date: 02/05/26 19:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	37.2	mg/L	1.40	5.00	40		93.0	78-114			

MS	CLIENT ID: BCGW	Lab ID: QC-2442335-004

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 02/05/26 19:31
Prep Date: 02/05/26 19:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	143	mg/L	1.35	4.81	153.85	6.92	88.5	78-114			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2442335-007

Method: EPA 1664A **Dilution:** 1 **Analysis Date:** 02/05/26 19:31
Prep Date: 02/05/26 19:29

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
n-Hexane Extractable Material (O&G)	2.80	mg/L	1.40	5.00		2.40			NC		J

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2429863

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3842407

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2429863-001

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 01/26/26 14:54
Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	<0.000174	mg/L	0.000174	0.00100							U
Barium, dissolved	0.000509	mg/L	0.000396	0.00200							J
Cadmium, dissolved	<0.0000650	mg/L	0.0000650	0.000200							U
Calcium, dissolved	<0.0686	mg/L	0.0686	0.200							U
Chromium, dissolved	<0.000810	mg/L	0.000810	0.00100							U
Copper, dissolved	0.000880	mg/L	0.000560	0.00100							J
Lead, dissolved	<0.000250	mg/L	0.000250	0.00100							U
Magnesium, dissolved	0.0497	mg/L	0.0145	0.200							J
Manganese, dissolved	<0.00110	mg/L	0.00110	0.00200							U
Potassium, dissolved	0.0737	mg/L	0.0344	0.100							J
Selenium, dissolved	<0.000669	mg/L	0.000669	0.00100							U
Silver, dissolved	0.0000440	mg/L	0.0000410	0.000200							J
Zinc, dissolved	<0.00494	mg/L	0.00494	0.0100							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2429863-002

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 01/26/26 14:56
Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.102	mg/L	0.000174	0.00100	0.1		102	80-120			
Barium, dissolved	0.112	mg/L	0.000396	0.00200	0.1		112	80-120			
Cadmium, dissolved	0.111	mg/L	0.0000650	0.000200	0.1		111	80-120			
Calcium, dissolved	11.5	mg/L	0.0686	0.200	10		115	80-120			
Chromium, dissolved	0.104	mg/L	0.000810	0.00100	0.1		104	80-120			
Copper, dissolved	0.105	mg/L	0.000560	0.00100	0.1		105	80-120			
Lead, dissolved	0.111	mg/L	0.000250	0.00100	0.1		111	80-120			
Magnesium, dissolved	10.5	mg/L	0.0145	0.200	10		105	80-120			
Manganese, dissolved	0.115	mg/L	0.00110	0.00200	0.1		115	80-120			
Potassium, dissolved	10.4	mg/L	0.0344	0.100	10		104	80-120			
Selenium, dissolved	0.0970	mg/L	0.000669	0.00100	0.1		97.0	80-120			
Silver, dissolved	0.104	mg/L	0.0000410	0.000200	0.1		104	80-120			
Sodium, dissolved	10.9	mg/L	0.0468	0.200	10		109	80-120			
Zinc, dissolved	0.102	mg/L	0.00494	0.0100	0.1		102	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2429863-004

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 01/26/26 14:59
Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.104	mg/L	0.000174	0.001000	0.1	0.000461	104	75-125			
Barium, dissolved	0.118	mg/L	0.000396	0.00199	0.1	0.0190	99.2	75-125			
Cadmium, dissolved	0.0982	mg/L	0.0000650	0.000199	0.1	<0.0000650	98.1	75-125			
Calcium, dissolved	48.2	mg/L	0.0686	0.200	10	39.2	90.1	75-125			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2429863

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3842407

MS	CLIENT ID: Batch QC	Lab ID: QC-2429863-004

Method: EPA 6020B

Dilution: 1

Analysis Date: 01/26/26 14:59

Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Chromium, dissolved	0.105	mg/L	0.000810	0.001000	0.1	<0.000810	104	75-125			
Copper, dissolved	0.103	mg/L	0.000560	0.001000	0.1	0.000807	103	75-125			
Lead, dissolved	0.100	mg/L	0.000250	0.001000	0.1	0.000512	99.5	75-125			
Magnesium, dissolved	19.8	mg/L	0.0145	0.200	10	10.0	97.8	75-125			
Manganese, dissolved	0.223	mg/L	0.00110	0.00199	0.1	0.127	95.9	75-125			
Potassium, dissolved	11.1	mg/L	0.0344	0.1000	10	0.947	102	75-125			
Selenium, dissolved	0.0962	mg/L	0.000669	0.001000	0.1	<0.000669	95.8	75-125			
Silver, dissolved	0.103	mg/L	0.0000410	0.000199	0.1	<0.0000410	103	75-125			
Sodium, dissolved	13.2	mg/L	0.0468	0.200	10	2.90	103	75-125			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2429863-005

Method: EPA 6020B

Dilution: 1

Analysis Date: 01/26/26 15:01

Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic, dissolved	0.108	mg/L	0.000174	0.00100	0.1	0.000461	108	75-125	3.55	20	
Barium, dissolved	0.122	mg/L	0.000396	0.00200	0.1	0.0190	103	75-125	3.12	20	
Cadmium, dissolved	0.102	mg/L	0.0000650	0.000200	0.1	<0.0000650	102	75-125	3.49	20	
Calcium, dissolved	48.4	mg/L	0.0686	0.200	10	39.2	92.1	75-125	0.408	20	
Chromium, dissolved	0.107	mg/L	0.000810	0.00100	0.1	<0.000810	107	75-125	2.64	20	
Copper, dissolved	0.106	mg/L	0.000560	0.00100	0.1	0.000807	106	75-125	2.93	20	
Lead, dissolved	0.104	mg/L	0.000250	0.00100	0.1	0.000512	103	75-125	3.52	20	
Magnesium, dissolved	20.3	mg/L	0.0145	0.200	10	10.0	102	75-125	2.24	20	
Manganese, dissolved	0.226	mg/L	0.00110	0.00200	0.1	0.127	98.8	75-125	1.28	20	
Potassium, dissolved	11.4	mg/L	0.0344	0.100	10	0.947	105	75-125	2.53	20	
Selenium, dissolved	0.102	mg/L	0.000669	0.00100	0.1	<0.000669	102	75-125	6.08	20	
Silver, dissolved	0.106	mg/L	0.0000410	0.000200	0.1	<0.0000410	106	75-125	2.61	20	
Sodium, dissolved	13.5	mg/L	0.0468	0.200	10	2.90	106	75-125	2.41	20	

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2429863

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3843819

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2429863-001

Method: EPA 6020B**Dilution:** 1**Analysis Date:** 01/27/26 11:02**Prep Date:** 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Sodium, dissolved	0.147	mg/L	0.0468	0.200							J

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: GROUNDWATER
QC Lot: 2429863

Work Order: HN2601120
Date Collected: 01/15/26 11:00
Date Received: 01/15/26 14:10
Run ID: 3844838

Metals

MS	CLIENT ID: Batch QC	Lab ID: QC-2429863-004

Method: EPA 6020B **Dilution:** 10 **Analysis Date:** 01/27/26 11:07
Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Zinc, dissolved	0.380	mg/L	0.0494	0.1000	0.1	0.298	81.5	75-125			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2429863-005

Method: EPA 6020B **Dilution:** 10 **Analysis Date:** 01/27/26 11:09
Prep Date: 01/26/26 11:35

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Zinc, dissolved	0.403	mg/L	0.0494	0.1000	0.1	0.298	105	75-125	5.97	20	

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2437294

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3854621

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2437294-001

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 02/02/26 14:12
Prep Date: 02/01/26 13:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.000174	mg/L	0.000174	0.00100							U
Barium	<0.000396	mg/L	0.000396	0.00200							U
Cadmium	<0.0000650	mg/L	0.0000650	0.000200							U
Calcium	<0.0686	mg/L	0.0686	0.200							U
Chromium	<0.000810	mg/L	0.000810	0.00100							U
Copper	<0.000560	mg/L	0.000560	0.00100							U
Iron	<0.0141	mg/L	0.0141	0.0200							U
Lead	<0.000250	mg/L	0.000250	0.00100							U
Magnesium	<0.0145	mg/L	0.0145	0.200							U
Manganese	<0.00110	mg/L	0.00110	0.00200							U
Potassium	<0.0344	mg/L	0.0344	0.100							U
Selenium	<0.000669	mg/L	0.000669	0.00100							U
Silver	<0.0000410	mg/L	0.0000410	0.000200							U
Sodium	0.123	mg/L	0.0468	0.200							J
Zinc	<0.00494	mg/L	0.00494	0.0100							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2437294-002

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 02/02/26 14:14
Prep Date: 02/01/26 13:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.0968	mg/L	0.000174	0.00100	0.1		96.8	80-120			
Barium	0.0983	mg/L	0.000396	0.00200	0.1		98.3	80-120			
Cadmium	0.0973	mg/L	0.0000650	0.000200	0.1		97.3	80-120			
Calcium	9.95	mg/L	0.0686	0.200	10		99.5	80-120			
Chromium	0.0964	mg/L	0.000810	0.00100	0.1		96.4	80-120			
Copper	0.0981	mg/L	0.000560	0.00100	0.1		98.1	80-120			
Iron	9.78	mg/L	0.0141	0.0200	10		97.8	80-120			
Lead	0.0996	mg/L	0.000250	0.00100	0.1		99.6	80-120			
Magnesium	9.92	mg/L	0.0145	0.200	10		99.2	80-120			
Manganese	0.0984	mg/L	0.00110	0.00200	0.1		98.4	80-120			
Potassium	10.0	mg/L	0.0344	0.100	10		100	80-120			
Selenium	0.102	mg/L	0.000669	0.00100	0.1		102	80-120			
Silver	0.0966	mg/L	0.0000410	0.000200	0.1		96.6	80-120			
Sodium	9.86	mg/L	0.0468	0.200	10		98.6	80-120			
Zinc	0.0976	mg/L	0.00494	0.0100	0.1		97.6	80-120			

MS	CLIENT ID: BCGW	Lab ID: QC-2437294-004

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 02/02/26 14:20
Prep Date: 02/01/26 13:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.0967	mg/L	0.000174	0.001000	0.1	0.000992	95.7	75-125			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2437294

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3854621

MS	CLIENT ID: BCGW	Lab ID: QC-2437294-004

Method: EPA 6020B

Dilution: 1

Analysis Date: 02/02/26 14:20

Prep Date: 02/01/26 13:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Barium	0.179	mg/L	0.000396	0.00199	0.1	0.0837	95.1	75-125			
Cadmium	0.0927	mg/L	0.0000650	0.000199	0.1	<0.0000650	92.7	75-125			
Calcium	108	mg/L	0.0686	0.200	10	103	NC	75-125			O
Chromium	0.0934	mg/L	0.000810	0.001000	0.1	<0.000810	92.8	75-125			
Copper	0.0941	mg/L	0.000560	0.001000	0.1	0.00246	91.6	75-125			
Iron	9.35	mg/L	0.0141	0.0200	10	0.0352	93.2	75-125			
Lead	0.0978	mg/L	0.000250	0.001000	0.1	<0.000250	97.7	75-125			
Magnesium	30.2	mg/L	0.0145	0.200	10	21.7	84.7	75-125			
Manganese	0.877	mg/L	0.00110	0.00199	0.1	0.820	NC	75-125			O
Potassium	27.1	mg/L	0.0344	0.1000	10	18.3	87.8	75-125			
Selenium	0.0933	mg/L	0.000669	0.001000	0.1	<0.000669	93.1	75-125			
Silver	0.0933	mg/L	0.0000410	0.000199	0.1	0.000304	93.0	75-125			
Sodium	79.2	mg/L	0.0468	0.200	10	72.9	NC	75-125			O
Zinc	0.0932	mg/L	0.00494	0.01000	0.1	<0.00494	91.7	75-125			

MSD	CLIENT ID: BCGW	Lab ID: QC-2437294-005

Method: EPA 6020B

Dilution: 1

Analysis Date: 02/02/26 14:22

Prep Date: 02/01/26 13:57

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	0.0990	mg/L	0.000174	0.00100	0.1	0.000992	98.0	75-125	2.35	20	
Barium	0.181	mg/L	0.000396	0.00200	0.1	0.0837	97.2	75-125	1.19	20	
Cadmium	0.0960	mg/L	0.0000650	0.000200	0.1	<0.0000650	96.0	75-125	3.51	20	
Calcium	108	mg/L	0.0686	0.200	10	103	NC	75-125	0.113	20	O
Chromium	0.0963	mg/L	0.000810	0.00100	0.1	<0.000810	95.7	75-125	3.08	20	
Copper	0.0974	mg/L	0.000560	0.00100	0.1	0.00246	95.0	75-125	3.47	20	
Iron	9.70	mg/L	0.0141	0.0200	10	0.0352	96.6	75-125	3.62	20	
Lead	0.101	mg/L	0.000250	0.00100	0.1	<0.000250	101	75-125	3.00	20	
Magnesium	30.3	mg/L	0.0145	0.200	10	21.7	85.9	75-125	0.395	20	
Manganese	0.869	mg/L	0.00110	0.00200	0.1	0.820	NC	75-125	0.972	20	O
Potassium	27.0	mg/L	0.0344	0.100	10	18.3	86.4	75-125	0.504	20	
Selenium	0.0986	mg/L	0.000669	0.00100	0.1	<0.000669	98.4	75-125	5.47	20	
Silver	0.0939	mg/L	0.0000410	0.000200	0.1	0.000304	93.6	75-125	0.725	20	
Sodium	78.5	mg/L	0.0468	0.200	10	72.9	NC	75-125	0.917	20	O
Zinc	0.0957	mg/L	0.00494	0.0100	0.1	<0.00494	94.1	75-125	2.62	20	

The following samples were analyzed in this batch: HN2601120-001

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2437771

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3855644

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-2437771-001

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 02/02/26 15:15
Prep Date: 02/02/26 14:55

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	<0.000160	mg/L	0.000160	0.000200							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2437771-002

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 02/02/26 15:17
Prep Date: 02/02/26 14:55

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.00220	mg/L	0.000160	0.000200	0.002		110	85-115			

MS	CLIENT ID: Batch QC	Lab ID: QC-2437771-004

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 02/02/26 15:20
Prep Date: 02/02/26 14:55

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.00177	mg/L	0.000160	0.000195	0.002	<0.000160	92.6	80-120			

MSD	CLIENT ID: Batch QC	Lab ID: QC-2437771-005

Method: EPA 245.1 **Dilution:** 1 **Analysis Date:** 02/02/26 15:22
Prep Date: 02/02/26 14:55

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Mercury	0.00178	mg/L	0.000160	0.000200	0.002	<0.000160	93.3	80-120	0.844	20	

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

Per- and Polyfluorinated Alkyl Substances by LC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2441045-001

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/04/26 23:08**Prep Date:** 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	<0.467	ng/L	0.467	5.00							U
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	<1.13	ng/L	1.13	5.00							U
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	<0.936	ng/L	0.936	5.00							U
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	<1.92	ng/L	1.92	5.00							U
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	<1.08	ng/L	1.08	5.00							U
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	<3.02	ng/L	3.02	5.00							U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	<1.39	ng/L	1.39	5.00							U
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<0.562	ng/L	0.562	5.00							U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	<0.448	ng/L	0.448	5.00							U
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	<1.17	ng/L	1.17	5.00							U
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	<1.54	ng/L	1.54	5.00							U
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	<0.644	ng/L	0.644	5.00							U
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	<0.886	ng/L	0.886	5.00							U
Perfluorobutane sulfonic acid (PFBS)	<0.351	ng/L	0.351	5.00							U
Perfluorobutanoic acid (PFBA)	<2.60	ng/L	2.60	5.00							U
Perfluorobutylsulfonamide (PFBSA)	<1.98	ng/L	1.98	5.00							U
Perfluorodecane sulfonic acid (PFDS)	<1.37	ng/L	1.37	5.00							U
Perfluorodecanoic acid (PFDA)	<1.24	ng/L	1.24	5.00							U
Perfluorododecanoic acid (PFDOA)	<0.691	ng/L	0.691	5.00							U
Perfluoroheptane sulfonic acid (PFHpS)	<0.566	ng/L	0.566	5.00							U
Perfluoroheptanoic acid (PFHpA)	<1.73	ng/L	1.73	5.00							U
Perfluorohexane sulfonic acid (PFHxS)	<0.903	ng/L	0.903	5.00							U
Perfluorohexanesulfonamide (PFHxSA)	<0.878	ng/L	0.878	5.00							U
Perfluorohexanoic acid (PFHxA)	<1.20	ng/L	1.20	5.00							U
Perfluorononane sulfonic acid (PFNS)	<0.496	ng/L	0.496	5.00							U
Perfluorononanoic acid (PFNA)	<0.870	ng/L	0.870	5.00							U
Perfluorooctane sulfonamide (PFOSAm)	<0.711	ng/L	0.711	5.00							U
Perfluorooctane sulfonic acid (PFOS)	<0.892	ng/L	0.892	2.00							U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

MB	CLIENT ID: Method Blank	Lab ID: QC-2441045-001

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/04/26 23:08**Prep Date:** 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorooctanoic acid (PFOA)	<0.630	ng/L	0.630	2.00							U
Perfluoropentane sulfonic acid (PFPeS)	<0.556	ng/L	0.556	5.00							U
Perfluoropentanoic acid (PFPeA)	<1.28	ng/L	1.28	5.00							U
Perfluorotetradecanoic acid (PFTDA)	<2.64	ng/L	2.64	5.00							U
Perfluorotridecanoic acid (PFTrDA)	<1.93	ng/L	1.93	5.00							U
Perfluoroundecanoic acid (PFUnDA)	<0.974	ng/L	0.974	5.00							U
Surr: 13C2-FtS 4:2	137	ng/L			149.44		91.6	50-150			
Surr: 13C2-FtS 6:2	162	ng/L			152		106	50-150			
Surr: 13C2-FtS 8:2	157	ng/L			153.28		103	50-150			
Surr: 13C2-PFDA	129	ng/L			160		80.7	50-150			
Surr: 13C2-PFDoA	123	ng/L			160		76.8	50-150			
Surr: 13C2-PFHxA	129	ng/L			160		80.6	50-150			
Surr: 13C2-PFTeA	129	ng/L			160		80.8	27-134			
Surr: 13C2-PFUnA	119	ng/L			160		74.4	50-150			
Surr: 13C3-HFPO-DA	149	ng/L			160		93.0	41-142			
Surr: 13C3-PFBS	137	ng/L			148.8		91.9	50-150			
Surr: 13C4-PFBA	132	ng/L			160		82.7	50-150			
Surr: 13C4-PFHpA	155	ng/L			160		97.0	42-141			
Surr: 13C4-PFOA	123	ng/L			160		76.8	50-150			
Surr: 13C4-PFOS	111	ng/L			152.8		72.7	50-150			
Surr: 13C5-PFNA	132	ng/L			160		82.4	50-150			
Surr: 13C5-PFPeA	146	ng/L			160		91.1	43-138			
Surr: 13C8-FOSA	129	ng/L			160		80.6	30-122			
Surr: 18O2-PFHxS	115	ng/L			151.2		76.2	50-150			
Surr: d3-N-MeFOSAA	123	ng/L			160		77.0	35-136			
Surr: d5-N-EtFOSAA	132	ng/L			160		82.5	34-142			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2441045-002

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/04/26 23:22**Prep Date:** 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	27.1	ng/L	0.467	5.00	30.1		90.2	61-128			
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	32.4	ng/L	1.13	5.00	30.7		105	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	29.6	ng/L	0.936	5.00	29.9		99.0	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	33.7	ng/L	1.92	5.00	30.3		111	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	25.1	ng/L	1.08	5.00	32		78.5	39-117			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

LCS		CLIENT ID: Laboratory Control Sample				Lab ID: QC-2441045-002					
Method: EPA 537Mod		Dilution: 1				Analysis Date: 02/04/26 23:22					
						Prep Date: 02/04/26 14:31					
Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	33.2	ng/L	3.02	5.00	32		104	71-138			
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	34.0	ng/L	1.39	5.00	32		106	64-134			
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	32.4	ng/L	0.562	5.00	30.1		108	74-135			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	27.5	ng/L	0.448	5.00	29.8		92.4	69-133			
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	38.8	ng/L	1.17	5.00	32		121	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	22.5	ng/L	1.54	5.00	32		70.4	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	24.6	ng/L	0.644	5.00	32		77.0	67-133			
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	31.9	ng/L	0.886	5.00	28.8		111	74-131			
Perfluorobutane sulfonic acid (PFBS)	28.9	ng/L	0.351	5.00	28.3		102	69-131			
Perfluorobutanoic acid (PFBA)	30.1	ng/L	2.60	5.00	32		93.9	73-139			
Perfluorobutylsulfonamide (PFBSA)	34.8	ng/L	1.98	5.00	32		109	68-164			
Perfluorodecane sulfonic acid (PFDS)	29.3	ng/L	1.37	5.00	30.8		95.0	64-128			
Perfluorodecanoic acid (PFDA)	34.3	ng/L	1.24	5.00	32		107	77-135			
Perfluorododecanoic acid (PFDOA)	34.1	ng/L	0.691	5.00	32		106	77-137			
Perfluoroheptane sulfonic acid (PFHpS)	33.5	ng/L	0.566	5.00	30.5		110	70-137			
Perfluoroheptanoic acid (PFHpA)	32.8	ng/L	1.73	5.00	32		103	67-130			
Perfluorohexane sulfonic acid (PFHxS)	28.6	ng/L	0.903	5.00	29.1		98.2	68-131			
Perfluorohexanesulfonamide (PFHxSA)	28.2	ng/L	0.878	5.00	32		88.0	69-135			
Perfluorohexanoic acid (PFHxA)	30.2	ng/L	1.20	5.00	32		94.2	72-129			
Perfluorononane sulfonic acid (PFNS)	31.5	ng/L	0.496	5.00	30.7		103	70-132			
Perfluorononanoic acid (PFNA)	28.1	ng/L	0.870	5.00	32		87.8	75-131			
Perfluorooctane sulfonamide (PFOSAm)	33.5	ng/L	0.711	5.00	32		105	66-140			
Perfluorooctane sulfonic acid (PFOS)	28.8	ng/L	0.892	2.00	29.7		96.8	72-133			
Perfluorooctanoic acid (PFOA)	30.1	ng/L	0.630	2.00	32		93.9	71-133			
Perfluoropentane sulfonic acid (PFPeS)	31.0	ng/L	0.556	5.00	30		103	73-137			
Perfluoropentanoic acid (PFPeA)	33.8	ng/L	1.28	5.00	32		106	72-129			
Perfluorotetradecanoic acid (PFTDA)	26.0	ng/L	2.64	5.00	32		81.1	62-139			
Perfluorotridecanoic acid (PFTDA)	27.4	ng/L	1.93	5.00	32		85.5	47-147			
Perfluoroundecanoic acid (PFUnDA)	32.3	ng/L	0.974	5.00	32		101	80-135			
Surr: 13C2-FtS 4:2	187	ng/L			149.44		125	50-150			
Surr: 13C2-FtS 6:2	209	ng/L			152		137	50-150			
Surr: 13C2-FtS 8:2	211	ng/L			153.28		138	50-150			
Surr: 13C2-PFDA	173	ng/L			160		108	50-150			
Surr: 13C2-PFDoA	182	ng/L			160		114	50-150			
Surr: 13C2-PFHxA	200	ng/L			160		125	50-150			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2441045-002

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/04/26 23:22

Prep Date: 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 13C2-PFTeA	149	ng/L			160		93.3	27-134			
Surr: 13C2-PFUnA	175	ng/L			160		109	50-150			
Surr: 13C3-HFPO-DA	183	ng/L			160		114	41-142			
Surr: 13C3-PFBS	184	ng/L			148.8		124	50-150			
Surr: 13C4-PFBA	198	ng/L			160		124	50-150			
Surr: 13C4-PFHpA	203	ng/L			160		127	42-141			
Surr: 13C4-PFOA	209	ng/L			160		131	50-150			
Surr: 13C4-PFOS	172	ng/L			152.8		113	50-150			
Surr: 13C5-PFNA	197	ng/L			160		123	50-150			
Surr: 13C5-PFPeA	190	ng/L			160		119	43-138			
Surr: 13C8-FOSA	166	ng/L			160		104	30-122			
Surr: 18O2-PFHxS	169	ng/L			151.2		112	50-150			
Surr: d3-N-MeFOSAA	168	ng/L			160		105	35-136			
Surr: d5-N-EtFOSAA	167	ng/L			160		104	34-142			

MS	CLIENT ID: BCGW	Lab ID: QC-2441045-005

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/05/26 01:19

Prep Date: 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	146	ng/L	0.486	5.20	31.306	<0.486	464	61-128			S
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	32.7	ng/L	1.18	5.20	31.93	<1.18	101	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	30.9	ng/L	0.973	5.20	31.098	<0.973	99.0	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	33.6	ng/L	2.00	5.20	31.514	<2.00	104	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	41.1	ng/L	1.12	5.20	33.282	<1.12	123	39-117			S
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	36.6	ng/L	3.14	5.20	33.282	<3.14	107	71-138			
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	65.5	ng/L	1.45	5.20	33.282	27.9	113	64-134			
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	77.6	ng/L	0.585	5.20	31.306	<0.585	248	74-135			S
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	137	ng/L	0.466	5.20	30.994	<0.466	441	69-133			S
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	37.9	ng/L	1.22	5.20	33.282	<1.22	112	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	34.7	ng/L	1.61	5.20	33.282	2.04	98.0	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	28.9	ng/L	0.670	5.20	33.282	1.68	81.9	67-133			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

MS	CLIENT ID: BCGW	Lab ID: QC-2441045-005

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/05/26 01:19**Prep Date:** 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	314	ng/L	0.921	5.20	28.8	161	NC	74-131			O
Perfluorobutane sulfonic acid (PFBS)	431	ng/L	0.365	5.20	28.3	440	NC	69-141			O
Perfluorobutanoic acid (PFBA)	169	ng/L	2.70	5.20	32	142	NC	73-139			O
Perfluorobutylsulfonamide (PFBSA)	196	ng/L	2.06	5.20	32	186	NC	68-164			O
Perfluorodecane sulfonic acid (PFDS)	159	ng/L	1.42	5.20	32.034	4.88	482	64-128			S
Perfluorodecanoic acid (PFDA)	67.5	ng/L	1.29	5.20	33.282	35.3	96.8	77-135			
Perfluorododecanoic acid (PFDOA)	39.4	ng/L	0.719	5.20	33.282	<0.719	117	77-137			
Perfluoroheptanoic acid (PFHpA)	348	ng/L	1.80	5.20	32	342	NC	67-130			O
Perfluorononane sulfonic acid (PFNS)	472	ng/L	0.516	5.20	30.7	344	NC	70-132			O
Perfluorononanoic acid (PFNA)	136	ng/L	0.905	5.20	33.282	113	67.5	75-131			S
Perfluorooctane sulfonamide (PFOSAm)	54.4	ng/L	0.739	5.20	33.282	19.9	104	66-140			
Perfluoropentanoic acid (PFPeA)	370	ng/L	1.33	5.20	32	365	NC	72-129			O
Perfluorotetradecanoic acid (PFTDA)	30.9	ng/L	2.75	5.20	33.282	<2.75	92.2	62-139			
Perfluorotridecanoic acid (PFTrDA)	30.9	ng/L	2.01	5.20	33.282	<2.01	92.7	47-147			
Perfluoroundecanoic acid (PFUnDA)	38.5	ng/L	1.01	5.20	33.282	1.29	112	80-135			
Surr: 13C2-FtS 4:2	645	ng/L			155.43		415	50-150			S
Surr: 13C2-FtS 6:2	358	ng/L			158.09		226	50-150			S
Surr: 13C2-FtS 8:2	438	ng/L			159.42		275	50-150			S
Surr: 13C2-PFDA	207	ng/L			166.41		124	50-150			
Surr: 13C2-PFDoA	191	ng/L			166.41		115	50-150			
Surr: 13C2-PFHxA	139	ng/L			166.41		83.3	50-150			
Surr: 13C2-PFTeA	183	ng/L			166.41		110	27-134			
Surr: 13C2-PFUnA	192	ng/L			166.41		115	50-150			
Surr: 13C3-HFPO-DA	156	ng/L			166.41		94.0	41-142			
Surr: 13C3-PFBS	179	ng/L			154.76		116	50-150			
Surr: 13C4-PFBA	185	ng/L			166.41		111	50-150			
Surr: 13C4-PFHpA	71.6	ng/L			166.41		43.0	42-141			
Surr: 13C4-PFOA	113	ng/L			166.41		67.9	50-150			
Surr: 13C4-PFOS	35.9	ng/L			158.92		22.6	50-150			S
Surr: 13C5-PFNA	64.1	ng/L			166.41		38.5	50-150			S
Surr: 13C5-PFPeA	164	ng/L			166.41		98.5	43-138			
Surr: 13C8-FOSA	177	ng/L			166.41		106	30-122			
Surr: 18O2-PFHxS	49.6	ng/L			157.26		31.5	50-150			S
Surr: d3-N-MeFOSAA	183	ng/L			166.41		110	35-136			
Surr: d5-N-EtFOSAA	185	ng/L			166.41		111	34-142			

DUP	CLIENT ID: Batch QC	Lab ID: QC-2441045-007

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/05/26 01:48**Prep Date:** 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1H, 1H, 2H, 2H- Perfluorodecanesulfonic acid (8:2 FTS)	<1.19	ng/L	1.19	5.27		<1.15			NC		U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

DUP	CLIENT ID: Batch QC				Lab ID: QC-2441045-007							

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/05/26 01:48

Prep Date: 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	<0.986	ng/L	0.986	5.27		<0.951			NC		U
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	<2.02	ng/L	2.02	5.27		<1.95			NC		U
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	<1.14	ng/L	1.14	5.27		<1.10			NC		U
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	<3.18	ng/L	3.18	5.27		<3.07			NC		U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	<1.46	ng/L	1.46	5.27		<1.41			NC		U
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<0.592	ng/L	0.592	5.27		<0.571			NC		U
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	<1.23	ng/L	1.23	5.27		<1.19			NC		U
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	<0.679	ng/L	0.679	5.27		<0.654			NC		U
Perfluorobutane sulfonic acid (PFBS)	<0.370	ng/L	0.370	5.27		<0.357			NC		U
Perfluorobutanoic acid (PFBA)	26.6	ng/L	2.74	5.27		27.4			3.00	30	
Perfluorobutylsulfonamide (PFBSA)	<2.09	ng/L	2.09	5.27		<2.02			NC		U
Perfluorodecanoic acid (PFDA)	<1.31	ng/L	1.31	5.27		<1.26			NC		U
Perfluorododecanoic acid (PFDOA)	<0.728	ng/L	0.728	5.27		<0.702			NC		U
Perfluoroheptane sulfonic acid (PFHpS)	<0.596	ng/L	0.596	5.27		<0.575			NC		U
Perfluoroheptanoic acid (PFHpA)	<1.82	ng/L	1.82	5.27		<1.76			NC		U
Perfluorohexane sulfonic acid (PFHxS)	2.03	ng/L	0.952	5.27		1.25			NC		J
Perfluorohexanesulfonamide (PFHxSA)	<0.925	ng/L	0.925	5.27		<0.892			NC		U
Perfluorohexanoic acid (PFHxA)	<1.26	ng/L	1.26	5.27		<1.22			NC		U
Perfluorononanoic acid (PFNA)	<0.917	ng/L	0.917	5.27		<0.884			NC		U
Perfluorooctane sulfonamide (PFOSAm)	<0.749	ng/L	0.749	5.27		<0.723			NC		U
Perfluorooctanoic acid (PFOA)	<0.664	ng/L	0.664	2.11		<0.640			NC		U
Perfluoropentane sulfonic acid (PFPeS)	<0.586	ng/L	0.586	5.27		<0.565			NC		U
Perfluoropentanoic acid (PFPeA)	<1.35	ng/L	1.35	5.27		<1.30			NC		U
Perfluorotetradecanoic acid (PFTDA)	<2.78	ng/L	2.78	5.27		<2.68			NC		U
Perfluorotridecanoic acid (PFTTrDA)	<2.03	ng/L	2.03	5.27		<1.96			NC		U
Perfluoroundecanoic acid (PFUnDA)	<1.03	ng/L	1.03	5.27		<0.990			NC		U
Surr: 13C2-FtS 4:2	185	ng/L			149.44		117	50-150	7.08	30	
Surr: 13C2-FtS 6:2	220	ng/L			152		137	50-150	6.02	30	
Surr: 13C2-FtS 8:2	241	ng/L			153.28		149	50-150	24.1	30	
Surr: 13C2-PFDA	195	ng/L			160		116	50-150	10.9	30	
Surr: 13C2-PFDoA	187	ng/L			160		111	50-150	11.4	30	
Surr: 13C2-PFHxA	209	ng/L			160		124	50-150	7.53	30	
Surr: 13C2-PFTeA	175	ng/L			160		104	27-134	6.55	30	
Surr: 13C2-PFUnA	178	ng/L			160		106	50-150	3.85	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3862234

DUP	CLIENT ID: Batch QC	Lab ID: QC-2441045-007

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/05/26 01:48

Prep Date: 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 13C3-HFPO-DA	204	ng/L			160		121	41-142	8.62	30	
Surr: 13C3-PFBS	188	ng/L			148.8		120	50-150	7.79	30	
Surr: 13C4-PFBA	193	ng/L			160		114	50-150	7.27	30	
Surr: 13C4-PFHpA	225	ng/L			160		133	42-141	21.7	30	
Surr: 13C4-PFOA	202	ng/L			160		120	50-150	10.5	30	
Surr: 13C5-PFNA	197	ng/L			160		117	50-150	2.60	30	
Surr: 13C5-PFPeA	197	ng/L			160		117	43-138	8.93	30	
Surr: 13C8-FOSA	172	ng/L			160		102	30-122	5.54	30	
Surr: 18O2-PFHxS	188	ng/L			151.2		118	50-150	17.0	30	
Surr: d3-N-MeFOSAA	171	ng/L			160		101	35-136	5.91	30	

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WASTEWATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: 02/02/26 10:00
Date Received: 02/03/26 08:10
Run ID: 3865489

Per- and Polyfluorinated Alkyl Substances by LC-MS

MS	CLIENT ID: BCGW	Lab ID: QC-2441045-005

Method: EPA 537Mod **Dilution:** 20 **Analysis Date:** 02/06/26 03:29
Prep Date: 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoroheptane sulfonic acid (PFHpS)	1070	ng/L	11.8	104	30.5	945	NC	70-137			O
Perfluorohexanesulfonamide (PFHxSA)	5500	ng/L	18.3	104	32	5080	NC	69-135			O
Perfluorohexanoic acid (PFHxA)	1890	ng/L	25.0	104	32	1700	NC	72-129			O
Perfluorooctanoic acid (PFOA)	1350	ng/L	13.1	41.6	32	1150	NC	71-133			O
Perfluoropentane sulfonic acid (PFPeS)	988	ng/L	11.6	104	30	898	NC	73-137			O

DUP	CLIENT ID: Batch QC	Lab ID: QC-2441045-007

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/05/26 21:38
Prep Date: 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	<0.492	ng/L	0.492	5.27		<0.475			NC		U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	<0.472	ng/L	0.472	5.27		<0.455			NC		U
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	<1.63	ng/L	1.63	5.27		<1.57			NC		U
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	<0.934	ng/L	0.934	5.27		<0.900			NC		U
Perfluorodecane sulfonic acid (PFDS)	<1.44	ng/L	1.44	5.27		<1.39			NC		U
Perfluorononane sulfonic acid (PFNS)	<0.523	ng/L	0.523	5.27		<0.504			NC		U
Perfluorooctane sulfonic acid (PFOS)	<0.940	ng/L	0.940	2.11		<0.907			NC		U
Surr: 13C4-PFOS	174	ng/L			152.8		108	50-150	13.1	30	
Surr: d5-N-EtFOSAA	183	ng/L			160		108	34-142	9.51	30	

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2441045

Work Order: HN2601120
Date Collected: 01/20/26 14:00
Date Received: 01/23/26 11:00
Run ID: 3865654

Per- and Polyfluorinated Alkyl Substances by LC-MS

MS	CLIENT ID: BCGW	Lab ID: QC-2441045-005

Method: EPA 537Mod**Dilution:** 300**Analysis Date:** 02/06/26 03:00**Prep Date:** 02/04/26 14:31

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorohexane sulfonic acid (PFHxS)	12300	ng/L	282	1560	29.1	13500	NC	68-131			O
Perfluorooctane sulfonic acid (PFOS)	32700	ng/L	278	624	29.7	39600	NC	72-133			O

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2431037

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847191

Semivolatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2431037-001

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 01/28/26 14:49**Prep Date:** 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	<0.420	µg/L	0.420	1.00							U
1,2,4,5-Tetrachlorobenzene	<1.71	µg/L	1.71	5.00							U
1,4-Dioxane (1,4- Diethyleneoxide)	<0.720	µg/L	0.720	5.00							U
1-Methylnaphthalene	<0.0830	µg/L	0.0830	0.100							U
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	<0.230	µg/L	0.230	1.00							U
2,3,4,6-Tetrachlorophenol	<0.450	µg/L	0.450	1.00							U
2,4,5-Trichlorophenol	<0.170	µg/L	0.170	1.00							U
2,4,6-Trichlorophenol	<0.250	µg/L	0.250	1.00							U
2,4-Dichlorophenol	<0.350	µg/L	0.350	1.00							U
2,4-Dimethylphenol	<0.360	µg/L	0.360	1.00							U
2,4-Dinitrophenol	<2.61	µg/L	2.61	5.00							U
2,4-Dinitrotoluene (2,4-DNT)	<0.350	µg/L	0.350	1.00							U
2,6-Dinitrotoluene (2,6-DNT)	<0.330	µg/L	0.330	1.00							U
2-Chloronaphthalene	<0.0750	µg/L	0.0750	0.100							U
2-Chlorophenol	<0.230	µg/L	0.230	1.00							U
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	<0.270	µg/L	0.270	1.00							U
2-Methylnaphthalene	<0.0650	µg/L	0.0650	0.100							U
2-Methylphenol (o-Cresol)	<0.250	µg/L	0.250	1.00							U
2-Nitroaniline	<0.210	µg/L	0.210	1.00							U
2-Nitrophenol	<0.340	µg/L	0.340	1.00							U
3&4-Methylphenol	<0.210	µg/L	0.210	1.00							U
3,3'-Dichlorobenzidine	<0.460	µg/L	0.460	5.00							U
3-Nitroaniline	<0.188	µg/L	0.188	1.00							U
4-Bromophenyl phenyl ether (BDE-3)	<0.330	µg/L	0.330	1.00							U
4-Chloro-3-methylphenol	<0.260	µg/L	0.260	1.00							U
4-Chloroaniline	<0.340	µg/L	0.340	1.00							U
4-Chlorophenyl phenylether	<0.310	µg/L	0.310	1.00							U
4-Nitroaniline	<0.228	µg/L	0.228	1.00							U
4-Nitrophenol	<1.08	µg/L	1.08	5.00							U
Acenaphthene	<0.0810	µg/L	0.0810	0.100							U
Acenaphthylene	<0.0750	µg/L	0.0750	0.100							U
Acetophenone	<0.370	µg/L	0.370	1.00							U
Anthracene	<0.0810	µg/L	0.0810	0.100							U
Atrazine	<0.350	µg/L	0.350	1.00							U
Benzaldehyde	<0.520	µg/L	0.520	1.00							U
Benzo(a)anthracene	<0.0990	µg/L	0.0990	0.100							U
Benzo(a)pyrene	<0.0440	µg/L	0.0440	0.100							U
Benzo(b)fluoranthene	<0.0510	µg/L	0.0510	0.100							U
Benzo(g,h,i)perylene	<0.0890	µg/L	0.0890	0.100							U
Benzo(k)fluoranthene	<0.0480	µg/L	0.0480	0.100							U
bis(2-Chloroethoxy)methane	<0.290	µg/L	0.290	1.00							U
bis(2-Chloroethyl) ether	<0.370	µg/L	0.370	1.00							U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2431037

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847191

MB	CLIENT ID: Method Blank	Lab ID: QC-2431037-001

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 01/28/26 14:49**Prep Date:** 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Butyl benzyl phthalate	<0.300	µg/L	0.300	1.00							U
Caprolactam	<0.960	µg/L	0.960	5.00							U
Carbazole	<0.240	µg/L	0.240	1.00							U
Chrysene	<0.0480	µg/L	0.0480	0.100							U
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	<0.400	µg/L	0.400	1.00							U
Dibenz(a,h) anthracene	<0.0730	µg/L	0.0730	0.100							U
Dibenzofuran	<0.230	µg/L	0.230	1.00							U
Diethyl phthalate	<0.350	µg/L	0.350	1.00							U
Dimethyl phthalate	<0.650	µg/L	0.650	1.00							U
Di-n-butyl phthalate	<0.200	µg/L	0.200	1.00							U
Di-n-octyl phthalate	<0.530	µg/L	0.530	1.00							U
Fluoranthene	<0.0827	µg/L	0.0827	0.100							U
Fluorene	<0.0510	µg/L	0.0510	0.100							U
Hexachlorobenzene	<0.440	µg/L	0.440	1.00							U
Hexachlorobutadiene	<0.630	µg/L	0.630	1.00							U
Hexachlorocyclopentadiene	<1.09	µg/L	1.09	5.00							U
Hexachloroethane	<0.620	µg/L	0.620	1.00							U
Indeno(1,2,3-cd) pyrene	<0.0670	µg/L	0.0670	0.100							U
Isophorone	<0.340	µg/L	0.340	5.00							U
Methylphenol, Total	<0.460	µg/L	0.460	2.00							U
Naphthalene	<0.0670	µg/L	0.0670	0.100							U
Nitrobenzene	<0.260	µg/L	0.260	1.00							U
n-Nitrosodi-n-propylamine	<0.350	µg/L	0.350	1.00							U
N-Nitrosodiphenylamine	<0.490	µg/L	0.490	1.00							U
Pentachlorophenol	<0.970	µg/L	0.970	5.00							U
Phenanthrene	<0.0810	µg/L	0.0810	0.100							U
Phenol	<0.210	µg/L	0.210	1.00							U
Pyrene	<0.0872	µg/L	0.0872	0.100							U
Pyridine	<1.13	µg/L	1.13	10.0							U
Surr: 2,4,6-Tribromophenol	10.4	µg/L			50		20.7	38-103			S
Surr: 2-Fluorobiphenyl	12.0	µg/L			50		23.9	36-96			S
Surr: 2-Fluorophenol	15.9	µg/L			50		31.7	20-73			
Surr: 4-Terphenyl-d14	18.8	µg/L			50		37.5	44-114			S
Surr: Nitrobenzene-d5	11.4	µg/L			50		22.8	33-100			S
Surr: Phenol-d6	10.8	µg/L			50		21.6	10-48			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2431037-002

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 01/28/26 15:10**Prep Date:** 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	0.940	µg/L	0.420	1.00	20		4.70	24-111			JS
1,2,4,5-Tetrachlorobenzene	<1.71	µg/L	1.71	5.00	20		4.75	14-110			SU
1-Methylnaphthalene	0.730	µg/L	0.0830	0.100	20		3.65	17-114			S

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2431037

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847191

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2431037-002

Method: EPA 8270E

Dilution: 1

Analysis Date: 01/28/26 15:10

Prep Date: 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	0.760	µg/L	0.230	1.00	20		3.80	31-104			JS
2,3,4,6-Tetrachlorophenol	0.980	µg/L	0.450	1.00	20		4.90	33-110			JS
2,4,5-Trichlorophenol	1.29	µg/L	0.170	1.00	20		6.45	33-114			S
2,4,6-Trichlorophenol	0.840	µg/L	0.250	1.00	20		4.20	36-113			JS
2,4-Dichlorophenol	2.41	µg/L	0.350	1.00	20		12.0	30-111			S
2,4-Dimethylphenol	3.08	µg/L	0.360	1.00	20		15.4	36-109			S
2,4-Dinitrophenol	<2.61	µg/L	2.61	5.00	20		4.75	36-109			SU
2,4-Dinitrotoluene (2,4-DNT)	0.880	µg/L	0.350	1.00	20		4.40	51-107			JS
2,6-Dinitrotoluene (2,6-DNT)	0.810	µg/L	0.330	1.00	20		4.05	51-105			JS
2-Chloronaphthalene	0.890	µg/L	0.0750	0.100	20		4.45	22-112			S
2-Chlorophenol	5.26	µg/L	0.230	1.00	20		26.3	35-108			S
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	0.830	µg/L	0.270	1.00	20		4.15	28-121			JS
2-Methylnaphthalene	0.840	µg/L	0.0650	0.100	20		4.20	12-119			S
2-Methylphenol (o-Cresol)	6.57	µg/L	0.250	1.00	20		32.8	31-100			
2-Nitroaniline	1.79	µg/L	0.210	1.00	20		8.95	46-106			S
2-Nitrophenol	1.01	µg/L	0.340	1.00	20		5.05	26-111			S
3&4-Methylphenol	6.91	µg/L	0.210	1.00	20		34.6	24-95			
3,3'-Dichlorobenzidine	0.660	µg/L	0.460	5.00	20		3.30	48-101			JS
3-Nitroaniline	9.24	µg/L	0.188	1.00	20		46.2	52-105			S
4-Bromophenyl phenyl ether (BDE-3)	0.830	µg/L	0.330	1.00	20		4.15	49-107			JS
4-Chloro-3-methylphenol	4.53	µg/L	0.260	1.00	20		22.6	35-105			S
4-Chloroaniline	16.5	µg/L	0.340	1.00	20		82.6	46-101			
4-Chlorophenyl phenylether	0.870	µg/L	0.310	1.00	20		4.35	40-107			JS
4-Nitroaniline	5.13	µg/L	0.228	1.00	20		25.6	49-110			S
4-Nitrophenol	2.68	µg/L	1.08	5.00	20		13.4	10-64			J
Acenaphthene	0.710	µg/L	0.0810	0.100	20		3.55	32-108			S
Acenaphthylene	0.640	µg/L	0.0750	0.100	20		3.20	34-107			S
Acetophenone	1.25	µg/L	0.370	1.00	20		6.25	41-102			S
Anthracene	0.740	µg/L	0.0810	0.100	20		3.70	53-105			S
Atrazine	1.62	µg/L	0.350	1.00	20		8.10	53-112			S
Benzaldehyde	1.48	µg/L	0.520	1.00	20		7.40	32-111			S
Benzo(a)anthracene	0.810	µg/L	0.0990	0.100	20		4.05	57-106			S
Benzo(a)pyrene	0.780	µg/L	0.0440	0.100	20		3.90	54-107			S
Benzo(b)fluoranthene	0.940	µg/L	0.0510	0.100	20		4.70	53-109			S
Benzo(g,h,i)perylene	1.34	µg/L	0.0890	0.100	20		6.70	50-114			S
Benzo(k)fluoranthene	0.890	µg/L	0.0480	0.100	20		4.45	53-110			S
bis(2-Chloroethoxy)methane	0.760	µg/L	0.290	1.00	20		3.80	42-101			JS
bis(2-Chloroethyl) ether	20.7	µg/L	0.370	1.00	20		104	39-100			S
Butyl benzyl phthalate	0.790	µg/L	0.300	1.00	20		3.95	45-112			JS
Carbazole	0.780	µg/L	0.240	1.00	20		3.90	55-106			JS
Chrysene	1.08	µg/L	0.0480	0.100	20		5.40	57-108			S
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1.07	µg/L	0.400	1.00	20		5.35	53-116			S
Dibenz(a,h) anthracene	1.32	µg/L	0.0730	0.100	20		6.60	51-112			S

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2431037

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847191

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2431037-002

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 01/28/26 15:10**Prep Date:** 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Dibenzofuran	0.960	µg/L	0.230	1.00	20		4.80	37-107			JS
Diethyl phthalate	0.800	µg/L	0.350	1.00	20		4.00	44-114			JS
Dimethyl phthalate	0.920	µg/L	0.200	1.00	20		4.60	40-115			JS
Di-n-butyl phthalate	0.770	µg/L	0.210	1.00	20		3.85	49-112			JS
Di-n-octyl phthalate	0.940	µg/L	0.530	1.00	20		4.70	47-120			JS
Fluoranthene	0.770	µg/L	0.0827	0.100	20		3.85	54-107			S
Fluorene	0.820	µg/L	0.0510	0.100	20		4.10	42-107			S
Hexachlorobenzene	0.850	µg/L	0.440	1.00	20		4.25	50-105			JS
Hexachlorobutadiene	<0.630	µg/L	0.630	1.00	20		1.90	10-112			SU
Hexachlorocyclopentadiene	<1.09	µg/L	1.09	5.00	20		1.45	10-102			SU
Hexachloroethane	<0.620	µg/L	0.620	1.00	20		1.60	10-115			SU
Indeno(1,2,3-cd) pyrene	1.16	µg/L	0.0670	0.100	20		5.80	49-113			S
Isophorone	1.11	µg/L	0.340	5.00	20		5.55	42-103			JS
Methylphenol, Total	13.5	µg/L	0.460	2.00	40		33.7	24-100			
Naphthalene	0.630	µg/L	0.0670	0.100	20		3.15	18-109			S
Nitrobenzene	0.920	µg/L	0.260	1.00	20		4.60	38-101			JS
n-Nitrosodi-n-propylamine	1.01	µg/L	0.350	1.00	20		5.05	40-104			S
N-Nitrosodiphenylamine	0.720	µg/L	0.490	1.00	20		3.60	49-105			JS
Pentachlorophenol	<0.970	µg/L	0.970	5.00	20		3.10	22-109			SU
Phenanthrene	0.910	µg/L	0.0810	0.100	20		4.55	51-103			S
Phenol	4.34	µg/L	0.210	1.00	20		21.7	10-63			
Pyrene	0.760	µg/L	0.0872	0.100	20		3.80	50-105			S
Pyridine	7.22	µg/L	1.13	10.0	20		36.1	11-77			J
Surr: 2,4,6-Tribromophenol	1.80	µg/L			50		3.60	38-103			S
Surr: 2-Fluorobiphenyl	1.97	µg/L			50		3.94	36-96			S
Surr: 2-Fluorophenol	16.3	µg/L			50		32.6	20-73			
Surr: 4-Terphenyl-d14	15.0	µg/L			50		30.0	44-114			S
Surr: Nitrobenzene-d5	1.92	µg/L			50		3.84	33-100			S
Surr: Phenol-d6	12.0	µg/L			50		23.9	10-48			

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2431037-003

Method: EPA 8270E**Dilution:** 1**Analysis Date:** 01/28/26 15:31**Prep Date:** 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1'-Biphenyl (BZ-0)	0.860	µg/L	0.420	1.00	20		4.30	24-111	NC		JS
1,2,4,5-Tetrachlorobenzene	<1.71	µg/L	1.71	5.00	20		5.40	14-110	NC		US
1-Methylnaphthalene	0.680	µg/L	0.0830	0.100	20		3.40	17-114	7.09	30	S
2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether	0.730	µg/L	0.230	1.00	20		3.65	31-104	NC		JS
2,3,4,6-Tetrachlorophenol	0.780	µg/L	0.450	1.00	20		3.90	33-110	NC		JS
2,4,5-Trichlorophenol	1.19	µg/L	0.170	1.00	20		5.95	33-114	8.06	30	S
2,4,6-Trichlorophenol	0.840	µg/L	0.250	1.00	20		4.20	36-113	NC		JS
2,4-Dichlorophenol	2.24	µg/L	0.350	1.00	20		11.2	30-111	7.31	30	S
2,4-Dimethylphenol	3.17	µg/L	0.360	1.00	20		15.8	36-109	2.88	30	S

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2431037

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847191

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2431037-003

Method: EPA 8270E

Dilution: 1

Analysis Date: 01/28/26 15:31

Prep Date: 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
2,4-Dinitrophenol	<2.61	µg/L	2.61	5.00	20		4.50	36-109	NC		US
2,4-Dinitrotoluene (2,4-DNT)	0.830	µg/L	0.350	1.00	20		4.15	51-107	NC		JS
2,6-Dinitrotoluene (2,6-DNT)	0.790	µg/L	0.330	1.00	20		3.95	51-105	NC		JS
2-Chloronaphthalene	0.890	µg/L	0.0750	0.100	20		4.45	22-112	0.00	30	S
2-Chlorophenol	4.92	µg/L	0.230	1.00	20		24.6	35-108	6.68	30	S
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	0.700	µg/L	0.270	1.00	20		3.50	28-121	NC		JS
2-Methylnaphthalene	0.800	µg/L	0.0650	0.100	20		4.00	12-119	4.88	30	S
2-Methylphenol (o-Cresol)	6.48	µg/L	0.250	1.00	20		32.4	31-100	1.38	30	
2-Nitroaniline	1.67	µg/L	0.210	1.00	20		8.35	46-106	6.94	30	S
2-Nitrophenol	1.00	µg/L	0.340	1.00	20		5.00	26-111	0.995	30	S
3&4-Methylphenol	6.65	µg/L	0.210	1.00	20		33.2	24-95	3.83	30	
3,3'-Dichlorobenzidine	0.630	µg/L	0.460	5.00	20		3.15	48-101	NC		JS
3-Nitroaniline	8.88	µg/L	0.188	1.00	20		44.4	52-105	3.97	30	S
4-Bromophenyl phenyl ether (BDE-3)	0.710	µg/L	0.330	1.00	20		3.55	49-107	NC		JS
4-Chloro-3-methylphenol	4.29	µg/L	0.260	1.00	20		21.4	35-105	5.44	30	S
4-Chloroaniline	16.2	µg/L	0.340	1.00	20		80.8	46-101	2.20	30	
4-Chlorophenyl phenylether	0.830	µg/L	0.310	1.00	20		4.15	40-107	NC		JS
4-Nitroaniline	4.74	µg/L	0.228	1.00	20		23.7	49-110	7.90	30	S
4-Nitrophenol	2.15	µg/L	1.08	5.00	20		10.8	10-64	NC		J
Acenaphthene	0.680	µg/L	0.0810	0.100	20		3.40	32-108	4.32	30	S
Acenaphthylene	0.610	µg/L	0.0750	0.100	20		3.05	34-107	4.80	30	S
Acetophenone	1.15	µg/L	0.370	1.00	20		5.75	41-102	8.33	30	S
Anthracene	0.670	µg/L	0.0810	0.100	20		3.35	53-105	9.93	30	S
Atrazine	1.43	µg/L	0.350	1.00	20		7.15	53-112	12.5	30	S
Benzaldehyde	1.46	µg/L	0.520	1.00	20		7.30	32-111	1.36	30	S
Benzo(a)anthracene	0.610	µg/L	0.0990	0.100	20		3.05	57-106	28.2	30	S
Benzo(a)pyrene	0.540	µg/L	0.0440	0.100	20		2.70	54-107	36.4	30	RS
Benzo(b)fluoranthene	0.650	µg/L	0.0510	0.100	20		3.25	53-109	36.5	30	RS
Benzo(g,h,i)perylene	0.870	µg/L	0.0890	0.100	20		4.35	50-114	42.5	30	RS
Benzo(k)fluoranthene	0.640	µg/L	0.0480	0.100	20		3.20	53-110	32.7	30	RS
bis(2-Chloroethoxy)methane	0.730	µg/L	0.290	1.00	20		3.65	42-101	NC		JS
bis(2-Chloroethyl) ether	21.0	µg/L	0.370	1.00	20		105	39-100	1.29	30	S
Butyl benzyl phthalate	0.690	µg/L	0.300	1.00	20		3.45	45-112	NC		JS
Carbazole	0.720	µg/L	0.240	1.00	20		3.60	55-106	NC		JS
Chrysene	0.780	µg/L	0.0480	0.100	20		3.90	57-108	32.3	30	RS
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	0.840	µg/L	0.400	1.00	20		4.20	53-116	NC		JS
Dibenz(a,h) anthracene	0.890	µg/L	0.0730	0.100	20		4.45	51-112	38.9	30	RS
Dibenzofuran	0.920	µg/L	0.230	1.00	20		4.60	37-107	NC		JS
Diethyl phthalate	0.760	µg/L	0.350	1.00	20		3.80	44-114	NC		JS
Dimethyl phthalate	0.900	µg/L	0.200	1.00	20		4.50	40-115	NC		JS
Di-n-butyl phthalate	0.680	µg/L	0.210	1.00	20		3.40	49-112	NC		JS
Di-n-octyl phthalate	0.760	µg/L	0.530	1.00	20		3.80	47-120	NC		JS
Fluoranthene	0.640	µg/L	0.0827	0.100	20		3.20	54-107	18.4	30	S
Fluorene	0.750	µg/L	0.0510	0.100	20		3.75	42-107	8.92	30	S

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2431037

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3847191

DLCS	CLIENT ID: Laboratory Control Sample Duplicate	Lab ID: QC-2431037-003

Method: EPA 8270E

Dilution: 1

Analysis Date: 01/28/26 15:31

Prep Date: 01/27/26 08:38

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Hexachlorobenzene	0.680	µg/L	0.440	1.00	20		3.40	50-105	NC		JS
Hexachlorobutadiene	<0.630	µg/L	0.630	1.00	20		1.85	10-112	NC		US
Hexachlorocyclopentadiene	<1.09	µg/L	1.09	5.00	20		1.65	10-102	NC		US
Hexachloroethane	<0.620	µg/L	0.620	1.00	20		1.65	10-115	NC		US
Indeno(1,2,3-cd) pyrene	0.710	µg/L	0.0670	0.100	20		3.55	49-113	48.1	30	RS
Isophorone	0.960	µg/L	0.340	5.00	20		4.80	42-103	NC		JS
Methylphenol, Total	13.1	µg/L	0.460	2.00	40		32.8	24-100	2.63	30	
Naphthalene	0.580	µg/L	0.0670	0.100	20		2.90	18-109	8.26	30	S
Nitrobenzene	0.860	µg/L	0.260	1.00	20		4.30	38-101	NC		JS
n-Nitrosodi-n-propylamine	0.980	µg/L	0.350	1.00	20		4.90	40-104	NC		JS
N-Nitrosodiphenylamine	0.660	µg/L	0.490	1.00	20		3.30	49-105	NC		JS
Pentachlorophenol	<0.970	µg/L	0.970	5.00	20		2.85	22-109	NC		US
Phenanthrene	0.750	µg/L	0.0810	0.100	20		3.75	51-103	19.3	30	S
Phenol	3.98	µg/L	0.210	1.00	20		19.9	10-63	8.65	30	
Pyrene	0.600	µg/L	0.0872	0.100	20		3.00	50-105	23.5	30	S
Pyridine	7.00	µg/L	1.13	10.0	20		35.0	11-77	NC		J
Surr: 2,4,6-Tribromophenol	1.58	µg/L			50		3.16	38-103	13.0	30	S
Surr: 2-Fluorobiphenyl	1.69	µg/L			50		3.38	36-96	15.3	30	S
Surr: 2-Fluorophenol	14.7	µg/L			50		29.3	20-73	10.6	30	
Surr: 4-Terphenyl-d14	6.86	µg/L			50		13.7	44-114	74.5	30	SR
Surr: Nitrobenzene-d5	1.81	µg/L			50		3.62	33-100	5.90	30	S
Surr: Phenol-d6	10.8	µg/L			50		21.5	10-48	10.6	30	

The following samples were analyzed in this batch: HN2601120-001



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

Volatile Organic Compounds by GC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2432684-001

Method: EPA 8260D

Dilution: 1

Analysis Date: 01/27/26 14:00

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	<0.460	µg/L	0.460	1.00							U
1,1,2,2-Tetrachloroethane	<0.400	µg/L	0.400	1.00							U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.520	µg/L	0.520	1.00							U
1,1,2-Trichloroethane	<0.460	µg/L	0.460	1.00							U
1,1-Dichloroethane	<0.440	µg/L	0.440	1.00							U
1,1-Dichloroethylene	<0.400	µg/L	0.400	1.00							U
1,2,3-Trichlorobenzene	<2.99	µg/L	2.99	5.00							U
1,2,3-Trichloropropane	<0.400	µg/L	0.400	1.00							U
1,2,4-Trichlorobenzene	<0.940	µg/L	0.940	1.00							U
1,2,4-Trimethylbenzene	<0.450	µg/L	0.450	1.00							U
1,2-Dibromo-3-chloropropane (DBCP)	<0.430	µg/L	0.430	1.00							U
1,2-Dibromoethane (EDB, Ethylene dibromide)	<0.410	µg/L	0.410	1.00							U
1,2-Dichlorobenzene (o-Dichlorobenzene)	<0.320	µg/L	0.320	1.00							U
1,2-Dichloroethane (Ethylene dichloride)	<0.440	µg/L	0.440	1.00							U
1,2-Dichloropropane	<0.480	µg/L	0.480	1.00							U
1,3,5-Trimethylbenzene	<0.650	µg/L	0.650	1.00							U
1,3-Dichlorobenzene (m-Dichlorobenzene)	<0.330	µg/L	0.330	1.00							U
1,3-Dichloropropene	<0.570	µg/L	0.570	2.00							U
1,4-Dichlorobenzene (p-Dichlorobenzene)	<0.350	µg/L	0.350	1.00							U
2-Butanone (Methyl ethyl ketone, MEK)	<2.43	µg/L	2.43	5.00							U
2-Hexanone	<0.590	µg/L	0.590	5.00							U
4-Methyl-2-pentanone (MIBK)	<0.520	µg/L	0.520	1.00							U
Acetone	<4.53	µg/L	4.53	10.0							U
Benzene	<0.460	µg/L	0.460	1.00							U
Bromochloromethane	<0.450	µg/L	0.450	1.00							U
Bromodichloromethane	<0.490	µg/L	0.490	1.00							U
Bromoform	<0.560	µg/L	0.560	1.00							U
Carbon disulfide	<0.490	µg/L	0.490	1.00							U
Carbon tetrachloride	<0.400	µg/L	0.400	1.00							U
Chlorobenzene	<0.400	µg/L	0.400	1.00							U
Chlorodibromomethane	<0.400	µg/L	0.400	1.00							U
Chloroethane (Ethyl chloride)	<0.680	µg/L	0.680	1.00							U
Chloroform	<0.460	µg/L	0.460	1.00							U
cis & trans-1,2-Dichloroethene	<0.480	µg/L	0.480	2.00							U
cis-1,2-Dichloroethylene	<0.420	µg/L	0.420	1.00							U
cis-1,3-Dichloropropene	<0.570	µg/L	0.570	1.00							U
Cyclohexane	<0.630	µg/L	0.630	2.00							U
Dichlorodifluoromethane (Freon-12)	<0.680	µg/L	0.680	1.00							U

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

MB	CLIENT ID: Method Blank	Lab ID: QC-2432684-001

Method: EPA 8260D **Dilution:** 1 **Analysis Date:** 01/27/26 14:00
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Ethylbenzene	<0.340	µg/L	0.340	1.00							U
Isopropylbenzene	<0.350	µg/L	0.350	1.00							U
m+p-Xylene	<0.810	µg/L	0.810	2.00							U
Methyl acetate	<0.590	µg/L	0.590	2.00							U
Methyl bromide (Bromomethane)	<0.900	µg/L	0.900	1.00							U
Methyl chloride (Chloromethane)	<0.830	µg/L	0.830	5.00							U
Methyl tert-butyl ether (MTBE)	<0.450	µg/L	0.450	1.00							U
Methylcyclohexane	<0.350	µg/L	0.350	1.00							U
Methylene chloride (Dichloromethane)	<0.860	µg/L	0.860	5.00							U
o-Xylene	<0.310	µg/L	0.310	1.00							U
Styrene	<0.330	µg/L	0.330	1.00							U
Tetrachloroethylene (Perchloroethylene)	<0.390	µg/L	0.390	1.00							U
Toluene	<0.450	µg/L	0.450	1.00							U
Total Xylene	<0.810	µg/L	0.810	2.00							U
trans-1,2-Dichloroethylene	<0.480	µg/L	0.480	1.00							U
trans-1,3-Dichloropropylene	<0.380	µg/L	0.380	1.00							U
Trichloroethene (Trichloroethylene)	<0.430	µg/L	0.430	1.00							U
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	<0.520	µg/L	0.520	1.00							U
Vinyl chloride (Chloroethene)	<0.530	µg/L	0.530	1.00							U
Surr: 1,2-Dichloroethane-d4	19.5	µg/L			20		97.6	80-120			
Surr: 4-Bromofluorobenzene	21.6	µg/L			20		108	80-120			
Surr: Dibromofluoromethane	20.0	µg/L			20		100	80-120			
Surr: Toluene-d8	18.8	µg/L			20		94.0	80-120			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2432684-002

Method: EPA 8260D **Dilution:** 1 **Analysis Date:** 01/27/26 12:51
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.0	µg/L		1.00	20		89.8	75-119			
1,1,2,2-Tetrachloroethane	19.9	µg/L		1.00	20		99.5	80-123			
1,1,2-Trichloroethane	18.0	µg/L		1.00	20		89.9	83-118			
1,1-Dichloroethane	16.2	µg/L		1.00	20		80.8	73-122			
1,1-Dichloroethylene	16.4	µg/L		1.00	20		82.0	66-131			
1,2,3-Trichlorobenzene	15.6	µg/L		5.00	20		77.8	65-140			
1,2,3-Trichloropropane	19.2	µg/L		1.00	20		96.0	78-119			
1,2,4-Trichlorobenzene	17.5	µg/L		1.00	20		87.4	73-127			
1,2,4-Trimethylbenzene	19.0	µg/L		1.00	20		94.8	74-118			
1,2-Dibromo-3-chloropropane (DBCP)	16.0	µg/L		1.00	20		79.9	52-141			
1,2-Dibromoethane (EDB, Ethylene dibromide)	17.8	µg/L		1.00	20		88.9	60-159			
1,2-Dichlorobenzene (o-Dichlorobenzene)	16.5	µg/L		1.00	20		82.4	80-119			



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2432684-002

Method: EPA 8260D

Dilution: 1

Analysis Date: 01/27/26 12:51

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,2-Dichloroethane (Ethylene dichloride)	18.0	µg/L		1.00	20		89.9	78-121			
1,2-Dichloropropane	17.8	µg/L		1.00	20		89.2	78-120			
1,3,5-Trimethylbenzene	19.7	µg/L		1.00	20		98.6	76-120			
1,3-Dichlorobenzene (m-Dichlorobenzene)	16.8	µg/L		1.00	20		83.8	80-120			
1,3-Dichloropropene	36.4	µg/L		2.00	40		91.0	67-120			
1,4-Dichlorobenzene (p-Dichlorobenzene)	16.5	µg/L		1.00	20		82.6	81-119			
2-Butanone (Methyl ethyl ketone, MEK)	15.9	µg/L		5.00	20		79.4	69-147			
2-Hexanone	18.8	µg/L		5.00	20		94.0	67-140			
4-Methyl-2-pentanone (MIBK)	25.6	µg/L		1.00	20		128	68-199			
Acetone	18.7	µg/L		10.0	20		93.3	70-166			
Benzene	18.6	µg/L		1.00	20		93.0	78-120			
Bromochloromethane	17.2	µg/L		1.00	20		85.8	70-125			
Bromodichloromethane	16.7	µg/L		1.00	20		83.6	73-126			
Bromoform	15.9	µg/L		1.00	20		79.4	60-124			
Carbon disulfide	16.0	µg/L		1.00	20		80.2	67-159			
Carbon tetrachloride	18.1	µg/L		1.00	20		90.3	69-124			
Chlorobenzene	17.8	µg/L		1.00	20		88.8	80-118			
Chlorodibromomethane	16.4	µg/L		1.00	20		82.0	63-117			
Chloroethane (Ethyl chloride)	8.64	µg/L		1.00	20		43.2	35-136			
Chloroform	16.0	µg/L		1.00	20		79.8	75-119			
cis & trans-1,2-Dichloroethene	33.2	µg/L		2.00	40		83.1	73-124			
cis-1,2-Dichloroethylene	17.0	µg/L		1.00	20		84.8	75-123			
cis-1,3-Dichloropropene	18.7	µg/L		1.00	20		93.4	69-120			
Cyclohexane	17.1	µg/L		2.00	20		85.6	66-128			
Dichlorodifluoromethane (Freon-12)	9.28	µg/L		1.00	20		46.4	36-133			
Ethylbenzene	18.6	µg/L		1.00	20		93.0	76-116			
Isopropylbenzene	19.0	µg/L		1.00	20		95.1	77-118			
m+p-Xylene	38.0	µg/L		2.00	40		94.9	76-119			
Methyl acetate	17.0	µg/L		2.00	20		84.8	70-130			
Methyl bromide (Bromomethane)	13.1	µg/L		1.00	20		65.7	20-183			
Methyl chloride (Chloromethane)	11.7	µg/L		5.00	20		58.4	26-117			
Methyl tert-butyl ether (MTBE)	16.8	µg/L		1.00	20		84.1	77-137			
Methylcyclohexane	18.9	µg/L		1.00	20		94.6	66-125			
Methylene chloride (Dichloromethane)	16.7	µg/L		5.00	20		83.6	68-125			
o-Xylene	19.0	µg/L		1.00	20		94.9	77-116			
Styrene	18.1	µg/L		1.00	20		90.5	76-123			
Tetrachloroethylene (Perchloroethylene)	19.4	µg/L		1.00	20		96.8	80-124			
Toluene	17.8	µg/L		1.00	20		89.2	78-116			
Total Xylene	57.0	µg/L		2.00	60		94.9	77-119			
trans-1,2-Dichloroethylene	16.3	µg/L		1.00	20		81.5	73-124			
trans-1,3-Dichloropropylene	17.8	µg/L		1.00	20		88.8	67-118			
Trichloroethene (Trichloroethylene)	17.9	µg/L		1.00	20		89.7	75-122			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2432684-002

Method: EPA 8260D

Dilution: 1

Analysis Date: 01/27/26 12:51

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	11.3	µg/L		1.00	20		56.6	52-115			
Vinyl chloride (Chloroethene)	10.3	µg/L		1.00	20		51.7	49-122			
Surr: 1,2-Dichloroethane-d4	18.8	µg/L			20		93.9	80-120			
Surr: 4-Bromofluorobenzene	20.2	µg/L			20		101	80-120			
Surr: Dibromofluoromethane	19.0	µg/L			20		95.2	80-120			
Surr: Toluene-d8	19.5	µg/L			20		97.4	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-2432684-005

Method: EPA 8260D

Dilution: 100

Analysis Date: 01/27/26 21:35

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1860	µg/L	46.0	100	2000	<46.0	92.8	75-119			
1,1,2,2-Tetrachloroethane	2020	µg/L	40.0	100	2000	<40.0	101	80-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1810	µg/L	52.0	100	2000	<52.0	90.7	64-133			
1,1,2-Trichloroethane	1840	µg/L	46.0	100	2000	<46.0	92.0	83-118			
1,1-Dichloroethane	1730	µg/L	44.0	100	2000	<44.0	86.6	73-122			
1,1-Dichloroethylene	1740	µg/L	40.0	100	2000	<40.0	86.8	66-131			
1,2,3-Trichlorobenzene	1620	µg/L	299	500	2000	<299	80.8	65-140			
1,2,3-Trichloropropane	1930	µg/L	40.0	100	2000	<40.0	96.6	78-119			
1,2,4-Trichlorobenzene	1770	µg/L	94.0	100	2000	<94.0	88.3	73-127			
1,2,4-Trimethylbenzene	1980	µg/L	45.0	100	2000	<45.0	99.2	74-118			
1,2-Dibromo-3-chloropropane (DBCP)	1680	µg/L	43.0	100	2000	<43.0	84.1	52-141			
1,2-Dibromoethane (EDB, Ethylene dibromide)	1860	µg/L	41.0	100	2000	<41.0	92.9	60-159			
1,2-Dichlorobenzene (o-Dichlorobenzene)	1830	µg/L	32.0	100	2000	<32.0	91.5	80-119			
1,2-Dichloroethane (Ethylene dichloride)	1920	µg/L	44.0	100	2000	<44.0	96.1	78-121			
1,2-Dichloropropane	1860	µg/L	48.0	100	2000	<48.0	92.8	78-120			
1,3,5-Trimethylbenzene	2120	µg/L	65.0	100	2000	<65.0	106	76-120			
1,3-Dichlorobenzene (m-Dichlorobenzene)	1800	µg/L	33.0	100	2000	<33.0	90.2	80-120			
1,3-Dichloropropene	3550	µg/L	57.0	200	4000	<57.0	88.7	67-120			
1,4-Dichlorobenzene (p-Dichlorobenzene)	1860	µg/L	35.0	100	2000	<35.0	92.9	81-119			
2-Butanone (Methyl ethyl ketone, MEK)	1480	µg/L	243	500	2000	<243	74.2	69-147			
2-Hexanone	1900	µg/L	59.0	500	2000	<59.0	94.9	67-140			
4-Methyl-2-pentanone (MIBK)	2580	µg/L	52.0	100	2000	<52.0	129	68-199			
Acetone	1830	µg/L	453	1000	2000	<453	91.3	70-166			
Benzene	1950	µg/L	46.0	100	2000	<46.0	97.4	78-120			
Bromochloromethane	1880	µg/L	45.0	100	2000	<45.0	94.1	70-125			
Bromodichloromethane	1760	µg/L	49.0	100	2000	<49.0	87.8	73-126			
Bromoform	1640	µg/L	56.0	100	2000	<56.0	82.0	60-124			

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

MS	CLIENT ID: Batch QC	Lab ID: QC-2432684-005

Method: EPA 8260D**Dilution:** 100**Analysis Date:** 01/27/26 21:35**Prep Date:** NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Carbon disulfide	1540	µg/L	49.0	100	2000	<49.0	77.0	67-159			
Carbon tetrachloride	1880	µg/L	40.0	100	2000	<40.0	94.2	69-124			
Chlorobenzene	1880	µg/L	40.0	100	2000	<40.0	94.1	80-118			
Chlorodibromomethane	1680	µg/L	40.0	100	2000	<40.0	84.0	63-117			
Chloroethane (Ethyl chloride)	1140	µg/L	68.0	100	2000	<68.0	56.8	26-117			
Chloroform	1740	µg/L	46.0	100	2000	<46.0	87.0	75-119			
cis & trans-1,2-Dichloroethene	3460	µg/L	48.0	200	4000	<48.0	86.5	73-124			
cis-1,2-Dichloroethylene	1760	µg/L	42.0	100	2000	<42.0	88.0	75-123			
cis-1,3-Dichloropropene	1820	µg/L	57.0	100	2000	<57.0	91.2	69-120			
Cyclohexane	1790	µg/L	63.0	200	2000	<63.0	89.5	66-128			
Dichlorodifluoromethane (Freon-12)	792	µg/L	68.0	100	2000	<68.0	39.6	36-133			
Ethylbenzene	1980	µg/L	34.0	100	2000	<34.0	98.8	76-116			
Isopropylbenzene	2100	µg/L	35.0	100	2000	<35.0	105	77-118			
m+p-Xylene	4110	µg/L	81.0	200	4000	<81.0	103	77-116			
Methyl acetate	1700	µg/L	59.0	200	2000	<59.0	84.9	70-130			
Methyl bromide (Bromomethane)	1670	µg/L	90.0	100	2000	<90.0	83.4	20-183			
Methyl chloride (Chloromethane)	916	µg/L	83.0	500	2000	<83.0	45.8	26-117			
Methyl tert-butyl ether (MTBE)	1680	µg/L	45.0	100	2000	<45.0	84.1	77-137			
Methylcyclohexane	1900	µg/L	35.0	100	2000	<35.0	95.2	66-125			
Methylene chloride (Dichloromethane)	1780	µg/L	86.0	500	2000	<86.0	89.2	68-125			
o-Xylene	2040	µg/L	31.0	100	2000	<31.0	102	77-116			
Styrene	1950	µg/L	33.0	100	2000	<33.0	97.4	76-123			
Tetrachloroethylene (Perchloroethylene)	2780	µg/L	39.0	100	2000	913	93.4	80-124			
Toluene	1850	µg/L	45.0	100	2000	<45.0	92.6	78-116			
Total Xylene	6140	µg/L	81.0	200	6000	<81.0	102	77-119			
trans-1,2-Dichloroethylene	1700	µg/L	48.0	100	2000	<48.0	85.0	73-124			
trans-1,3-Dichloropropylene	1720	µg/L	38.0	100	2000	<38.0	86.1	67-118			
Trichloroethene (Trichloroethylene)	1920	µg/L	43.0	100	2000	<43.0	94.4	75-122			
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	1330	µg/L	52.0	100	2000	<52.0	66.6	52-115			
Vinyl chloride (Chloroethene)	1050	µg/L	53.0	100	2000	<53.0	52.6	49-122			
Surr: 1,2-Dichloroethane-d4	<100	µg/L			20		93.0	80-120			U
Surr: 4-Bromofluorobenzene	<100	µg/L			20		103	80-120			U
Surr: Dibromofluoromethane	<100	µg/L			20		94.0	80-120			U
Surr: Toluene-d8	<100	µg/L			20		98.4	80-120			U

MSD	CLIENT ID: Batch QC	Lab ID: QC-2432684-006

Method: EPA 8260D**Dilution:** 100**Analysis Date:** 01/27/26 21:58**Prep Date:** NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1910	µg/L	46.0	100	2000	<46.0	95.4	75-119	2.76	30	
1,1,2,2-Tetrachloroethane	2070	µg/L	40.0	100	2000	<40.0	104	80-123	2.39	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1730	µg/L	52.0	100	2000	<52.0	86.5	64-133	4.74	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

MSD	CLIENT ID: Batch QC	Lab ID: QC-2432684-006

Method: EPA 8260D

Dilution: 100

Analysis Date: 01/27/26 21:58

Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1,1,2-Trichloroethane	1850	µg/L	46.0	100	2000	<46.0	92.4	83-118	0.434	30	
1,1-Dichloroethane	1720	µg/L	44.0	100	2000	<44.0	85.9	73-122	0.869	30	
1,1-Dichloroethylene	1670	µg/L	40.0	100	2000	<40.0	83.6	66-131	3.82	30	
1,2,3-Trichlorobenzene	1570	µg/L	299	500	2000	<299	78.6	65-140	2.70	30	
1,2,3-Trichloropropane	1980	µg/L	40.0	100	2000	<40.0	99.2	78-119	2.61	30	
1,2,4-Trichlorobenzene	1830	µg/L	94.0	100	2000	<94.0	91.3	73-127	3.34	30	
1,2,4-Trimethylbenzene	2010	µg/L	45.0	100	2000	<45.0	101	74-118	1.35	30	
1,2-Dibromo-3-chloropropane (DBCP)	1670	µg/L	43.0	100	2000	<43.0	83.5	52-141	0.716	30	
1,2-Dibromoethane (EDB, Ethylene dibromide)	1860	µg/L	41.0	100	2000	<41.0	92.8	60-159	0.162	30	
1,2-Dichlorobenzene (o-Dichlorobenzene)	1790	µg/L	32.0	100	2000	<32.0	89.7	80-119	1.99	30	
1,2-Dichloroethane (Ethylene dichloride)	1890	µg/L	44.0	100	2000	<44.0	94.6	78-121	1.52	30	
1,2-Dichloropropane	1850	µg/L	48.0	100	2000	<48.0	92.6	78-120	0.216	30	
1,3,5-Trimethylbenzene	2180	µg/L	65.0	100	2000	<65.0	109	76-120	2.65	30	
1,3-Dichlorobenzene (m-Dichlorobenzene)	1800	µg/L	33.0	100	2000	<33.0	90.2	80-120	0.0554	30	
1,3-Dichloropropene	3620	µg/L	57.0	200	4000	<57.0	90.6	67-120	2.09	30	
1,4-Dichlorobenzene (p-Dichlorobenzene)	1800	µg/L	35.0	100	2000	<35.0	89.8	81-119	3.34	30	
2-Butanone (Methyl ethyl ketone, MEK)	1570	µg/L	243	500	2000	<243	78.4	69-147	5.44	30	
2-Hexanone	1960	µg/L	59.0	500	2000	<59.0	98.2	67-140	3.42	30	
4-Methyl-2-pentanone (MIBK)	2570	µg/L	52.0	100	2000	<52.0	129	68-199	0.426	30	
Acetone	1810	µg/L	453	1000	2000	<453	90.4	70-166	0.991	30	
Benzene	1930	µg/L	46.0	100	2000	<46.0	96.4	78-120	1.03	30	
Bromochloromethane	1820	µg/L	45.0	100	2000	<45.0	91.0	70-125	3.29	30	
Bromodichloromethane	1790	µg/L	49.0	100	2000	<49.0	89.6	73-126	1.97	30	
Bromoform	1720	µg/L	56.0	100	2000	<56.0	86.2	60-124	4.99	30	
Carbon disulfide	1550	µg/L	49.0	100	2000	<49.0	77.3	67-159	0.324	30	
Carbon tetrachloride	1900	µg/L	40.0	100	2000	<40.0	95.2	69-124	1.16	30	
Chlorobenzene	1910	µg/L	40.0	100	2000	<40.0	95.4	80-118	1.42	30	
Chlorodibromomethane	1730	µg/L	40.0	100	2000	<40.0	86.4	63-117	2.88	30	
Chloroethane (Ethyl chloride)	1090	µg/L	68.0	100	2000	<68.0	54.5	26-117	4.22	30	
Chloroform	1720	µg/L	46.0	100	2000	<46.0	86.0	75-119	1.10	30	
cis & trans-1,2-Dichloroethene	3460	µg/L	48.0	200	4000	<48.0	86.5	73-124	0.0289	30	
cis-1,2-Dichloroethylene	1740	µg/L	42.0	100	2000	<42.0	87.0	75-123	1.09	30	
cis-1,3-Dichloropropene	1880	µg/L	57.0	100	2000	<57.0	93.8	69-120	2.81	30	
Cyclohexane	1810	µg/L	63.0	200	2000	<63.0	90.6	66-128	1.17	30	
Dichlorodifluoromethane (Freon-12)	778	µg/L	68.0	100	2000	<68.0	38.9	36-133	1.78	30	
Ethylbenzene	1980	µg/L	34.0	100	2000	<34.0	98.8	76-116	0.101	30	
Isopropylbenzene	2080	µg/L	35.0	100	2000	<35.0	104	77-118	0.526	30	
m+p-Xylene	4100	µg/L	81.0	200	4000	<81.0	103	77-116	0.146	30	
Methyl acetate	1740	µg/L	59.0	200	2000	<59.0	86.8	70-130	2.21	30	
Methyl bromide (Bromomethane)	1650	µg/L	90.0	100	2000	<90.0	82.3	20-183	1.33	30	
Methyl chloride (Chloromethane)	869	µg/L	83.0	500	2000	<83.0	43.4	26-117	5.27	30	

QA/QC Report



Client: Arcadis US, Inc.
Project: RACER Buick City RSSCT
Matrix: WATER
QC Lot: 2432684

Work Order: HN2601120
Date Collected: NA
Date Received: NA
Run ID: 3846257

MSD		CLIENT ID: Batch QC				Lab ID: QC-2432684-006					
Method: EPA 8260D		Dilution: 100				Analysis Date: 01/27/26 21:58					
						Prep Date: NA					
Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Methyl tert-butyl ether (MTBE)	1700	µg/L	45.0	100	2000	<45.0	84.8	77-137	0.888	30	
Methylcyclohexane	1940	µg/L	35.0	100	2000	<35.0	96.9	66-125	1.77	30	
Methylene chloride (Dichloromethane)	1780	µg/L	86.0	500	2000	<86.0	89.2	68-125	0.0561	30	
o-Xylene	2030	µg/L	31.0	100	2000	<31.0	102	77-116	0.147	30	
Styrene	1970	µg/L	33.0	100	2000	<33.0	98.3	76-123	0.868	30	
Tetrachloroethylene (Perchloroethylene)	2950	µg/L	39.0	100	2000	913	102	80-124	5.93	30	
Toluene	1900	µg/L	45.0	100	2000	<45.0	95.2	78-116	2.71	30	
Total Xylene	6140	µg/L	81.0	200	6000	<81.0	102	77-119	0.147	30	
trans-1,2-Dichloroethylene	1720	µg/L	48.0	100	2000	<48.0	86.0	73-124	1.17	30	
trans-1,3-Dichloropropylene	1740	µg/L	38.0	100	2000	<38.0	87.2	67-118	1.33	30	
Trichloroethene (Trichloroethylene)	1940	µg/L	43.0	100	2000	<43.0	95.4	75-122	1.04	30	
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	1320	µg/L	52.0	100	2000	<52.0	65.8	52-115	1.28	30	
Vinyl chloride (Chloroethene)	1010	µg/L	53.0	100	2000	<53.0	50.4	49-122	4.37	30	
Surr: 1,2-Dichloroethane-d4	<100	µg/L			20		95.0	80-120	NC		U
Surr: 4-Bromofluorobenzene	<100	µg/L			20		107	80-120	NC		U
Surr: Dibromofluoromethane	<100	µg/L			20		95.6	80-120	NC		U
Surr: Toluene-d8	<100	µg/L			20		99.1	80-120	NC		U

The following samples were analyzed in this batch: HN2601120-001

Appendix D

**Evoqua PFAS Removal from Contaminated Groundwater by
RSSCT Report**



PFAS REMOVAL FROM CONTAMINATED GROUNDWATER BY RAPID SMALL SCALE COLUMN TESTS

ARCADIS - SAN DIEGO, CA

RACER Buick City – Flint, MI

Evoqua Report # 00793131
March 17, 2026

Submitted by:

Julie Peterson, Sales Representative

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Executive Summary

Xylem was contracted to perform Rapid Small-Scale Column Tests (RSSCTs) to demonstrate removal of per- and polyfluoroalkyl substances (PFAS) from the RACER Buick City former industrial site. One granular activated carbon (GAC) and one anion-exchange resin were chosen for the study. Xylem supplied the following media for testing:

- UltraCarb® 1240LD granular activated carbon (UC1240LD)
- Evoqua APR-2 anion-exchange resin (APR-2)

Groundwater was run through the columns in parallel to evaluate the bed volumes (BV) treated, regulated compound breakthrough, and comparing influent and effluent PFAS concentrations.

Media performance summarized below is limited to first to breakthrough of the first regulated PFAS compound for each media. Breakthrough of some unregulated PFAS occurred earlier.

- In the UC1240LD RSSCT:
 - o PFHxS was the first compound to exceed the discharge limit (51 ng/L). This point was reached at 1,772 BV due to kinetics as discussed in Section 5.3.
 - o PFBS is the limiting compound based on the apparent equilibrium limit as defined by the throughput to 50% effluent/influent. This point was reached at 3,699 BV as discussed in Section 5.2.
 - o Lead/mid/lag operation provides more contact time and lower leakage as discussed in Sections 5.4 and 5.5. A throughput of 3,700 BV is a reasonable estimate for a lead/mid/lag configuration. This throughput corresponds to 65 days of operation for a 4-foot diameter vessel with 68 cubic feet of carbon treating 20 gpm.
- In the APR-2 RSSCT:
 - o PFOA was the first compound to exceed the discharge limit (8 ng/L). This point was reached at 20,295 BV due to kinetics as discussed in Section 5.3. PFOA is also the limiting compound based on the apparent equilibrium limit as defined by the throughput to 50% effluent/influent. This point was not reached when the RSSCT ended at 42,703 BV.
 - o Lead/mid/lag operation provides more contact time and lower leakage as discussed in Sections 5.4 and 5.5. A throughput of 43,000 BV is a reasonable estimate for bed life of a lead/mid/lag configuration. This throughput corresponds to 334 days of operation for a 3-foot diameter vessel with 30 cubic feet of resin treating 20 gpm.

Fouling of either media with organic material or suspended solids will reduce bed life due to reduced capacity to load PFAS or early breakthrough due to slower diffusion rates.

An economic analysis is needed to evaluate these options because capital costs, media price and media disposal costs differ for each option.

1. Objective and Background

The objective of the rapid small-scale column test (RSSCT) study is to demonstrate the bed lives of one (1) granular activated carbon (GAC), and one (1) anion-exchange resin to remove per- and polyfluoroalkyl substances (PFAS) from contaminated groundwater at the RACER Buick City site in Flint, MI.

2. RSSCT Design and Description

2.1. RSSCT Design

The RSSCTs were designed from early estimates of equipment size based on a customer-provided flow rate. The assumed full-scale design is presented in the top half of Table 1. The RSSCTs used ground and sieved media to shorten the duration of the demonstration. Constant diffusivity equations were used to scale flow rates for the RSSCTs. Details of the RSSCT conditions are summarized in the bottom half of Table 1. The table lists the bed depths, volumes, and particle sizes of the media tested.

Based on the scaling parameters and proposed full-scale design, APR-2 operating at full-scale and flow rate would treat 128 BV/day operating continuously and UC1240LD would process 57 BV/day. These throughputs were used to calculate the approximate bed life of each media using the RSSCT effluent results and throughputs at sampling.

Table 1 - RSSCT Design Parameters

Full Scale	UC1240LD	APR-2	Unit
Number of Trains	1	1	
Vessel Diameter	4	3	ft
Vessel Area	13	7	ft ²
Volume of Media per Vessel	68	30	ft ³
Bed Depth	5.4	4.3	ft
Flow Rate, Total Maximum	20	20	gpm
Hydraulic Loading Rate	1.6	2.8	gpm/ft ²
EBCT	25.5	11.2	minutes
RSSCT Scale	UC1240LD	APR-2	Unit
Column Diameter	0.48	0.48	cm
Particle Size	170 x 200	120 x 170	mesh
Volume of Media per Train	1.4	0.7	cm ³
Total Bed Depth	8	4	cm
Flow Rate	7.3	2.0	mL/min
EBCT	0.36	0.19	minutes

2.2. Water Source

Xylem received a 30-gallon sample of a PFAS contaminated groundwater sourced from the RACER Buick City former industrial site located in Flint, MI. The sample was transferred to a 16-gallon, stainless steel pressure vessel. During transfer to the RSSCT holding tank, the water

was filtered through a 0.45-micron, pleated cartridge filter. A single pressure canister was used for this testing to limit potential contamination of other vessels. The canister was filled three times during testing to ensure an adequate influent supply to the columns.

A sample for PFAS analysis was taken from the as received drum prior to filtering the sample to compare concentrations pre- and post-filtration. Prior to sampling, the drum was mixed for fifteen minutes by recirculating the water via vane pump. Raw water samples were then pulled from the bottom of the drum - using the same vane pump as used above - through the pump discharge. The results of the prefiltration sample are presented in Table 2.



Figure 1: RSSCT stainless steel pressure canister and groundwater sample drum

Table 2 - Prefiltration PFAS Sample Results

Analyte	Result (ng/L)
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	<0.487
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	<1.18
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	<0.977
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	<2.00
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	<1.13
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	<3.15
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	27.9
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	<0.586

Analyte	Result (ng/L)
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	<0.467
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	<1.22
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	2.04
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	1.68
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	161
Perfluorobutane sulfonic acid (PFBS)	440
Perfluorobutanoic acid (PFBA)	142
Perfluorobutylsulfonamide (PFBSA)	186
Perfluorodecane sulfonic acid (PFDS)	4.88
Perfluorodecanoic acid (PFDA)	35.3
Perfluorododecanoic acid (PFDOA)	<0.721
Perfluoroheptane sulfonic acid (PFHpS)	945
Perfluoroheptanoic acid (PFHpA)	342
Perfluorohexane sulfonic acid (PFHxS)	13,500
Perfluorohexanesulfonamide (PFHxSA)	5,080
Perfluorohexanoic acid (PFHxA)	1,700
Perfluorononane sulfonic acid (PFNS)	344
Perfluorononanoic acid (PFNA)	113
Perfluorooctane sulfonamide (PFOSAm)	19.9
Perfluorooctane sulfonic acid (PFOS)	39,600
Perfluorooctanoic acid (PFOA)	1,150
Perfluoropentane sulfonic acid (PFPeS)	898
Perfluoropentanoic acid (PFPeA)	365
Perfluorotetradecanoic acid (PFTDA)	<2.75
Perfluorotridecanoic acid (PFTrDA)	<2.01
Perfluoroundecanoic acid (PFUnDA)	1.29

2.3. RSSCT Equipment

RSSCT columns are made of 1.5-inch diameter clear acrylic with an internal diameter of 0.48 mm and 200 mm total bed depth. For bed depths less than 200 mm, a slug of glass wool is inserted above the media to keep the bed from lifting during operation. Columns are sealed with stainless steel fittings threaded onto each end of the column. Media support in the columns was provided by a 300 U.S. mesh screen inserted into both ends of the column. RSSCT pumps are manufactured by Shimadzu, model LC-8A, and provide constant flow through the media beds.

Figure 2 illustrates the RSSCT column construction and pump configuration. Once columns were sealed and plumbed, the influent pressure canister was pressurized to approximately 2 psi with high-purity nitrogen gas to aid in pushing influent to the RSSCT pumps.

To prevent gases from falling out of solution, a 20-psi backpressure regulator is plumbed into the effluent path downstream of the RSSCT column. The columns are operated in a bottom-to-top flow configuration to aid any gases that do fall out of solution to escape the media beds. The effluent stream is then plumbed to a programmable rotary valve autosampler that diverts flow to either sample bottles or intermediate containers between samples. Samples and waste effluent were weighed to confirm and track the volume of water treated.



Figure 2: RSSCT column plumbed for operation (left) and RSSCT pump setup (right)

3. Experimental

3.1. GAC Preparation

A sample of UC1240LD, lot 33104-L, was ground in a blade-style mechanical grinder, then sieved to retain the 170 x 200 U.S. mesh portion of the GAC. The material was transferred to a crucible and washed with deionized (DI) water. The wash step was repeated until the supernatant water was free of fines. The wash crucible was transferred to a vacuum oven and dried for 24 hours at 100°C and -20 inches of Hg. After drying, a mass of 0.5995 g of UC1240LD was dispensed onto weigh paper. The GAC was transferred to a 100 mL beaker containing approximately 30 mL of boiling water and allowed to degas in the water for 5 minutes. The GAC slurry was then transferred to the RSSCT column using a Pasteur pipet to a bed depth of 8 cm. A plug of glass wool was inserted just above the top of the GAC bed to keep the bed from lifting. The column was sealed and plumbed to the RSSCT pump.

3.2. Resin Preparation

A sample of APR-2 was ground in a blade-style mechanical grinder, then sieved to retain the 120 x 170 U.S. mesh portion of the resin. The material was transferred to a crucible and washed with DI water. The wash step was repeated until the supernatant water was free of fines. The wash crucible was transferred to a vacuum oven and dried for 48 hours at 50°C and -20 inches of Hg. After drying, a mass of 0.3449 g was dispensed onto a weigh paper. This mass is calculated by the following:

$$m_{resin} = \rho_{bulk} * V_{column} * 0.62$$

The APR-2 density is reported at 0.69 g/mL and is hydrated with approximately 38 percent water. The resin was rehydrated by placing it in a 10% solution of isopropanol / DI water and soaking it until all resin particles fell to the bottom of the beaker. The hydrated resin was then transferred to the column using a Pasteur pipette. Once the column was sealed, a flow of DI water was pumped through the column for 20,000 bed volumes at RSSCT scaled flowrate prior to the start of the sample groundwater.

3.3. Operation

Influent samples were manually taken from the influent holding tank sample port. The sample valve was opened just enough to achieve a laminar flow. The tubing was flushed for 500 mL prior to sample collection. The initial influent sample, IN-01, was collected 1/21/2026 at 9:00 and the final influent sample, IN-02, was collected on 2/2/2026 at 15:00.

The APR-2 RSSCT started on 1/21/2026 at 9:15 and the test ended on 2/1/2026 at 18:17 after having treated 42,703 BV. The column was scheduled to run until after having treated 50,000 BV on 2/3/2026, however the bed plugged and choked flow to where sample bottles did not contain enough volume for analysis. The nine effluent samples were taken via an autosampler pre-programmed to sample based on the estimated time at which each column should have incrementally processed the appropriate amount of water. The mass of water eluted was tracked and recorded at sample points, and was used to calculate the throughput of the column between samples and the total throughput.

The UC1240LD RSSCT started on 1/23/2026 at 8:45 and the testing ended on 1/26/2026 at 1:31 after having treated 19,725 BV. The ten effluent samples were taken via autosampler pre-programmed to sample based on the estimated time at which each column should have incrementally processed the appropriate amount of water. The mass of water eluted was tracked and recorded at sample points, and was used to calculate the throughput of the column between samples and total throughput.

Table 3 lists the sample times, calculated bed volumes, and estimated full-scale operating days.

Table 3 - PFAS Sample Bed Volumes

UC1240LD			APR-2		
Date	BV	Full-Scale Days	Date	BV	Full-Scale Days
1/23/26 11:59	855	7	1/22/26 15:35	3,449	61

UC1240LD			APR-2		
Date	BV	Full-Scale Days	Date	BV	Full-Scale Days
1/23/26 15:13	1,772	14	1/23/26 21:55	9,465	167
1/23/26 18:28	2,776	22	1/25/26 4:15	14,719	260
1/23/26 21:42	3,699	29	1/26/26 10:36	20,295	359
1/24/26 9:02	7,189	56	1/27/26 16:56	25,273	447
1/24/26 17:08	9,684	76	1/28/26 23:16	30,435	538
1/25/26 1:14	12,172	95	1/30/26 5:36	35,156	622
1/25/26 9:20	14,701	115	1/31/26 11:57	39,276	694
1/25/26 17:25	17,222	134	2/1/26 18:17	42,703	755
1/26/26 1:31	19,725	154			

3.4. Sample Analysis

Influent and effluent samples were analyzed for PFAS using EPA method 537 Modified at ALS Environmental located in Holland, MI. Sixteen of the thirty-four analytes were detected in the filtered influent water. Table 4 lists the analytes, CAS numbers, and influent concentrations. The lab reported the PFAS results in ng/L. All non-detects are listed as <MDL in this report.

Table 4 - PFAS Analyte List

Analyte	CAS No.	IN-01	IN-02	Units
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	763051-92-9	<4.60	<4.61	ng/L
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	<11.1	<11.2	ng/L
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	757124-72-4	<9.21	<9.24	ng/L
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	27619-97-2	<18.9	<18.9	ng/L
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	812-70-4	<10.6	<10.7	ng/L
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	356-02-5	<29.7	<29.8	ng/L
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	914637-49-3	27.4	22.1	ng/L
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	919005-14-4	<5.53	<5.55	ng/L
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	756426-58-1	<4.41	<4.42	ng/L
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	13252-13-6	<11.5	<11.5	ng/L
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	2991-50-6	<15.2	<15.2	ng/L
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	2355-31-9	<6.34	<6.36	ng/L
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	133201-07-7	14.1	37.5	ng/L
Perfluorobutane sulfonic acid (PFBS)	375-73-5	405	414	ng/L
Perfluorobutanoic acid (PFBA)	375-22-4	145	148	ng/L
Perfluorobutylsulfonamide (PFBSA)	30334-69-1	229	226	ng/L
Perfluorodecane sulfonic acid (PFDS)	335-77-3	<13.5	<13.5	ng/L
Perfluorodecanoic acid (PFDA)	335-76-2	21.9	30.8	ng/L
Perfluorododecanoic acid (PFDOA)	307-55-1	<6.80	<6.82	ng/L

Analyte	CAS No.	IN-01	IN-02	Units
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	396	1180	ng/L
Perfluoroheptanoic acid (PFHpA)	375-85-9	340	344	ng/L
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	12800	17200	ng/L
Perfluorohexanesulfonamide (PFHxSA)	41997-13-1	5430	5790	ng/L
Perfluorohexanoic acid (PFHxA)	307-24-4	2450	2370	ng/L
Perfluorononane sulfonic acid (PFNS)	68259-12-1	<4.88	9.06	ng/L
Perfluorononanoic acid (PFNA)	375-95-1	107	113	ng/L
Perfluorooctane sulfonamide (PFOSAm)	754-91-6	<7.00	16.1	ng/L
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	2220	16600	ng/L
Perfluorooctanoic acid (PFOA)	335-67-1	1570	1720	ng/L
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	1050	1350	ng/L
Perfluoropentanoic acid (PFPeA)	2706-90-3	363	356	ng/L
Perfluorotetradecanoic acid (PFTDA)	376-06-7	<26.0	<26.1	ng/L
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	<19.0	<19.1	ng/L
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	<9.59	<9.61	ng/L

4. Results

Results for the fourteen PFAS detected in the influent samples are presented by compound. Any results that were below the MDL are presented as <MDL for that compound. PFNS and PFOSAm were only detected in sample IN-02 with no detections from either column effluent.

4.1. PFBA

Results for PFBA are presented in Figure 3 and Table 5. The unfiltered water had 142 ng/L, while IN-01 and IN-02 had 1,145 and 148 ng/L, respectively.

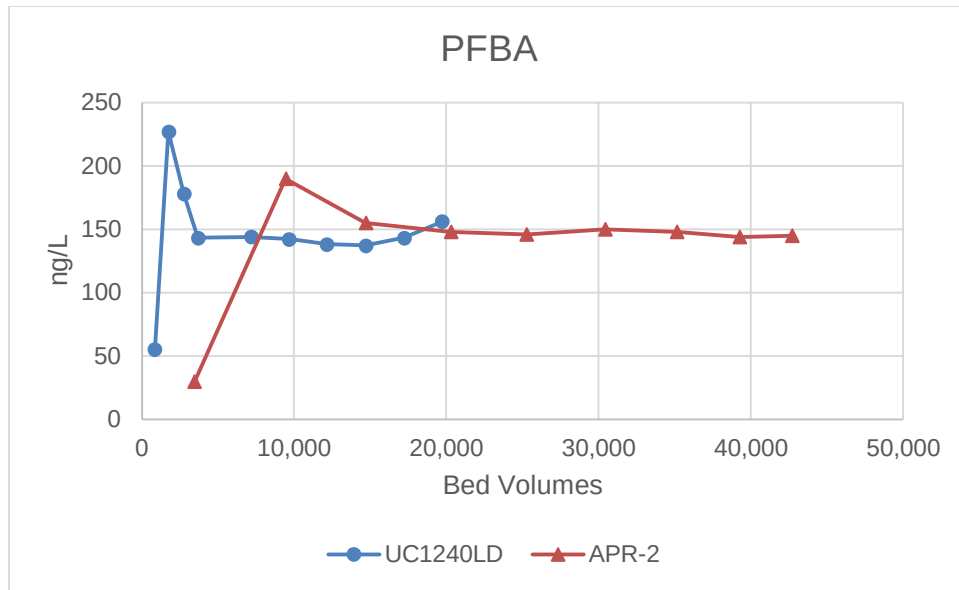


Figure 3 - PFBA Breakthrough Curves
Table 5 - PFBA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	55	1/22/26 15:35	3,449	30
1/23/26 15:13	1,772	227	1/23/26 21:55	9,465	190
1/23/26 18:28	2,776	178	1/25/26 4:15	14,719	155
1/23/26 21:42	3,699	143	1/26/26 10:36	20,295	148
1/24/26 9:02	7,189	144	1/27/26 16:56	25,273	146
1/24/26 17:08	9,684	142	1/28/26 23:16	30,435	150
1/25/26 1:14	12,172	138	1/30/26 5:36	35,156	148
1/25/26 9:20	14,701	137	1/31/26 11:57	39,276	144
1/25/26 17:25	17,222	143	2/1/26 18:17	42,703	145
1/26/26 1:31	19,725	156			

4.2. PFPeA

Results for PFPeA are presented in Figure 4 and Table 6. The unfiltered water had 365 ng/L, while IN-01 and IN-02 had 363 and 356 ng/L, respectively.

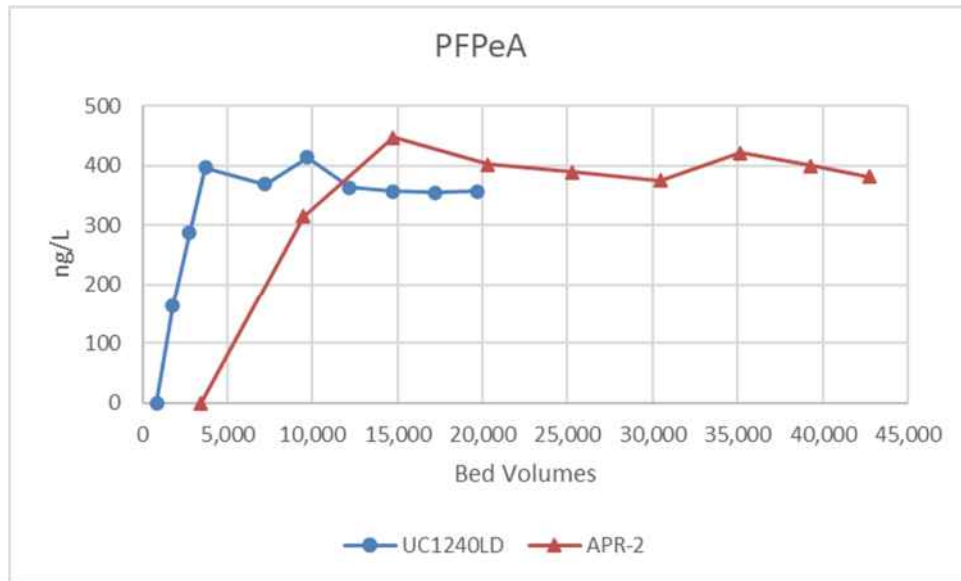


Figure 4 - PFPeA Breakthrough Curves

Table 6 - PFPeA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	2	1/22/26 15:35	3,449	<1.14
1/23/26 15:13	1,772	163	1/23/26 21:55	9,465	315
1/23/26 18:28	2,776	287	1/25/26 4:15	14,719	447
1/23/26 21:42	3,699	396	1/26/26 10:36	20,295	402
1/24/26 9:02	7,189	368	1/27/26 16:56	25,273	389
1/24/26 17:08	9,684	413	1/28/26 23:16	30,435	375
1/25/26 1:14	12,172	363	1/30/26 5:36	35,156	421
1/25/26 9:20	14,701	357	1/31/26 11:57	39,276	400
1/25/26 17:25	17,222	354	2/1/26 18:17	42,703	381
1/26/26 1:31	19,725	357			

4.3. PFHxA

Results for PFHxA are presented in Figure 5 and Table 7. The unfiltered water had 1,700 ng/L, while IN-01 and IN-02 had 2,540 and 2,370 ng/L, respectively.

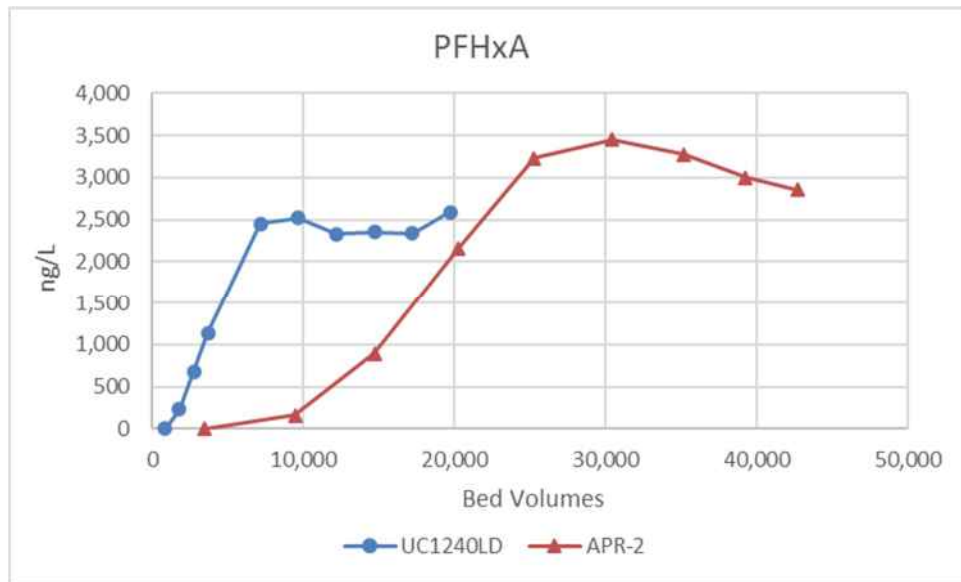


Figure 5 - PFHxA Breakthrough Curves

Table 7 - PFHxA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<1.10	1/22/26 15:35	3,449	<1.07
1/23/26 15:13	1,772	231	1/23/26 21:55	9,465	160
1/23/26 18:28	2,776	682	1/25/26 4:15	14,719	895
1/23/26 21:42	3,699	1,140	1/26/26 10:36	20,295	2,160
1/24/26 9:02	7,189	2,450	1/27/26 16:56	25,273	3,230
1/24/26 17:08	9,684	2,520	1/28/26 23:16	30,435	3,450
1/25/26 1:14	12,172	2,330	1/30/26 5:36	35,156	3,280
1/25/26 9:20	14,701	2,350	1/31/26 11:57	39,276	3,000
1/25/26 17:25	17,222	2,340	2/1/26 18:17	42,703	2,860
1/26/26 1:31	19,725	2,590			

4.4. PFHpA

Results for PFHpA are presented in Figure 6 and Table 8. The unfiltered water had 342 ng/L, while IN-01 and IN-02 had 340 and 344 ng/L, respectively.

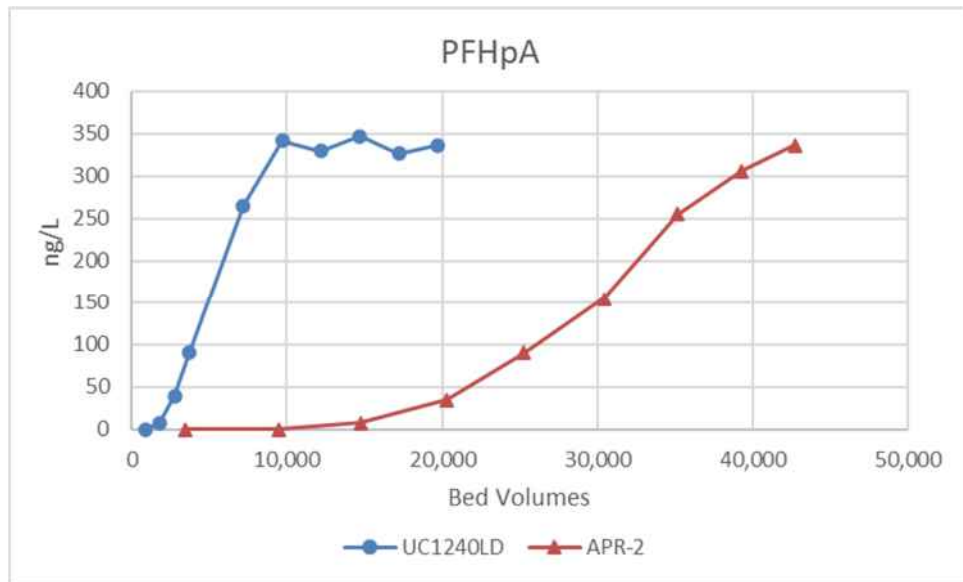


Figure 6 - PFHpA Breakthrough Curves

Table 8 - PFHpA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<1.58	1/22/26 15:35	3,449	<1.54
1/23/26 15:13	1,772	6	1/23/26 21:55	9,465	<1.72
1/23/26 18:28	2,776	39	1/25/26 4:15	14,719	7
1/23/26 21:42	3,699	91	1/26/26 10:36	20,295	35
1/24/26 9:02	7,189	265	1/27/26 16:56	25,273	90
1/24/26 17:08	9,684	341	1/28/26 23:16	30,435	154
1/25/26 1:14	12,172	329	1/30/26 5:36	35,156	255
1/25/26 9:20	14,701	347	1/31/26 11:57	39,276	306
1/25/26 17:25	17,222	326	2/1/26 18:17	42,703	336
1/26/26 1:31	19,725	336			

4.5. PFOA

Results for PFOA are presented in Figure 7 and Table 9. The unfiltered water had 1,150 ng/L, while IN-01 and IN-02 had 1,570 and 1,720 ng/L, respectively.

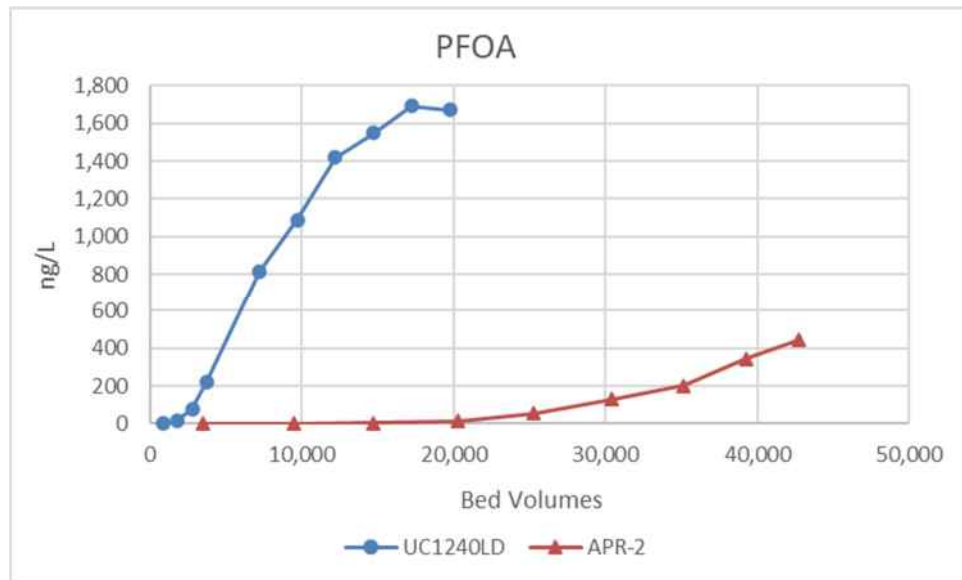


Figure 7 - PFOA Breakthrough Curves

Table 9 - PFOA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.575	1/22/26 15:35	3,449	<0.562
1/23/26 15:13	1,772	13	1/23/26 21:55	9,465	1
1/23/26 18:28	2,776	78	1/25/26 4:15	14,719	3
1/23/26 21:42	3,699	220	1/26/26 10:36	20,295	16
1/24/26 9:02	7,189	815	1/27/26 16:56	25,273	54
1/24/26 17:08	9,684	1090	1/28/26 23:16	30,435	132
1/25/26 1:14	12,172	1420	1/30/26 5:36	35,156	203
1/25/26 9:20	14,701	1550	1/31/26 11:57	39,276	345
1/25/26 17:25	17,222	1690	2/1/26 18:17	42,703	444
1/26/26 1:31	19,725	1670			

4.6. PFNA

Results for PFNA are presented in Figure 8 and Table 10. The unfiltered water had 113 ng/L, while IN-01 and IN-02 had 107 and 113 ng/L, respectively.

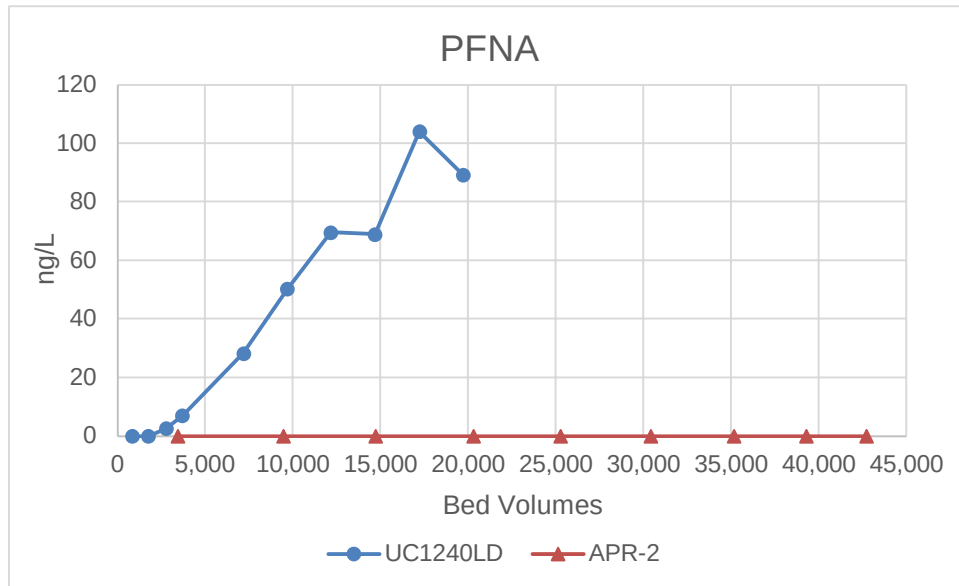


Figure 8 - PFNA Breakthrough Curves

Table 10 - PFNA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.794	1/22/26 15:35	3,449	<0.776
1/23/26 15:13	1,772	<0.785	1/23/26 21:55	9,465	<0.865
1/23/26 18:28	2,776	2	1/25/26 4:15	14,719	<0.879
1/23/26 21:42	3,699	7	1/26/26 10:36	20,295	<0.885
1/24/26 9:02	7,189	28	1/27/26 16:56	25,273	<8.67
1/24/26 17:08	9,684	50	1/28/26 23:16	30,435	<8.76
1/25/26 1:14	12,172	70	1/30/26 5:36	35,156	<8.62
1/25/26 9:20	14,701	69	1/31/26 11:57	39,276	<8.56
1/25/26 17:25	17,222	104	2/1/26 18:17	42,703	<8.76
1/26/26 1:31	19,725	89			

4.7. PFBS

Results for PFBS are presented in Figure 9 and Table 11. The unfiltered water had 440 ng/L, while IN-01 and IN-02 had 405 and 414 ng/L, respectively.

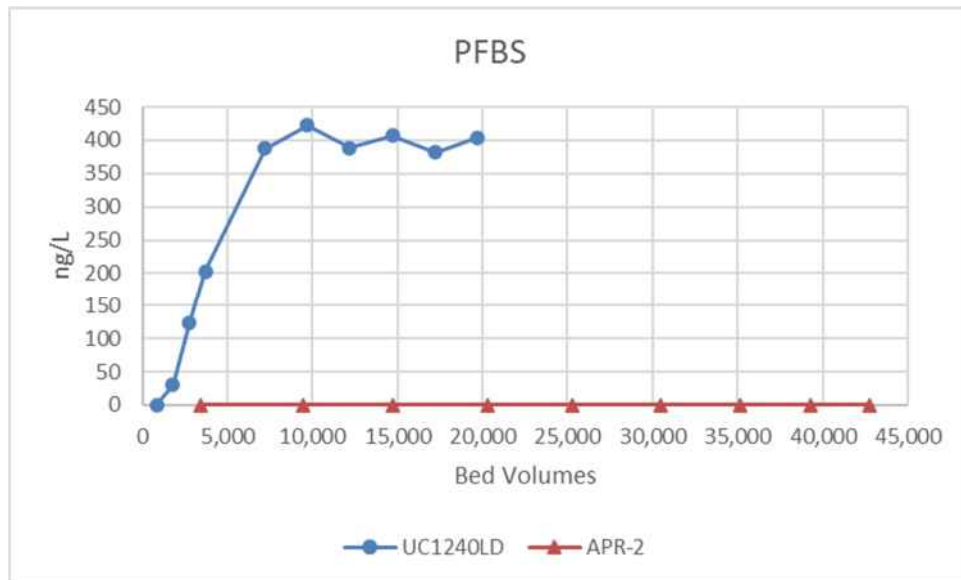


Figure 9 - PFBS Breakthrough Curves

Table 11 - PFBS Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.320	1/22/26 15:35	3,449	<0.313
1/23/26 15:13	1,772	30	1/23/26 21:55	9,465	<0.349
1/23/26 18:28	2,776	124	1/25/26 4:15	14,719	<0.355
1/23/26 21:42	3,699	203	1/26/26 10:36	20,295	<0.357
1/24/26 9:02	7,189	388	1/27/26 16:56	25,273	<3.50
1/24/26 17:08	9,684	422	1/28/26 23:16	30,435	<3.53
1/25/26 1:14	12,172	389	1/30/26 5:36	35,156	<3.48
1/25/26 9:20	14,701	407	1/31/26 11:57	39,276	8
1/25/26 17:25	17,222	382	2/1/26 18:17	42,703	11
1/26/26 1:31	19,725	404			

4.8. PFPeS

Results for PFPeS are presented in Figure 10 and Table 12. The unfiltered water had 898 ng/L, while IN-01 and IN-02 had 1,050 and 1,350 ng/L, respectively.

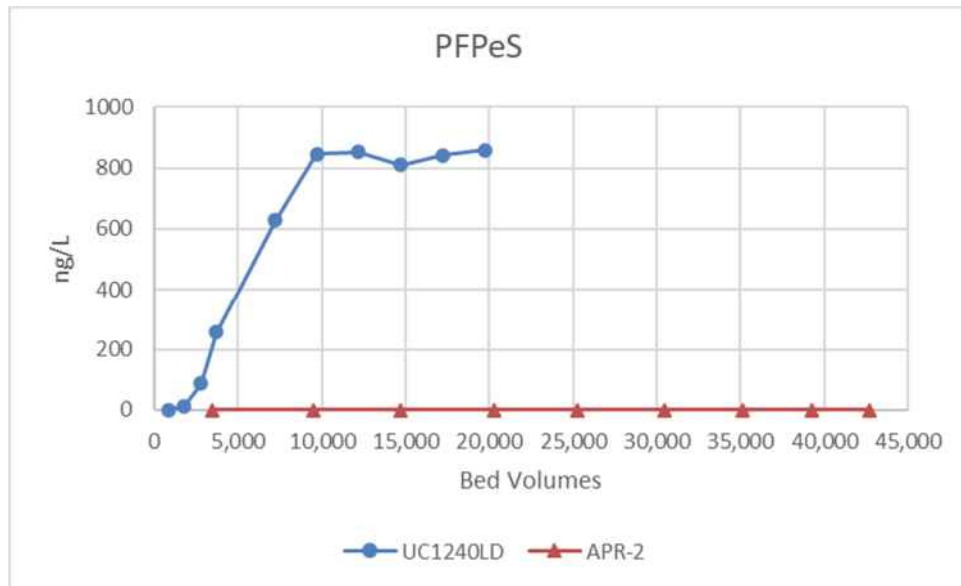


Figure 10 - PFPeS Breakthrough Curves

Table 12 - PFPeS Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.507	1/22/26 15:35	3,449	<0.496
1/23/26 15:13	1,772	12	1/23/26 21:55	9,465	<0.553
1/23/26 18:28	2,776	87	1/25/26 4:15	14,719	<0.562
1/23/26 21:42	3,699	256	1/26/26 10:36	20,295	<0.566
1/24/26 9:02	7,189	628	1/27/26 16:56	25,273	<5.54
1/24/26 17:08	9,684	846	1/28/26 23:16	30,435	<5.60
1/25/26 1:14	12,172	852	1/30/26 5:36	35,156	<5.51
1/25/26 9:20	14,701	810	1/31/26 11:57	39,276	<5.47
1/25/26 17:25	17,222	842	2/1/26 18:17	42,703	<5.60
1/26/26 1:31	19,725	859			

4.9. PFHxS

Results for PFHxS are presented in Figure 11 and Table 13. The unfiltered water had 13,500 ng/L, while IN-01 and IN-02 had 12,800 and 17,200 ng/L, respectively.

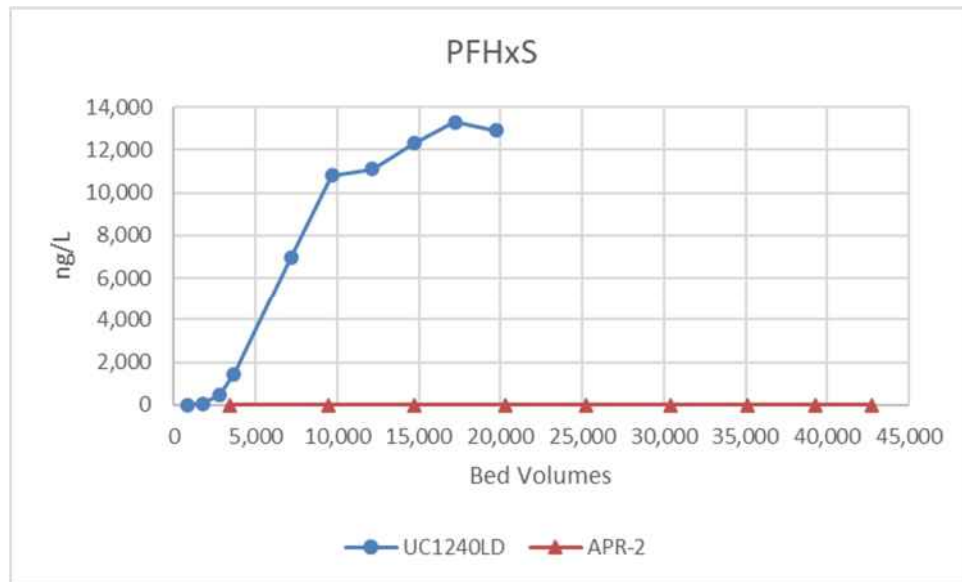


Figure 11 - PFHxS Breakthrough Curves

Table 13 - PFHxS Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.824	1/22/26 15:35	3,449	<0.806
1/23/26 15:13	1,772	78	1/23/26 21:55	9,465	<0.898
1/23/26 18:28	2,776	467	1/25/26 4:15	14,719	<0.912
1/23/26 21:42	3,699	1,440	1/26/26 10:36	20,295	<0.919
1/24/26 9:02	7,189	6,950	1/27/26 16:56	25,273	<8.99
1/24/26 17:08	9,684	10,800	1/28/26 23:16	30,435	<9.09
1/25/26 1:14	12,172	11,100	1/30/26 5:36	35,156	<8.95
1/25/26 9:20	14,701	12,300	1/31/26 11:57	39,276	13
1/25/26 17:25	17,222	13,300	2/1/26 18:17	42,703	16
1/26/26 1:31	19,725	12,900			

4.10.PFHpS

Results for PFHpS are presented in Figure 12 and Table 14. The unfiltered water had 945 ng/L, while IN-01 and IN-02 had 396 and 1,180 ng/L, respectively.

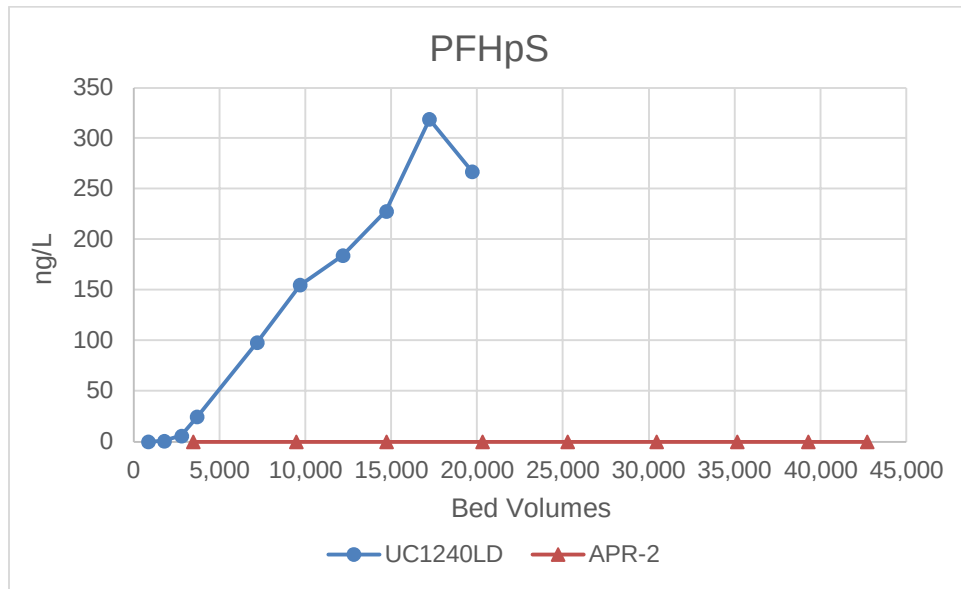


Figure 12 - PFHpS Breakthrough Curves

Table 14 - PFHpS Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.517	1/22/26 15:35	3,449	<0.505
1/23/26 15:13	1,772	0.75	1/23/26 21:55	9,465	<0.563
1/23/26 18:28	2,776	6	1/25/26 4:15	14,719	<0.572
1/23/26 21:42	3,699	25	1/26/26 10:36	20,295	<0.576
1/24/26 9:02	7,189	98	1/27/26 16:56	25,273	<5.64
1/24/26 17:08	9,684	155	1/28/26 23:16	30,435	<5.70
1/25/26 1:14	12,172	184	1/30/26 5:36	35,156	<5.61
1/25/26 9:20	14,701	228	1/31/26 11:57	39,276	<5.57
1/25/26 17:25	17,222	319	2/1/26 18:17	42,703	<5.70
1/26/26 1:31	19,725	267			

4.11. PFOS

Results for PFOS are presented in Figure 13 and Table 15. The unfiltered water had 39,600 ng/L, while IN-01 and IN-02 had 2,220 and 16,600 ng/L, respectively.

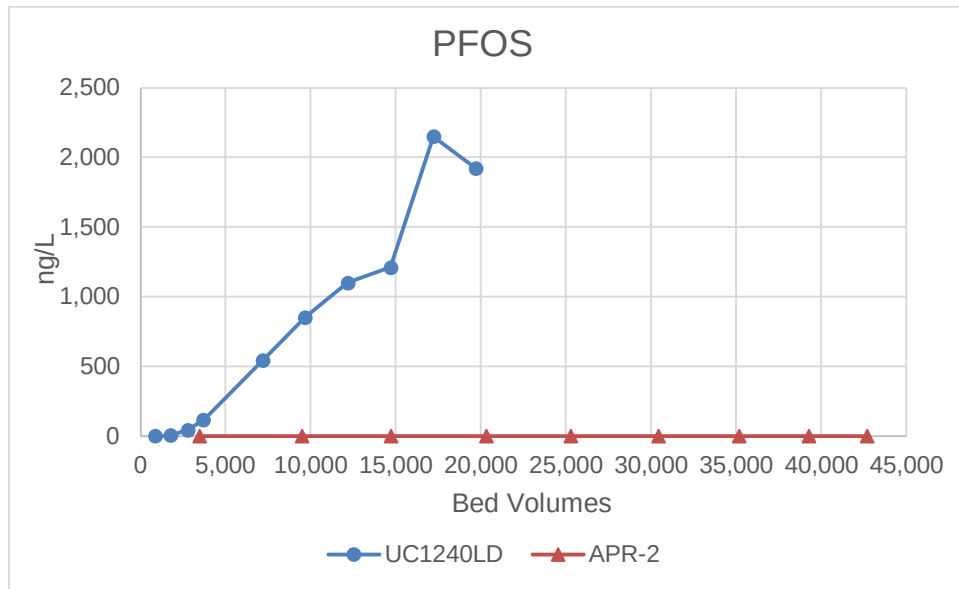


Figure 13 - PFOS Breakthrough Curves

Table 15 - PFOS Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.814	1/22/26 15:35	3,449	<0.796
1/23/26 15:13	1,772	5	1/23/26 21:55	9,465	1
1/23/26 18:28	2,776	44	1/25/26 4:15	14,719	2
1/23/26 21:42	3,699	115	1/26/26 10:36	20,295	3
1/24/26 9:02	7,189	544	1/27/26 16:56	25,273	<8.88
1/24/26 17:08	9,684	853	1/28/26 23:16	30,435	<8.98
1/25/26 1:14	12,172	1,100	1/30/26 5:36	35,156	<8.84
1/25/26 9:20	14,701	1,210	1/31/26 11:57	39,276	<8.78
1/25/26 17:25	17,222	2,150	2/1/26 18:17	42,703	<8.98
1/26/26 1:31	19,725	1,920			

4.12. PFBSA

Results for PFBSA are presented in Figure 14 and Table 16. The unfiltered water had 186 ng/L, while IN-01 and IN-02 had 229 and 226 ng/L, respectively.

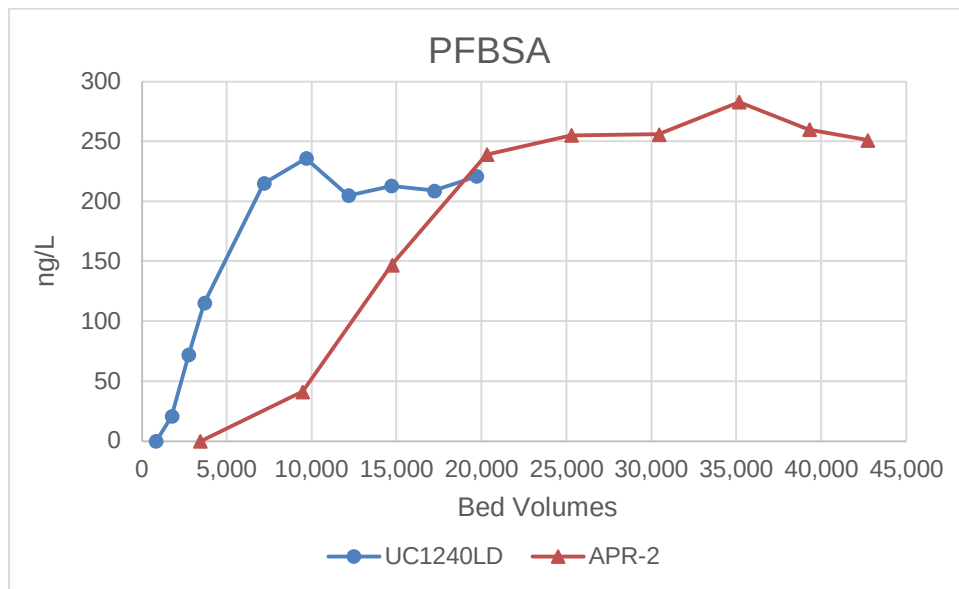


Figure 14 - PFBSA Breakthrough Curves

Table 16 - PFBSA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<1.81	1/22/26 15:35	3,449	<1.77
1/23/26 15:13	1,772	21	1/23/26 21:55	9,465	41
1/23/26 18:28	2,776	72	1/25/26 4:15	14,719	147
1/23/26 21:42	3,699	115	1/26/26 10:36	20,295	239
1/24/26 9:02	7,189	215	1/27/26 16:56	25,273	255
1/24/26 17:08	9,684	236	1/28/26 23:16	30,435	256
1/25/26 1:14	12,172	205	1/30/26 5:36	35,156	283
1/25/26 9:20	14,701	213	1/31/26 11:57	39,276	260
1/25/26 17:25	17,222	209	2/1/26 18:17	42,703	251
1/26/26 1:31	19,725	221			

4.13. PFHxSA

Results for PFHxSA are presented in Figure 15 and Table 17. The unfiltered water had 5,080 ng/L, while IN-01 and IN-02 had 5,430 and 5,790 ng/L, respectively.

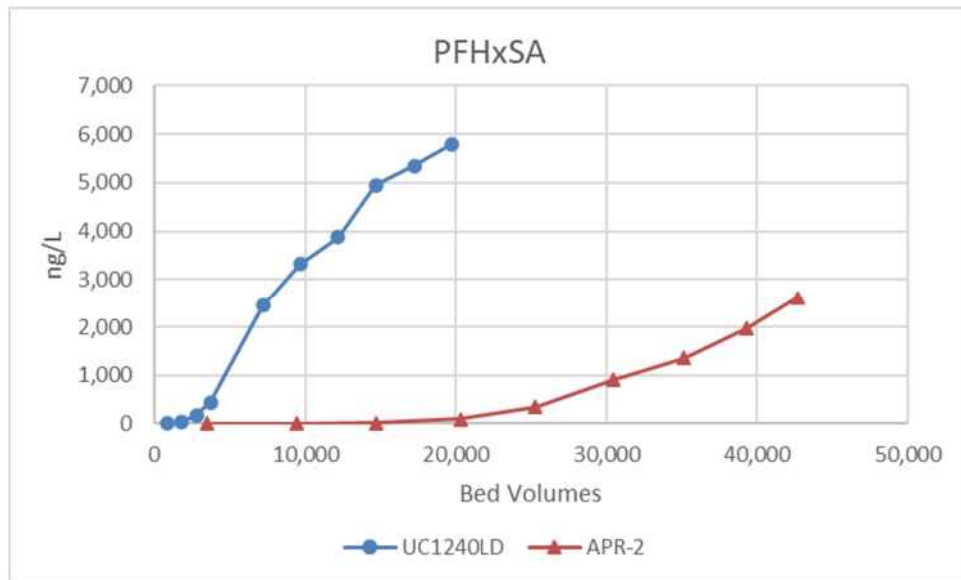


Figure 15 - PFHxSA Breakthrough Curves

Table 17 - PFHxSA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<0.801	1/22/26 15:35	3,449	<0.784
1/23/26 15:13	1,772	26	1/23/26 21:55	9,465	2
1/23/26 18:28	2,776	175	1/25/26 4:15	14,719	14
1/23/26 21:42	3,699	442	1/26/26 10:36	20,295	94
1/24/26 9:02	7,189	2,440	1/27/26 16:56	25,273	346
1/24/26 17:08	9,684	3,320	1/28/26 23:16	30,435	909
1/25/26 1:14	12,172	3,870	1/30/26 5:36	35,156	1,360
1/25/26 9:20	14,701	4,950	1/31/26 11:57	39,276	1,970
1/25/26 17:25	17,222	5,350	2/1/26 18:17	42,703	2,610
1/26/26 1:31	19,725	5,800			

4.14. 5:3 FTCA

Results for 5:3 FTCA are presented in Figure 16 and Table 18. The unfiltered water had 27.9 ng/L, while IN-01 and IN-02 had 27.4 and 22.1 ng/L, respectively. Breakthrough of 3:3 FTCA for UC1240LD at 3,699 BV could not be confirmed due to the high MDL for subsequent samples.

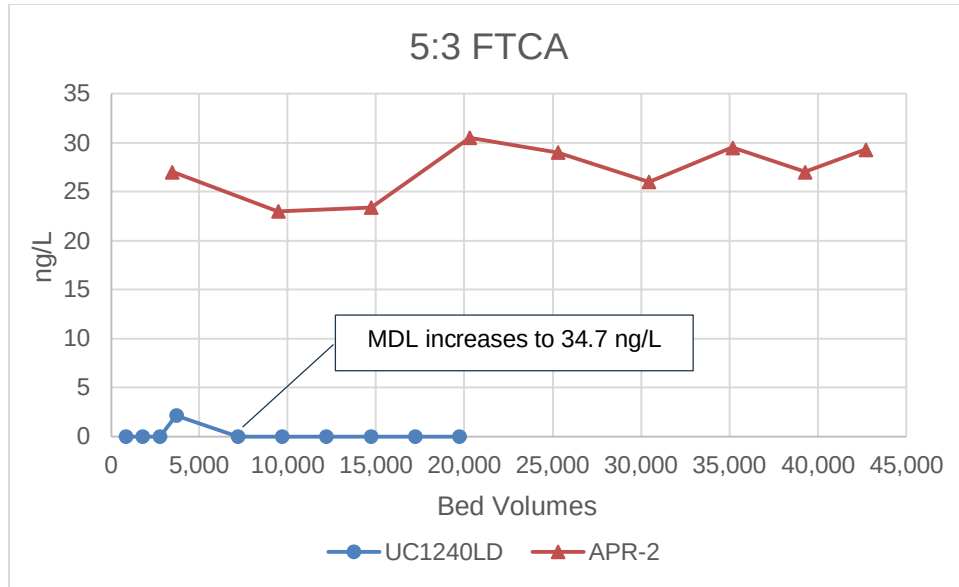


Figure 16 - 5:3 FTCA Breakthrough Curves

Table 18 - 5:3 FTCA Data

UC1240LD			APR-2		
Sample Date	BV	ng/L	Sample Date	BV	ng/L
1/23/26 11:59	855	<1.27	1/22/26 15:35	3,449	27.0
1/23/26 15:13	1,772	<1.25	1/23/26 21:55	9,465	23.0
1/23/26 18:28	2,776	<1.25	1/25/26 4:15	14,719	23.4
1/23/26 21:42	3,699	2.21	1/26/26 10:36	20,295	30.5
1/24/26 9:02	7,189	<34.7	1/27/26 16:56	25,273	29.0
1/24/26 17:08	9,684	<34.6	1/28/26 23:16	30,435	26.0
1/25/26 1:14	12,172	<69.4	1/30/26 5:36	35,156	29.5
1/25/26 9:20	14,701	<69.8	1/31/26 11:57	39,276	27.0
1/25/26 17:25	17,222	<69.6	2/1/26 18:17	42,703	29.3
1/26/26 1:31	19,725	<69.5			

5. Discussion

5.1. Sample Filtration and Changes to PFAS Concentrations

Table 19 summarizes the concentrations of all PFAS analytes for the raw, unfiltered water collected before the RSSCTs and compares those concentrations to the two filtered water samples collected at the start and completion of the RSSCTs. PFAS have been sorted by category and by molecular weight for easier visualization. Long-chain perfluorosulfonic acids (PFHpS, PFecHS, PFOS and PFNS) appear to be removed by filtration. The second filtered water sample had higher concentrations of most of these compounds suggesting less PFAS was removed as additional water was added to the stainless-steel canister.

Table 19 - PFAS Concentrations of Raw and Filtered Water

PFAS	Raw	IN-01	IN-02	Units
4:2 FTS	<0.977	<9.21	<9.24	ng/L
6:2 FTS	<2.00	<18.9	<18.9	ng/L
8:2 FTS	<1.18	<11.1	<11.2	ng/L
3:3 FTCA	<3.15	<29.7	<29.8	ng/L
5:3 FTCA	27.9	27.4	22.1	ng/L
7:3 FTCA	<1.13	<10.6	<10.7	ng/L
9-CI-PF3ONS	<0.467	<4.41	<4.42	ng/L
11-CI-PF3OUdS	<0.487	<4.60	<4.61	ng/L
HFPO-DA	<1.22	<11.5	<11.5	ng/L
DONA	<0.586	<5.53	<5.55	ng/L
NEtFOSAA	2.04	<15.2	<15.2	ng/L
NMeFOSAA	1.68	<6.34	<6.36	ng/L
PFBSA	186	229	226	ng/L
PFHxSA	5,080	5,430	5,790	ng/L
PFOSAm	19.9	<7.00	16.10	ng/L
PFBS	440	405	414	ng/L
PFPeS	898	1,050	1,350	ng/L
PFHxS	13,500	12,800	17,200	ng/L
PFHpS	945	396	1,180	ng/L
PFecHS	161	14.1	38	ng/L
PFOS	39,600	2,220	16,600	ng/L
PFNS	344	<4.88	9.06	ng/L
PFDS	4.88	<13.5	<13.5	ng/L
PFBA	142	145	148	ng/L
PFPeA	365	363	356	ng/L
PFHxA	1,700	2,450	2,370	ng/L
PFHpA	342	340	344	ng/L
PFOA	1,150	1,570	1,720	ng/L
PFNA	113	107	113	ng/L
PFDA	35.3	21.9	30.8	ng/L
PFUnDA	1.29	<9.59	<9.61	ng/L

PFAS	Raw	IN-01	IN-02	Units
PFDOA	<0.721	<6.80	<6.82	ng/L
PFTTrDA	<2.01	<19.0	<19.1	ng/L
PFTDA	<2.75	<26.0	<26.1	ng/L
Total	65,059	27,568	47,927	ng/L

5.2. Media Performance

Media bed life depends on the PFAS that need to be removed, the concentrations allowed in the effluent, and how the vessels are operated. In normal lead/lag operation, the lead bed is run to an endpoint that maximizes PFAS loading on the lead bed while assuring compliance for the final effluent. For this discussion, it is assumed the lead bed would be run to an effluent concentration equal to 50% of the influent concentration. Volumes to 50% breakthrough are more reproducible and often considered equilibrium limits.

Figure 17 summarizes the results for the PFAS presented in Section 4. Curves have been normalized by dividing effluent concentrations by the average influent concentrations. UC1240LD curves for PFHpS and PFOS may be off due to inconsistent influent concentrations as discussed in Section 5.1. These curves follow the expected trend where there is later breakthrough of higher molecular weight PFAS within a category. The trends also follow the observation where perfluorosulfonic acids have later breakthrough than perfluorocarboxylic acids of the same chain length. APR-2 is interesting in that it removed nonionic PFBSA and PFHxSA. APR-2 has early breakthrough of 5:3 FTCA, which is anionic.

Table 20 summarizes the bed volumes treated to 50% breakthrough. Values represent bed volumes to specific samples. Results were not interpolated. A single value is provided if there is a sample with 45% to 55% of the influent concentration. All other PFAS are listed as a range from the sample with less than 45% breakthrough to the sample with greater than 55% breakthrough. Breakthrough for 5:3 FTCA on UC1240LD could not be defined since the MDL was higher than the influent concentration after the first detection.

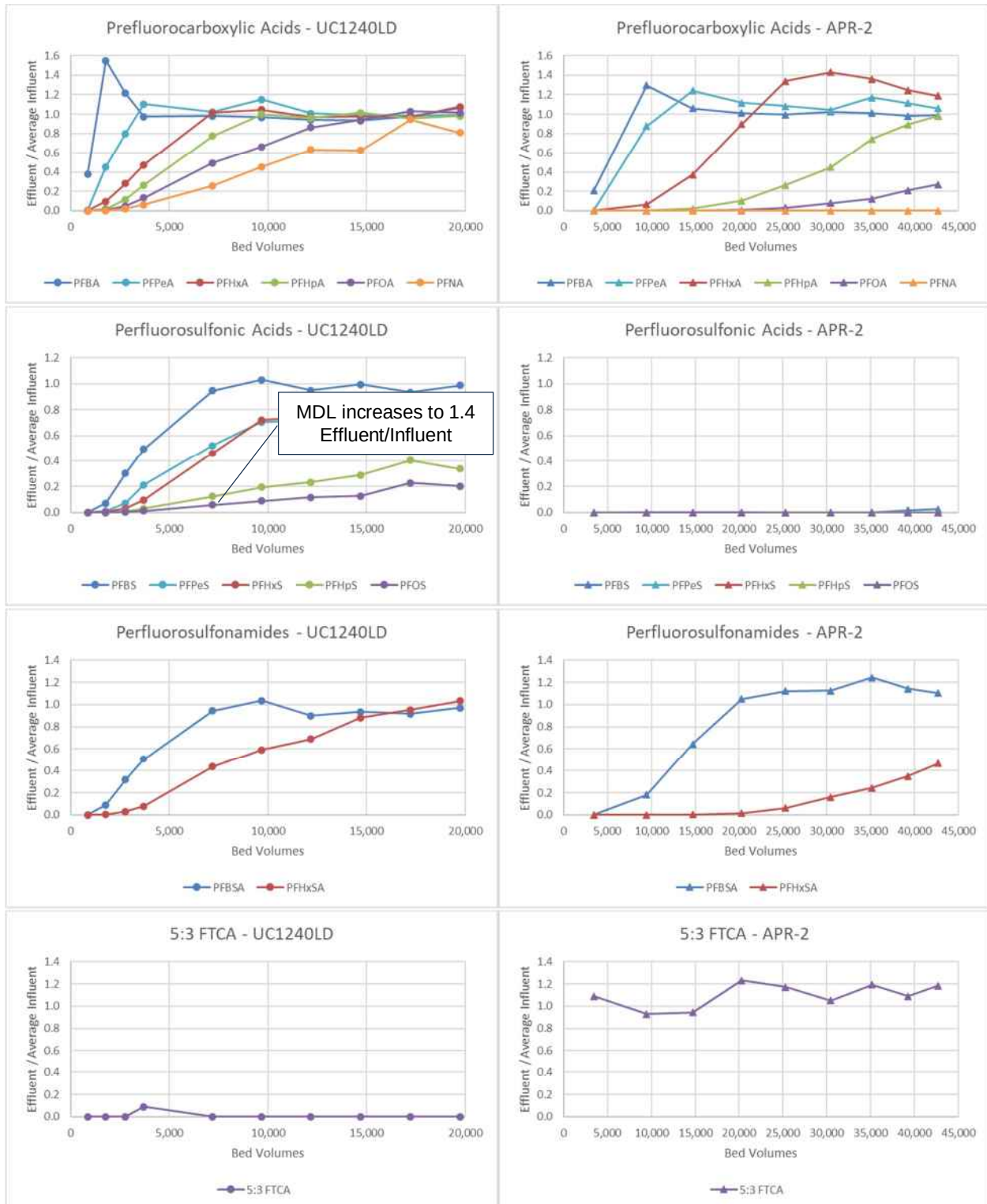


Figure 17 - Select PFAS Breakthrough Curves

Table 20 - Bed Volumes to 50% Breakthrough

PFAS	UC1240LD	APR-2
PFBA	855 - 1772	3,449 - 9,465
PFPeA	1,772	3,449 - 9,465
PFHxA	3,699	14,719 - 20,295
PFHpA	3699 - 7189	30,435
PFOA	7,189	>42,703
PFNA	9,684	>42,703
PFBS	3,699	>42,703
PFPeS	7,189	>42,703
PFHxS	7,189	>42,703
PFHpS	>19,725	>42,703
PFOS	>19,725	>42,703
PFBSA	3,699	9,465 - 14,719
PFHxSA	7,189 - 9,684	42,703
5:3 FTCA	>3,699 ^a	0 - 3,449

^a – 50% breakthrough could not be defined due to high MDL

5.3. Discharge Criteria

Table 21 compares the raw water concentrations of PFAS to the discharge criteria. Concentrations in bold exceed the discharge criteria.

PFBS is the first compound above the discharge criteria to breakthrough UC1240LD. Per Table 20, the effluent reached 50% of the influent concentration at approximately 3,699 BV. The customer may choose to operate past this point since the discharge criteria is 95% of the raw water concentration. This concentration was reached at approximately 7,189 BV in the RSSCT.

PFOA and PFHxS are the next compounds of concern with breakthrough. Effluents for both reached 50% of the influent concentration at approximately 7,189 BV. Expected throughput for UC1240LD should be between 3,699 and 7,189 BV. Bed life would be between 65 and 126 days based on the design flow rate of 57 BV/day.

PFOA is the first compound above the discharge criteria to breakthrough APR-2. The effluent concentration of PFOA was 27% of the influent concentration at 42,703 BV as shown in Figure 17. Bed life is 334 days for 42,703 BV based on the design flow rate of 128 BV/day.

Table 21 - Discharge Criteria

PFAS	Raw Water (ng/L)	Discharge Criteria (ng/L)
HFPO-DA	<1.22	370
PFBS	440	420
PFHxS	13,500	51
PFHxA	1,700	400,000
PFNA	113	6
PFOA	1,150	8
PFOS	39,600	16

5.4. Breakthrough Curves and Mass Transfer

Figure 17 highlights the gradual breakthrough curves of long-chain PFAS. The curves indicate potential kinetic limitations to the throughputs based on equilibrium discussed in Section 5.3. Figure 18 shows the initial breakthrough of regulated long-chain PFAS with high influent concentrations.

Section 5.3 presents throughputs of 7,189 BV for both PFOA and PFHxS. Figure 18 shows PFOA and PFHxS both exceeding the discharge limit before 1,772 BV. Additionally, PFOS exceeds the discharge limit before 2,776 BV based on influent with only 6% to 42% of the expected PFOS concentration. The sample at 1,772 BV was 33% of the discharge limit and likely would have exceeded the discharge limit with up to 20X the influent concentration.

Section 5.3 presents throughput of 42,703 BV for PFOA breakthrough to 27% of the influent concentration. Figure 18 shows PFOA exceeding the discharge limit before 20,295 BV. PFHxS does not exceed the discharge limit at 42,703 BV. PFOS does not exceed the discharge limit at 42,703 per the data presented in Table 15, where the concentration is listed at <9 ng/L. The PFOS curves are based on influent with only 6% to 42% of the raw water concentration. The effluent PFOS concentration peaked at 3 ng/L (20% of discharge limit) at 20,295 BV and may have exceeded the discharge limit at this point with a higher influent concentration.

The numbers in the previous two paragraphs do not take lead/lag operation into account. For example, 1,772 BV for the combined lead/lag system means the lead bed treats 3,544 BV, and 20,295 BV for the lead/lag system means the lead bed treats 40,590 BV.

It should be noted that RSSCTs typically have earlier initial breakthrough than full-scale or pilot systems. It should also be noted that breakthrough curves will be sharper with longer EBCTs. A lead/lag system would have twice the EBCT simulated in this experiment, and a lead/mid/lag system with have three times the EBCT.

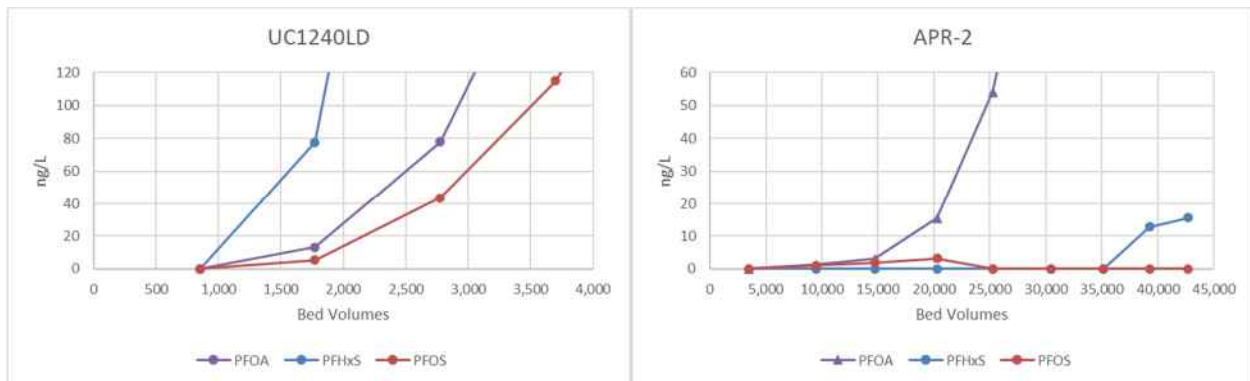


Figure 18 - Initial Breakthrough of Select PFAS with Discharge Limits

5.5. Equipment Design

The design basis for UC1240LD is a compromise between hydraulic loading rate (HLR), EBCT, and bed life. Xylem recommends a minimum HLR of 2 gpm/ft². Lower HLRs can result in channeling or selective flow. The design of 20 gpm through a 4-foot diameter vessel runs with a HLR of 1.6 gpm/ft². The next smaller size is a 3-foot diameter vessel, which would run with a HLR of 2.8 gpm/ft², but this design cuts EBCT and the time between media exchanges in half.

This site has high influent PFAS concentrations and low discharge limits. For example, PFOS needs to be reduced from 39,600 ng/L to <16 ng/L. 99.96% removal of PFOS is best handled by multiple beds in series. A lead/mid/lag configuration is recommended since it allows higher PFAS loading on the first bed while preventing discharge violations by having several polish beds. Operating in this manner allows PFAS loading to approach the equilibrium limit as predicted by the bed volumes to 50% effluent/influent.

One conservative mode of operation is to run the system until the effluent from the middle bed reaches the discharge limit. At that point, the lag bed is still working as a polisher to prevent violations in the final discharge. The lead bed is then replaced, the middle bed becomes the lead bed, and a vessel with new media is installed in the lag. Alternate endpoints also work, but there is a tradeoff between maximizing PFAS loading on the lead bed and risking discharge violations from the lag bed. Any PFAS loading on the middle bed will shorten its life when placed in the lead position.

6. Conclusions

In the UC1240LD RSSCT, PFHxS was the first compound to exceed the discharge limit (51 ng/L). This point was reached at 1,772 BV due to kinetics as discussed in Section 5.3. PFBS is the limiting compound based on the apparent equilibrium limit as defined by the throughput to 50% effluent/influent. This point was reached at 3,699 BV as discussed in Section 5.2.

Lead/mid/lag operation provides more contact time and lower leakage as discussed in Sections 5.4 and 5.5. A throughput of 3,700 BV is a reasonable estimate for a lead/mid/lag configuration.

This throughput corresponds to 65 days of operation for a 4-foot diameter vessel with 68 cubic feet of carbon treating 20 gpm.

In the APR-2 RSSCT, PFOA was the first compound to exceed the discharge limit (8 ng/L). This point was reached at 20,295 BV due to kinetics as discussed in Section 5.3. PFOA is also the limiting compound based on the apparent equilibrium limit as defined by the throughput to 50% effluent/influent. This point was not reached when the RSSCT ended at 42,703 BV.

Lead/mid/lag operation provides more contact time and lower leakage as discussed in Sections 5.4 and 5.5. A throughput of 43,000 BV is a reasonable estimate for bed life of a lead/mid/lag configuration. This throughput corresponds to 334 days of operation for a 3-foot diameter vessel with 30 cubic feet of resin treating 20 gpm.

Fouling of either media with organic material or suspended solids will reduce bed life due to reduced capacity to load PFAS or early breakthrough due to slower diffusion rates.

The best choice of media depends on many factors including, available equipment, available footprint, operation limitations, and regulatory concerns. A detailed economic analysis (not included here) is needed to understand the long-term costs of any media.

Appendix – ALS Analytical Reports

February 16, 2026

Kyle Trewitz
Xylem
4669 Shepherd Trail
Rockford, IL 61103

Re: **Arcadis PFAS**

Date Received: **02/07/2026**

Work Order: **HN2601842**

Dear Kyle,

Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Kathy Jones-Gronda

/S/ KATHY JONES-GRONDA

Project Manager



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842
Date Received: 07-Feb-2026

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

21 water samples were received for analysis at ALS Environmental on 07-Feb-2026. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organics

EPA 537 Mod-W

Run ID: 3883629

The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: PFTrDA.

Run ID: 3874147

HN2601842-011: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-011: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

Run ID: 3874149

HN2601842-012: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-012: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-012: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-013: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-013: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-013: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-014: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-014: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-014: 13C2-FtS 4:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-016: 13C2-FtS 8:2 - The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte:

HN2601842-017: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

HN2601842-017: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842
Date Received: 07-Feb-2026

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Run ID: 3874149

HN2601842-018: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.
HN2601842-018: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.
HN2601842-019: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.
HN2601842-019: 13C2-FtS 6:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.
HN2601842-020: 13C2-FtS 8:2 - One or more surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

Run ID: 3870678

HN2601842-001: Additional acid required to reach pH of 3 due to sample matrix.
HN2601842-002: Additional acid required to reach pH of 3 due to sample matrix.
HN2601842-003: Additional acid required to reach pH of 3 due to sample matrix.
HN2601842-004: Additional acid required to reach pH of 3 due to sample matrix.
HN2601842-005: Sample extracted at 25x dilution due to prescreening results.
HN2601842-006: Sample extracted at 25x dilution due to prescreening results.
HN2601842-007: Sample extracted at 50x dilution due to prescreening results.
HN2601842-008: Sample extracted at 50x dilution due to prescreening results.
HN2601842-009: Sample extracted at 50x dilution due to prescreening results.
HN2601842-011: Additional acid required to reach pH of 3 due to sample matrix.
HN2601842-015: Sample extracted at 10x dilution due to prescreening results.

Run ID: 3870681

HN2601842-010: Initial Volume - Sample extracted at 50x dilution due to prescreening results.
HN2601842-016: Initial Volume - Sample extracted at 10x dilution due to prescreening results.
HN2601842-017: Initial Volume - Sample extracted at 10x dilution due to prescreening results.
HN2601842-018: Initial Volume - Sample extracted at 10x dilution due to prescreening results.
HN2601842-019: Initial Volume - Sample extracted at 10x dilution due to prescreening results.
HN2601842-020: Initial Volume - Sample extracted at 10x dilution due to prescreening results.

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: G-1	Lab ID: HN2601842-001

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutanoic acid (PFBA)	55.3		4.56	ng/L	EPA 537Mod

CLIENT ID: G-2	Lab ID: HN2601842-002

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	29.9		4.51	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	227		4.51	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	20.6		4.51	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	6.45		4.51	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	77.6		4.51	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	25.5		4.51	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	231		4.51	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	5.35		1.81	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	13.3		1.81	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	12.4		4.51	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	163		4.51	ng/L	EPA 537Mod

CLIENT ID: G-3	Lab ID: HN2601842-003

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	124		4.51	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	178		4.51	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	72.0		4.51	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	5.67		4.51	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	39.4		4.51	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	467		13.5	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	175		4.51	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	682		13.5	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	43.7		1.80	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	78.0		1.80	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	86.6		4.51	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	287		4.51	ng/L	EPA 537Mod

CLIENT ID: G-4	Lab ID: HN2601842-004

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	203		4.51	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	143		4.51	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	115		4.51	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	24.5		4.51	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	90.8		4.51	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	1440		22.6	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	442		22.6	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	1140		22.6	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	6.85		4.51	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: G-4	Lab ID: HN2601842-004

Analyte	Results	Flag	MRL	Units	Method
Perfluorooctane sulfonic acid (PFOS)	115		1.80	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	220		1.80	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	256		4.51	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	396		4.51	ng/L	EPA 537Mod

CLIENT ID: G-5	Lab ID: HN2601842-005

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	388		125	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	144		125	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	215		125	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	265		125	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	6950		125	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	2440		125	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2450		125	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	544		49.9	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	815		49.9	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	628		125	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	368		125	ng/L	EPA 537Mod

CLIENT ID: G-6	Lab ID: HN2601842-006

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	422		124	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	142		124	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	236		124	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	155		124	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	341		124	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	10800		124	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	3320		124	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2520		124	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	853		49.8	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1090		49.8	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	846		124	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	413		124	ng/L	EPA 537Mod

CLIENT ID: G-7	Lab ID: HN2601842-007

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	389		250	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	329		250	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	11100		250	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	3870		250	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2330		250	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	1100		99.8	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: G-7	Lab ID: HN2601842-007

Analyte	Results	Flag	MRL	Units	Method
Perfluorooctanoic acid (PFOA)	1420		99.8	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	852		250	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	363		250	ng/L	EPA 537Mod

CLIENT ID: G-8	Lab ID: HN2601842-008

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	407		251	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	347		251	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	12300		251	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	4950		251	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2350		251	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	1210		100	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1550		100	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	810		251	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	357		251	ng/L	EPA 537Mod

CLIENT ID: G-9	Lab ID: HN2601842-009

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	382		251	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	319		251	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	326		251	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	13300		251	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	5350		251	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2340		251	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	2150		100	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1690		100	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	842		251	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	354		251	ng/L	EPA 537Mod

CLIENT ID: G-10	Lab ID: HN2601842-010

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	404		250	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	267		250	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	336		250	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	12900		250	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	5800		250	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2590		250	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	1920		100	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1670		100	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	859		250	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	357		250	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: R-1			Lab ID: HN2601842-011		
Analyte	Results	Flag	MRL	Units	Method
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	27.0		4.46	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	30.2		4.46	ng/L	EPA 537Mod
CLIENT ID: R-2			Lab ID: HN2601842-012		
Analyte	Results	Flag	MRL	Units	Method
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	23.0		4.97	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	190		4.97	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	41.0		4.97	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	160		4.97	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	315		4.97	ng/L	EPA 537Mod
CLIENT ID: R-3			Lab ID: HN2601842-013		
Analyte	Results	Flag	MRL	Units	Method
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	23.4		5.05	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	155		5.05	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	147		5.05	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	7.18		5.05	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	14.2		5.05	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	895		25.3	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	3.11		2.02	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	447		25.3	ng/L	EPA 537Mod
CLIENT ID: R-4			Lab ID: HN2601842-014		
Analyte	Results	Flag	MRL	Units	Method
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	30.5		5.09	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	148		5.09	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	239		5.09	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	34.9		5.09	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	94.4		5.09	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2160		50.9	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	3.20		2.03	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	15.5		2.03	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	402		5.09	ng/L	EPA 537Mod
CLIENT ID: R-5			Lab ID: HN2601842-015		
Analyte	Results	Flag	MRL	Units	Method
Perfluorobutanoic acid (PFBA)	146		49.8	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	255		49.8	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	90.0		49.8	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	346		49.8	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	3230		49.8	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	54.0		19.9	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: R-5	Lab ID: HN2601842-015

Analyte	Results	Flag	MRL	Units	Method
Perfluoropentanoic acid (PFPeA)	389		49.8	ng/L	EPA 537Mod

CLIENT ID: R-6	Lab ID: HN2601842-016

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutanoic acid (PFBA)	150		50.3	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	256		50.3	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	154		50.3	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	909		50.3	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	3450		50.3	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	132		20.1	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	375		50.3	ng/L	EPA 537Mod

CLIENT ID: R-7	Lab ID: HN2601842-017

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutanoic acid (PFBA)	148		49.6	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	283		49.6	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	255		49.6	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	1360		49.6	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	3280		49.6	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	203		19.8	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	421		49.6	ng/L	EPA 537Mod

CLIENT ID: R-8	Lab ID: HN2601842-018

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutanoic acid (PFBA)	144		49.2	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	260		49.2	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	306		49.2	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	1970		49.2	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	3000		49.2	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	345		19.7	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	400		49.2	ng/L	EPA 537Mod

CLIENT ID: R-9	Lab ID: HN2601842-019

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutanoic acid (PFBA)	145		50.3	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	251		50.3	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	336		50.3	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	2610		50.3	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2860		50.3	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	444		20.1	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	381		50.3	ng/L	EPA 537Mod

SAMPLE DETECTION SUMMARY

This form includes only detections above the limits as presented.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: IN-01	Lab ID: HN2601842-020

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	405		49.2	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	145		49.2	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	229		49.2	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	396		49.2	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	340		49.2	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	12800		246	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	5430		246	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2450		49.2	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	107		49.2	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	2220		19.7	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1570		19.7	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	1050		49.2	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	363		49.2	ng/L	EPA 537Mod

CLIENT ID: IN-02	Lab ID: HN2601842-021

Analyte	Results	Flag	MRL	Units	Method
Perfluorobutane sulfonic acid (PFBS)	414		49.3	ng/L	EPA 537Mod
Perfluorobutanoic acid (PFBA)	148		49.3	ng/L	EPA 537Mod
Perfluorobutylsulfonamide (PFBSA)	226		49.3	ng/L	EPA 537Mod
Perfluoroheptane sulfonic acid (PFHpS)	1180		49.3	ng/L	EPA 537Mod
Perfluoroheptanoic acid (PFHpA)	344		49.3	ng/L	EPA 537Mod
Perfluorohexane sulfonic acid (PFHxS)	17200		247	ng/L	EPA 537Mod
Perfluorohexanesulfonamide (PFHxSA)	5790		247	ng/L	EPA 537Mod
Perfluorohexanoic acid (PFHxA)	2370		49.3	ng/L	EPA 537Mod
Perfluorononanoic acid (PFNA)	113		49.3	ng/L	EPA 537Mod
Perfluorooctane sulfonic acid (PFOS)	16600		98.7	ng/L	EPA 537Mod
Perfluorooctanoic acid (PFOA)	1720		19.7	ng/L	EPA 537Mod
Perfluoropentane sulfonic acid (PFPeS)	1350		49.3	ng/L	EPA 537Mod
Perfluoropentanoic acid (PFPeA)	356		49.3	ng/L	EPA 537Mod

SAMPLE SUMMARY



Client: Xylem
Project: Arcadis PFAS
Workorder: HN2601842

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2601842-001	G-1	WATER	01/23/26 11:59	02/07/26 10:30
HN2601842-002	G-2	WATER	01/23/26 15:13	02/07/26 10:30
HN2601842-003	G-3	WATER	01/23/26 18:28	02/07/26 10:30
HN2601842-004	G-4	WATER	01/23/26 21:42	02/07/26 10:30
HN2601842-005	G-5	WATER	01/24/26 09:02	02/07/26 10:30
HN2601842-006	G-6	WATER	01/24/26 17:08	02/07/26 10:30
HN2601842-007	G-7	WATER	01/25/26 01:14	02/07/26 10:30
HN2601842-008	G-8	WATER	01/25/26 09:20	02/07/26 10:30
HN2601842-009	G-9	WATER	01/25/26 17:25	02/07/26 10:30
HN2601842-010	G-10	WATER	01/26/26 01:31	02/07/26 10:30
HN2601842-011	R-1	WATER	01/22/26 15:35	02/07/26 10:30
HN2601842-012	R-2	WATER	01/23/26 21:55	02/07/26 10:30
HN2601842-013	R-3	WATER	01/25/26 04:15	02/07/26 10:30
HN2601842-014	R-4	WATER	01/26/26 10:36	02/07/26 10:30
HN2601842-015	R-5	WATER	01/27/26 16:56	02/07/26 10:30
HN2601842-016	R-6	WATER	01/28/26 23:16	02/07/26 10:30
HN2601842-017	R-7	WATER	01/30/26 05:36	02/07/26 10:30
HN2601842-018	R-8	WATER	01/31/26 11:57	02/07/26 10:30
HN2601842-019	R-9	WATER	02/01/26 18:17	02/07/26 10:30
HN2601842-020	IN-01	WATER	01/21/26 09:00	02/07/26 10:30
HN2601842-021	IN-02	WATER	02/02/26 15:00	02/07/26 10:30



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Page 1 of 2

COC ID: **081884**

ALS Project Manager: Kathy Jones-G

ALS Work Order #:

Customer Information

Project Information

Parameter/Method Request for Analysis

Purchase Order: 4502128910

Project Name: Arco's FAS

Environmental Division
Holland
Work Order Reference
HN2601842

Quote #: HN2025X1LEM0001

Project Number: Arco's FAS

Company Name: Xylem

Bill To Company: Xylem

Send Report To: Kyle Trewitz

Invoice Attn: Xylem

Address: 201 S. Potters St

Address: Arco's FAS

City/State/Zip: Bellefonte PA 16823

City/State/Zip: Arco's FAS

Phone: 724-772-1407

Phone: 815-921-8160

Fax:

Fax:

e-Mail Address: Kyle.Trewitz@xylem.com

e-Mail Address: thomas.mallmann@xylem.com

Sample Description:

Date: 1/23/26

Time: 11:59

Matrix: water

Pres.: N/A

Bottles: 2

A B C D E F G H I J

Hold

1 G-1

1/23/26

11:59

water

N/A

2

A B C D E F G H I J

Hold

2 G-2

1/23/26

15:13

3 G-3

1/23/26

18:28

4 G-4

1/23/26

21:42

5 G-5

1/24/26

9:02

6 G-6

1/24/26

17:08

7 G-7

1/25/26

1:14

8 G-8

1/25/26

9:20

9 G-9

1/25/26

17:25

10 G-10

1/26/26

1:31

Sampler(s) Please Print & Sign

Shipment Method: UPS

Turnaround Time in Business Days (BD)

☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD

Other:

Notes:

QC Package: (Check One Box Below)

Results Due Date:

Relinquished by: Kyle Trewitz

Date: 2/6/26

Time: 11:00

Received by: UPS

Received by: UPS

QC Package: (Check One Box Below)

Level II Std QC ☐ TRRP Checklist ☐

Level III Std QC/Raw Date ☐ TRRP Level IV ☐

Relinquished by: Kyle Trewitz

Date: 2/7/26

Time: 10:30

Received by: UPS

Received by: UPS

QC Package: (Check One Box Below)

Level II Std QC ☐ TRRP Checklist ☐

Level III Std QC/Raw Date ☐ TRRP Level IV ☐

Logged by (Laboratory): BC

Date: 2/12/26

Time: 12:28

Received by: UPS

Received by: UPS

QC Package: (Check One Box Below)

Level II Std QC ☐ TRRP Checklist ☐

Level III Std QC/Raw Date ☐ TRRP Level IV ☐

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂SO₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Notes:

QC Package: (Check One Box Below)

Level II Std QC ☐ TRRP Checklist ☐

Level III Std QC/Raw Date ☐ TRRP Level IV ☐

Level IV SW646/CLP ☐ Other ☐

QC Package: (Check One Box Below)

Level II Std QC ☐ TRRP Checklist ☐

Level III Std QC/Raw Date ☐ TRRP Level IV ☐

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.

3. The Chain of Custody is a legal document. All information must be completed accurately.



Simi Valley, CA
+1 805 526 7161
Kelsey, WA
+1 360 577 7222
Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600
Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Houston, TX
+1 281 530 5656
Valparaiso, IN
+1 219 299 8727
South Charleston, WV
+1 304 356 3168
Middlestown, PA
+1 717 944 5541
Salt Lake City, UT
+1 801 266 7700
Rochester, NY
+1 585 288 5380

Page 2 of 2
COC ID: **082097**

Customer Information

Project Information

ALS Project Manager:

ALS Work Order #:

Parameter/Method Request for Analysis

Purchase Order 4502128910

Project Name

Arceuthis PMS

EPD 537 Modified

Quote # HN2025XYLEM0001

Project Number

Company Name Xylem

Bill To Company

Send Report To Kyle Trewitz

Invoice Attn

Address 201 S. Potter St

Address

City/State/Zip Bellevue WA 98003

City/State/Zip

Phone 724-772-1467

Phone

Fax

Fax

e-Mail Address Kyle.Trewitz@Xylem.com

e-Mail Address

No. Sample Description

Date

Time

Matrix

Pres.

Bottles

A

B

C

D

E

F

G

H

I

J

Hold

1 R-1

1/22/20

15:35

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

2 R-2

1/23/20

21:55

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

3 R-3

1/25/20

4:15

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

4 R-4

1/26/20

10:36

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

5 R-5

1/27/20

16:56

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

6 R-6

1/28/20

23:16

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

7 R-7

1/30/20

5:36

water

N/A

1

X

X

X

X

X

X

X

X

X

X

X

8 R-8

2/1/20

18:17

water

N/A

1

X

X

X

X

X

X

X

X

X

X

X

9 IN-01

1/21/20

9:00

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

10 IN-02

2/2/20

15:00

water

N/A

2

X

X

X

X

X

X

X

X

X

X

X

Sampler(s) Please Print & Sign

Shipment Method

Turnaround Time in Business Days (BD)

Other

Results Due Date:

Relinquished by: Kyle Trewitz

Date: 2/6/20

Time: 11:00

Received by: UPS

Received by: UPS

Notes:

Cooler ID

Cooler Temp.

QC Package: (Check One Box Below)

Level II Std QC

Level III Std QC/Raw Data

Level IV SW846/CLP

Other

Level II Std QC

Level III Std QC/Raw Data

Level IV SW846/CLP

Other

Relinquished by: Kyle Trewitz

Date: 2/6/20

Time: 10:10

Received by: UPS

Received by: UPS

Notes:

Cooler ID

Cooler Temp.

QC Package: (Check One Box Below)

Level II Std QC

Level III Std QC/Raw Data

Level IV SW846/CLP

Other

Level II Std QC

Level III Std QC/Raw Data

Level IV SW846/CLP

Other

Logged by (Laboratory): KC

Date: 2/6/20

Time: 12:28

Checked by (Laboratory): KC

Checked by (Laboratory): KC

Notes:

Cooler ID

Cooler Temp.

QC Package: (Check One Box Below)

Level II Std QC

Level III Std QC/Raw Data

Level IV SW846/CLP

Other

Level II Std QC

Level III Std QC/Raw Data

Level IV SW846/CLP

Other

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.



ALS Holland
3352 128th Ave., Holland MI 49424

ALS Holland Sample Receiving Checklist

Received by: BC

Date/Time: 2/7/26 10:30

Carrier Name: UPS

Shipping container/cooler in good condition? Yes / No / Not Present

Custody seals intact on shipping container/cooler? Yes / No / Not Present

Custody seals intact on sample bottles? Yes / No / Not Present

Chain of Custody present? Yes / No

COC signed when relinquished and received? Yes / No

COC agrees with sample labels? Yes / No

Samples in proper container/bottle? Yes / No

Sample containers intact? Yes / No

Sufficient sample volume for indicated test? Yes / No

All samples received within holding time? Yes / No

Container/Temp Blank temperature in compliance? Yes / No

Temperature(s) (°C): 21°C

Thermometer(s): IR7

Sample(s) received on ice? Yes / No

Matrix/Matrices: Water

Cooler(s)/Kit(s): 1

Date/Time sample(s) sent to storage: 2/7/26

Water – VOA vials have zero headspace? Yes / No / No Vials

Water – pH acceptable upon receipt? Yes / No / N/A

pH strip lot #: _____ < 2 _____ > 12 _____ Other _____

pH adjusted (note adjustments below)? Yes / No / N/A

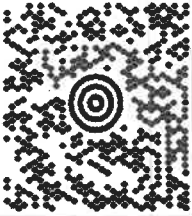
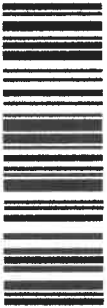
pH adjusted by: _____

Login Notes:

HN-SHT-160-R01, Sample Receipt Checklist

1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
2. Fold the printed label at the solid line below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
3. GETTING YOUR SHIPMENT TO UPS
Customers with a Daily Pickup
Your driver will pickup your shipment(s) as usual.
Customers without a Daily Pickup
Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
Hand the package to any UPS driver in your area.
Take your package to any location of The UPS Store®, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

FOLD HERE

KYLE TREWITT 8143213038 EVOOQUA BELLEFONTE 742AT1 201 POTTER ST BELLEFONTE PA 16823	52 LBS DWT: 25,14,14 AH	1 OF 1
SHIP TO: KATHY JONES-GRONDA 6163996070 ALS GLOBAL SUITE 400 3352 128TH AVE HOLLAND MI 49424-9263		
	MI 495 9-04 	
UPS NEXT DAY AIR TRACKING #: 1Z 742 AT1 44 9233 2359 1S		
		
BILLING: P/P		
Cost Center: carbon HQ Reference # 2: SVO 53955181 WNTNV50 6.0A 02/2026*  TM		

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Method criteria
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

LABORATORY CERTIFICATIONS¹

Agency	Type	ID	Issued	Expires
Colorado	UST		07/01/2025	06/30/2026
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2025	06/30/2026
Illinois	NELAP (Secondary)	200076	12/08/2025	12/31/2026
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/01/2025	09/01/2027
Kansas	NELAP (Secondary)	E-10411	08/01/2025	07/31/2026
Kentucky	Waste Water	KY98004	1/1/2026	12/31/2026
Kentucky	UST	120474	07/07/2025	06/30/2026
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/10/2025	12/31/2026
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2025	6/30/2026
New York	NELAP (Secondary)	12128	04/01/2025	04/01/2026
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/26/2025	6/30/2026
Pennsylvania	NELAP (Secondary)	68-03827	11/25/2025	07/31/2026
Texas	NELAP (Secondary)	T104704494	02/01/2026	01/31/2027
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572R1	01/28/2026	03/03/2029
West Virginia	State Specific	355	06/07/2025	08/31/2026
Wisconsin	State Specific	399084510	08/08/2025	08/31/2026

1 – Scope available upon request

ANALYST SUMMARY



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842

Sample Name: G-1
Laboratory Code: HN2601842-001
Sample Matrix: WATER

Date Collected: 01/23/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	001-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	001-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-2
Laboratory Code: HN2601842-002
Sample Matrix: WATER

Date Collected: 01/23/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	002-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	002-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-3
Laboratory Code: HN2601842-003
Sample Matrix: WATER

Date Collected: 01/23/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	003-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	003-AA	2448088	Steven Nguyen	3874990	Emily Schaaf
EPA 537Mod	EPA 537Mod	003-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-4
Laboratory Code: HN2601842-004
Sample Matrix: WATER

Date Collected: 01/23/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	004-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	004-AA	2448088	Steven Nguyen	3874990	Emily Schaaf
EPA 537Mod	EPA 537Mod	004-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

ANALYST SUMMARY



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842

Sample Name: G-5
Laboratory Code: HN2601842-005
Sample Matrix: WATER

Date Collected: 01/24/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	005-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	005-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-6
Laboratory Code: HN2601842-006
Sample Matrix: WATER

Date Collected: 01/24/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	006-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	006-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-7
Laboratory Code: HN2601842-007
Sample Matrix: WATER

Date Collected: 01/25/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	007-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	007-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-8
Laboratory Code: HN2601842-008
Sample Matrix: WATER

Date Collected: 01/25/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	008-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	008-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

ANALYST SUMMARY



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842

Sample Name: G-9
Laboratory Code: HN2601842-009
Sample Matrix: WATER

Date Collected: 01/25/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	009-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	009-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: G-10
Laboratory Code: HN2601842-010
Sample Matrix: WATER

Date Collected: 01/26/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	010-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	010-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Sample Name: R-1
Laboratory Code: HN2601842-011
Sample Matrix: WATER

Date Collected: 01/22/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	011-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	011-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: R-2
Laboratory Code: HN2601842-012
Sample Matrix: WATER

Date Collected: 01/23/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	012-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	012-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

ANALYST SUMMARY



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842

Sample Name: R-3
Laboratory Code: HN2601842-013
Sample Matrix: WATER

Date Collected: 01/25/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	013-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	013-AA	2448089	Kaylin Aviles	3874990	Emily Schaaf
EPA 537Mod	EPA 537Mod	013-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Sample Name: R-4
Laboratory Code: HN2601842-014
Sample Matrix: WATER

Date Collected: 01/26/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	014-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	014-AA	2448089	Kaylin Aviles	3874990	Emily Schaaf
EPA 537Mod	EPA 537Mod	014-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Sample Name: R-5
Laboratory Code: HN2601842-015
Sample Matrix: WATER

Date Collected: 01/27/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	015-AA	2448088	Steven Nguyen	3874147	Emily Schaaf
EPA 537Mod	EPA 537Mod	015-AA	2448088	Steven Nguyen	3883626	Emily Schaaf

Sample Name: R-6
Laboratory Code: HN2601842-016
Sample Matrix: WATER

Date Collected: 01/28/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	016-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	016-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

ANALYST SUMMARY



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842

Sample Name: R-7
Laboratory Code: HN2601842-017
Sample Matrix: WATER

Date Collected: 01/30/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	017-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	017-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Sample Name: R-8
Laboratory Code: HN2601842-018
Sample Matrix: WATER

Date Collected: 01/31/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	018-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	018-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Sample Name: R-9
Laboratory Code: HN2601842-019
Sample Matrix: WATER

Date Collected: 02/01/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	019-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	019-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Sample Name: IN-01
Laboratory Code: HN2601842-020
Sample Matrix: WATER

Date Collected: 01/21/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	020-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	020-AA	2448089	Kaylin Aviles	3874990	Emily Schaaf
EPA 537Mod	EPA 537Mod	020-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

ANALYST SUMMARY



Client: Xylem
Project: Arcadis PFAS

Work Order: HN2601842

Sample Name: IN-02
Laboratory Code: HN2601842-021
Sample Matrix: WATER

Date Collected: 02/02/26
Date Received: 02/07/26

Analysis Method	Preparation Method	Container ID	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 537Mod	EPA 537Mod	021-AA	2448089	Kaylin Aviles	3874149	Emily Schaaf
EPA 537Mod	EPA 537Mod	021-AA	2448089	Kaylin Aviles	3874990	Emily Schaaf
EPA 537Mod	EPA 537Mod	021-AA	2448089	Kaylin Aviles	3883629	Emily Schaaf

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 11:59
Date Received: 02/07/26 10:30

CLIENT ID: G-1

Lab ID: HN2601842-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	55.3		ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 11:59
Date Received: 02/07/26 10:30

CLIENT ID: G-1

Lab ID: HN2601842-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	1.83	1	02/11/26 04:07	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	ND	U	ng/L	1.83	1	02/11/26 04:07	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/13/26 18:56	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/13/26 18:56	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	4.56	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	82.4		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	90.4		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	96.5		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	77.1		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	77.8		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	86.0		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	79.3		%REC	27-134	1	02/13/26 18:56	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	80.5		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	86.7		%REC	41-142	1	02/11/26 04:07	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 11:59
Date Received: 02/07/26 10:30

CLIENT ID: G-1

Lab ID: HN2601842-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	87.0		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	83.5		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	85.3		%REC	42-141	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	92.3		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	84.0		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	86.5		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	83.7		%REC	43-138	1	02/11/26 04:07	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	73.9		%REC	30-122	1	02/11/26 04:07	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	78.7		%REC	50-150	1	02/11/26 04:07	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	71.7		%REC	35-136	1	02/11/26 04:07	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	72.7		%REC	34-142	1	02/11/26 04:07	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 15:13
Date Received: 02/07/26 10:30

CLIENT ID: G-2

Lab ID: HN2601842-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	29.9		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	227		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	20.6		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 15:13
Date Received: 02/07/26 10:30

CLIENT ID: G-2

Lab ID: HN2601842-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	6.45		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	77.6		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	25.5		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	231		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	5.35		ng/L	1.81	1	02/11/26 04:21	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	13.3		ng/L	1.81	1	02/11/26 04:21	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	12.4		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	163		ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/13/26 19:11	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/13/26 19:11	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	75.7		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	79.6		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	84.4		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	65.6		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	64.2		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	66.1		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	63.7		%REC	27-134	1	02/13/26 19:11	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	66.0		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	77.7		%REC	41-142	1	02/11/26 04:21	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 15:13
Date Received: 02/07/26 10:30

CLIENT ID: G-2

Lab ID: HN2601842-002

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	80.0		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	67.4		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	79.7		%REC	42-141	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	71.8		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	67.9		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	68.3		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	70.9		%REC	43-138	1	02/11/26 04:21	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	69.3		%REC	30-122	1	02/11/26 04:21	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	65.6		%REC	50-150	1	02/11/26 04:21	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	67.8		%REC	35-136	1	02/11/26 04:21	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	66.6		%REC	34-142	1	02/11/26 04:21	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 18:28
Date Received: 02/07/26 10:30

CLIENT ID: G-3

Lab ID: HN2601842-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	124		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	178		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	72.0		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 18:28
Date Received: 02/07/26 10:30

CLIENT ID: G-3	Lab ID: HN2601842-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	5.67		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	39.4		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	467		ng/L	13.5	3	02/11/26 12:32	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	175		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	682		ng/L	13.5	3	02/11/26 12:32	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	43.7		ng/L	1.80	1	02/11/26 04:35	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	78.0		ng/L	1.80	1	02/11/26 04:35	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	86.6		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	287		ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/13/26 19:25	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/13/26 19:25	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	73.5		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	83.0		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	90.9		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	74.6		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	68.7		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	62.2		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	68.7		%REC	27-134	1	02/13/26 19:25	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	70.7		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	74.7		%REC	41-142	1	02/11/26 04:35	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 18:28
Date Received: 02/07/26 10:30

CLIENT ID: G-3

Lab ID: HN2601842-003

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	76.8		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	72.6		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	67.6		%REC	42-141	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	78.3		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	65.4		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	72.6		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	67.6		%REC	43-138	1	02/11/26 04:35	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	65.4		%REC	30-122	1	02/11/26 04:35	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	65.5		%REC	50-150	1	02/11/26 04:35	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	61.0		%REC	35-136	1	02/11/26 04:35	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	63.8		%REC	34-142	1	02/11/26 04:35	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 21:42
Date Received: 02/07/26 10:30

CLIENT ID: G-4

Lab ID: HN2601842-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	203		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	143		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	115		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 21:42
Date Received: 02/07/26 10:30

CLIENT ID: G-4	Lab ID: HN2601842-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	24.5		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	90.8		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	1440		ng/L	22.6	5	02/11/26 11:34	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	442		ng/L	22.6	5	02/11/26 11:34	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	1140		ng/L	22.6	5	02/11/26 11:34	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	6.85		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	115		ng/L	1.80	1	02/11/26 04:50	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	220		ng/L	1.80	1	02/11/26 04:50	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	256		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	396		ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/13/26 19:40	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/13/26 19:40	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	4.51	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	90.3		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	94.7		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	95.5		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	85.0		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	77.8		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	65.3		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	69.7		%REC	27-134	1	02/13/26 19:40	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	78.0		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	81.3		%REC	41-142	1	02/11/26 04:50	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 21:42
Date Received: 02/07/26 10:30

CLIENT ID: G-4

Lab ID: HN2601842-004

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	84.3		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	84.3		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	60.0		%REC	42-141	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	82.3		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	86.4		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	68.9		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	75.3		%REC	43-138	1	02/11/26 04:50	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	77.4		%REC	30-122	1	02/11/26 04:50	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	62.5		%REC	50-150	1	02/11/26 04:50	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	70.7		%REC	35-136	1	02/11/26 04:50	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	70.4		%REC	34-142	1	02/11/26 04:50	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/24/26 09:02
Date Received: 02/07/26 10:30

CLIENT ID: G-5

Lab ID: HN2601842-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	388		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	144		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	215		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/24/26 09:02
Date Received: 02/07/26 10:30

CLIENT ID: G-5

Lab ID: HN2601842-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	265		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	6950		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	2440		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2450		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	544		ng/L	49.9	1	02/11/26 05:04	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	815		ng/L	49.9	1	02/11/26 05:04	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	628		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	368		ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	125	1	02/13/26 19:54	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	125	1	02/13/26 19:54	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	125	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	89.1		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	88.8		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	99.8		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	79.4		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	82.1		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	84.8		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	73.9		%REC	27-134	1	02/13/26 19:54	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	82.2		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	91.0		%REC	41-142	1	02/11/26 05:04	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/24/26 09:02
Date Received: 02/07/26 10:30

CLIENT ID: G-5

Lab ID: HN2601842-005

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	88.4		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	85.9		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	83.8		%REC	42-141	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	86.4		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	88.7		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	83.2		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	84.7		%REC	43-138	1	02/11/26 05:04	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	77.9		%REC	30-122	1	02/11/26 05:04	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	80.5		%REC	50-150	1	02/11/26 05:04	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	72.5		%REC	35-136	1	02/11/26 05:04	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	74.1		%REC	34-142	1	02/11/26 05:04	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/24/26 17:08
Date Received: 02/07/26 10:30

CLIENT ID: G-6	Lab ID: HN2601842-006

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	422		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	142		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	236		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/24/26 17:08
Date Received: 02/07/26 10:30

CLIENT ID: G-6

Lab ID: HN2601842-006

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	155		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	341		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	10800		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	3320		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2520		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	853		ng/L	49.8	1	02/11/26 05:19	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1090		ng/L	49.8	1	02/11/26 05:19	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	846		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	413		ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	124	1	02/13/26 20:09	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	124	1	02/13/26 20:09	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	124	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	77.3		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	81.2		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	92.8		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	75.3		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	76.3		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	78.8		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	73.4		%REC	27-134	1	02/13/26 20:09	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	78.2		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	81.3		%REC	41-142	1	02/11/26 05:19	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/24/26 17:08
Date Received: 02/07/26 10:30

CLIENT ID: G-6	Lab ID: HN2601842-006

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	81.1		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	85.0		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	68.9		%REC	42-141	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	86.8		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	78.6		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	81.4		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	76.7		%REC	43-138	1	02/11/26 05:19	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	67.7		%REC	30-122	1	02/11/26 05:19	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	72.2		%REC	50-150	1	02/11/26 05:19	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	65.3		%REC	35-136	1	02/11/26 05:19	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	69.8		%REC	34-142	1	02/11/26 05:19	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 01:14
Date Received: 02/07/26 10:30

CLIENT ID: G-7

Lab ID: HN2601842-007

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	389		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 01:14
Date Received: 02/07/26 10:30

CLIENT ID: G-7

Lab ID: HN2601842-007

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	329		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	11100		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	3870		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2330		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	1100		ng/L	99.8	1	02/11/26 05:33	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1420		ng/L	99.8	1	02/11/26 05:33	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	852		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	363		ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	250	1	02/13/26 20:23	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	250	1	02/13/26 20:23	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	85.0		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	96.4		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	109		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	85.5		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	81.7		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	83.8		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	79.8		%REC	27-134	1	02/13/26 20:23	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	77.7		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	81.8		%REC	41-142	1	02/11/26 05:33	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 01:14
Date Received: 02/07/26 10:30

CLIENT ID: G-7

Lab ID: HN2601842-007

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	86.2		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	86.7		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	85.2		%REC	42-141	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	86.0		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	80.0		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	86.2		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	81.1		%REC	43-138	1	02/11/26 05:33	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	74.9		%REC	30-122	1	02/11/26 05:33	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	80.7		%REC	50-150	1	02/11/26 05:33	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	71.3		%REC	35-136	1	02/11/26 05:33	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	72.7		%REC	34-142	1	02/11/26 05:33	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 09:20
Date Received: 02/07/26 10:30

CLIENT ID: G-8

Lab ID: HN2601842-008

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	407		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 09:20
Date Received: 02/07/26 10:30

CLIENT ID: G-8	Lab ID: HN2601842-008

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	347		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	12300		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	4950		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2350		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	1210		ng/L	100	1	02/11/26 05:48	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1550		ng/L	100	1	02/11/26 05:48	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	810		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	357		ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	251	1	02/13/26 20:38	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	251	1	02/13/26 20:38	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	79.1		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	84.3		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	94.0		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	78.4		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	78.3		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	82.0		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	73.2		%REC	27-134	1	02/13/26 20:38	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	75.2		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	77.0		%REC	41-142	1	02/11/26 05:48	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 09:20
Date Received: 02/07/26 10:30

CLIENT ID: G-8

Lab ID: HN2601842-008

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	82.1		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	81.7		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	79.0		%REC	42-141	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	78.0		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	84.0		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	78.0		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	78.3		%REC	43-138	1	02/11/26 05:48	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	70.2		%REC	30-122	1	02/11/26 05:48	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	78.6		%REC	50-150	1	02/11/26 05:48	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	70.2		%REC	35-136	1	02/11/26 05:48	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	67.1		%REC	34-142	1	02/11/26 05:48	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 17:25
Date Received: 02/07/26 10:30

CLIENT ID: G-9

Lab ID: HN2601842-009

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	382		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 17:25
Date Received: 02/07/26 10:30

CLIENT ID: G-9

Lab ID: HN2601842-009

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	319		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	326		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	13300		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	5350		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2340		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	2150		ng/L	100	1	02/11/26 06:31	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1690		ng/L	100	1	02/11/26 06:31	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	842		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	354		ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	251	1	02/13/26 20:52	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	251	1	02/13/26 20:52	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	251	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	74.8		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	84.9		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	84.0		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	71.7		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	64.3		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	67.7		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	66.1		%REC	27-134	1	02/13/26 20:52	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	66.6		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	73.4		%REC	41-142	1	02/11/26 06:31	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 17:25
Date Received: 02/07/26 10:30

CLIENT ID: G-9

Lab ID: HN2601842-009

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	76.1		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	70.6		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	75.4		%REC	42-141	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	69.5		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	66.3		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	70.3		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	72.7		%REC	43-138	1	02/11/26 06:31	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	67.2		%REC	30-122	1	02/11/26 06:31	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	67.0		%REC	50-150	1	02/11/26 06:31	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	65.1		%REC	35-136	1	02/11/26 06:31	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	66.0		%REC	34-142	1	02/11/26 06:31	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/26/26 01:31
Date Received: 02/07/26 10:30

CLIENT ID: G-10

Lab ID: HN2601842-010

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	404		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/26/26 01:31
Date Received: 02/07/26 10:30

CLIENT ID: G-10

Lab ID: HN2601842-010

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	267		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	336		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	12900		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	5800		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2590		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	1920		ng/L	100	1	02/11/26 07:29	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1670		ng/L	100	1	02/11/26 07:29	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	859		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	357		ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	250	1	02/13/26 22:19	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	250	1	02/13/26 22:19	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	250	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	99.8		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	120		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	125		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	87.5		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	83.6		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	85.8		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	82.4		%REC	27-134	1	02/13/26 22:19	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	82.8		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	90.2		%REC	41-142	1	02/11/26 07:29	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/26/26 01:31
Date Received: 02/07/26 10:30

CLIENT ID: G-10

Lab ID: HN2601842-010

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	97.7		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	86.0		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	98.8		%REC	42-141	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	85.1		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	81.1		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	85.6		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	93.8		%REC	43-138	1	02/11/26 07:29	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	80.6		%REC	30-122	1	02/11/26 07:29	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	86.1		%REC	50-150	1	02/11/26 07:29	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	81.9		%REC	35-136	1	02/11/26 07:29	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	82.1		%REC	34-142	1	02/11/26 07:29	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/22/26 15:35
Date Received: 02/07/26 10:30

CLIENT ID: R-1

Lab ID: HN2601842-011

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	27.0		ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	30.2		ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/22/26 15:35
Date Received: 02/07/26 10:30

CLIENT ID: R-1

Lab ID: HN2601842-011

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	1.78	1	02/11/26 06:45	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	ND	U	ng/L	1.78	1	02/11/26 06:45	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/13/26 21:06	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/13/26 21:06	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	4.46	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	308	S	%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	216	S	%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	134		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	79.3		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	71.5		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	88.4		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	68.4		%REC	27-134	1	02/13/26 21:06	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	74.8		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	76.5		%REC	41-142	1	02/11/26 06:45	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/22/26 15:35
Date Received: 02/07/26 10:30

CLIENT ID: R-1

Lab ID: HN2601842-011

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	89.6		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	78.2		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	98.9		%REC	42-141	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	87.9		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	69.0		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	87.0		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	75.1		%REC	43-138	1	02/11/26 06:45	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	72.7		%REC	30-122	1	02/11/26 06:45	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	82.9		%REC	50-150	1	02/11/26 06:45	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	67.3		%REC	35-136	1	02/11/26 06:45	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	66.8		%REC	34-142	1	02/11/26 06:45	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 21:55
Date Received: 02/07/26 10:30

CLIENT ID: R-2

Lab ID: HN2601842-012

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	23.0		ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	190		ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	41.0		ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 21:55
Date Received: 02/07/26 10:30

CLIENT ID: R-2

Lab ID: HN2601842-012

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	160		ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	1.99	1	02/11/26 07:43	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	ND	U	ng/L	1.99	1	02/11/26 07:43	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	315		ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/13/26 22:33	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	4.97	1	02/13/26 22:33	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	4.97	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	433	S	%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	318	S	%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	203	S	%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	114		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	106		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	107		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	92.0		%REC	27-134	1	02/13/26 22:33	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	113		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	102		%REC	41-142	1	02/11/26 07:43	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/23/26 21:55
Date Received: 02/07/26 10:30

CLIENT ID: R-2

Lab ID: HN2601842-012

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	120		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	107		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	104		%REC	42-141	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	121		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	109		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	122		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	93.0		%REC	43-138	1	02/11/26 07:43	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	98.1		%REC	30-122	1	02/11/26 07:43	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	85.5		%REC	50-150	1	02/11/26 07:43	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	91.7		%REC	35-136	1	02/11/26 07:43	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	96.7		%REC	34-142	1	02/11/26 07:43	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 04:15
Date Received: 02/07/26 10:30

CLIENT ID: R-3

Lab ID: HN2601842-013

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	23.4		ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	155		ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	147		ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 04:15
Date Received: 02/07/26 10:30

CLIENT ID: R-3

Lab ID: HN2601842-013

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	7.18		ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	14.2		ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	895		ng/L	25.3	5	02/11/26 11:49	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	2.02	1	02/11/26 07:58	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	3.11		ng/L	2.02	1	02/11/26 07:58	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	447		ng/L	25.3	5	02/11/26 11:49	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/13/26 22:48	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	5.05	1	02/13/26 22:48	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	5.05	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	349	S	%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	271	S	%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	193	S	%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	92.2		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	78.3		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	70.9		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	76.4		%REC	27-134	1	02/13/26 22:48	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	81.9		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	85.1		%REC	41-142	1	02/11/26 07:58	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/25/26 04:15
Date Received: 02/07/26 10:30

CLIENT ID: R-3

Lab ID: HN2601842-013

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	102		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	84.0		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	90.5		%REC	42-141	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	78.9		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	89.7		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	87.4		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	76.6		%REC	43-138	1	02/11/26 07:58	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	85.1		%REC	30-122	1	02/11/26 07:58	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	77.0		%REC	50-150	1	02/11/26 07:58	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	81.2		%REC	35-136	1	02/11/26 07:58	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	83.9		%REC	34-142	1	02/11/26 07:58	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/26/26 10:36
Date Received: 02/07/26 10:30

CLIENT ID: R-4

Lab ID: HN2601842-014

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	30.5		ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	148		ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	239		ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/26/26 10:36
Date Received: 02/07/26 10:30

CLIENT ID: R-4

Lab ID: HN2601842-014

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	34.9		ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	94.4		ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2160		ng/L	50.9	10	02/11/26 11:20	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	3.20		ng/L	2.03	1	02/11/26 08:12	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	15.5		ng/L	2.03	1	02/11/26 08:12	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	402		ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/13/26 23:02	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	5.09	1	02/13/26 23:02	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	5.09	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	430	S	%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	360	S	%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	241	S	%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	134		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	109		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	81.4		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	97.8		%REC	27-134	1	02/13/26 23:02	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	116		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	113		%REC	41-142	1	02/11/26 08:12	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/26/26 10:36
Date Received: 02/07/26 10:30

CLIENT ID: R-4

Lab ID: HN2601842-014

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	136		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	114		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	126		%REC	42-141	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	108		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	116		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	125		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	102		%REC	43-138	1	02/11/26 08:12	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	107		%REC	30-122	1	02/11/26 08:12	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	104		%REC	50-150	1	02/11/26 08:12	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	109		%REC	35-136	1	02/11/26 08:12	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	108		%REC	34-142	1	02/11/26 08:12	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/27/26 16:56
Date Received: 02/07/26 10:30

CLIENT ID: R-5

Lab ID: HN2601842-015

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorobutanoic acid (PFBA)	EPA 537Mod	146		ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	255		ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/27/26 16:56
Date Received: 02/07/26 10:30

CLIENT ID: R-5	Lab ID: HN2601842-015

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	90.0		ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	346		ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	3230		ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	19.9	1	02/11/26 01:13	02/10/26 16:29
Perfluorooctanoic acid (PFOA)	EPA 537Mod	54.0		ng/L	19.9	1	02/11/26 01:13	02/10/26 16:29
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	389		ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/13/26 16:03	02/10/26 16:29
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/13/26 16:03	02/10/26 16:29
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	49.8	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-FtS 4:2	EPA 537Mod	93.3		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-FtS 6:2	EPA 537Mod	113		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-FtS 8:2	EPA 537Mod	108		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-PFDA	EPA 537Mod	77.6		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-PFDoA	EPA 537Mod	73.6		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-PFHxA	EPA 537Mod	71.4		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C2-PFTeA	EPA 537Mod	76.3		%REC	27-134	1	02/13/26 16:03	02/10/26 16:29
Surr: 13C2-PFUnA	EPA 537Mod	70.8		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C3-HFPO-DA	EPA 537Mod	78.7		%REC	41-142	1	02/11/26 01:13	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/27/26 16:56
Date Received: 02/07/26 10:30

CLIENT ID: R-5

Lab ID: HN2601842-015

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	84.3		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C4-PFBA	EPA 537Mod	76.6		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C4-PFHpA	EPA 537Mod	91.3		%REC	42-141	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C4-PFOA	EPA 537Mod	79.1		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C4-PFOS	EPA 537Mod	69.1		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C5-PFNA	EPA 537Mod	76.4		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C5-PFPeA	EPA 537Mod	79.0		%REC	43-138	1	02/11/26 01:13	02/10/26 16:29
Surr: 13C8-FOSA	EPA 537Mod	73.1		%REC	30-122	1	02/11/26 01:13	02/10/26 16:29
Surr: 18O2-PFHxS	EPA 537Mod	76.1		%REC	50-150	1	02/11/26 01:13	02/10/26 16:29
Surr: d3-N-MeFOSAA	EPA 537Mod	67.8		%REC	35-136	1	02/11/26 01:13	02/10/26 16:29
Surr: d5-N-EtFOSAA	EPA 537Mod	69.3		%REC	34-142	1	02/11/26 01:13	02/10/26 16:29

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/28/26 23:16
Date Received: 02/07/26 10:30

CLIENT ID: R-6	Lab ID: HN2601842-016

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	150		ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	256		ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/28/26 23:16
Date Received: 02/07/26 10:30

CLIENT ID: R-6

Lab ID: HN2601842-016

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	154		ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	909		ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	3450		ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	20.1	1	02/11/26 01:57	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	132		ng/L	20.1	1	02/11/26 01:57	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	375		ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/13/26 16:47	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	50.3	1	02/13/26 16:47	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	120		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	130		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	129		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	84.3		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	81.2		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	85.9		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	86.6		%REC	27-134	1	02/13/26 16:47	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	84.0		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	99.4		%REC	41-142	1	02/11/26 01:57	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/28/26 23:16
Date Received: 02/07/26 10:30

CLIENT ID: R-6

Lab ID: HN2601842-016

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	102		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	91.5		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	109		%REC	42-141	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	97.1		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	79.2		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	90.4		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	97.7		%REC	43-138	1	02/11/26 01:57	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	89.0		%REC	30-122	1	02/11/26 01:57	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	84.7		%REC	50-150	1	02/11/26 01:57	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	77.9		%REC	35-136	1	02/11/26 01:57	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	86.7		%REC	34-142	1	02/11/26 01:57	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/30/26 05:36
Date Received: 02/07/26 10:30

CLIENT ID: R-7

Lab ID: HN2601842-017

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	148		ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	283		ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/30/26 05:36
Date Received: 02/07/26 10:30

CLIENT ID: R-7

Lab ID: HN2601842-017

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	255		ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	1360		ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	3280		ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	19.8	1	02/11/26 08:27	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	203		ng/L	19.8	1	02/11/26 08:27	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	421		ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/13/26 23:16	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	49.6	1	02/13/26 23:16	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	49.6	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	145		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	167	S	%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	164	S	%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	128		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	120		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	120		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	107		%REC	27-134	1	02/13/26 23:16	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	124		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	116		%REC	41-142	1	02/11/26 08:27	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/30/26 05:36
Date Received: 02/07/26 10:30

CLIENT ID: R-7

Lab ID: HN2601842-017

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	128		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	125		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	126		%REC	42-141	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	135		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	118		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	130		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	118		%REC	43-138	1	02/11/26 08:27	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	106		%REC	30-122	1	02/11/26 08:27	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	120		%REC	50-150	1	02/11/26 08:27	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	102		%REC	35-136	1	02/11/26 08:27	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	108		%REC	34-142	1	02/11/26 08:27	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/31/26 11:57
Date Received: 02/07/26 10:30

CLIENT ID: R-8

Lab ID: HN2601842-018

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	144		ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	260		ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/31/26 11:57
Date Received: 02/07/26 10:30

CLIENT ID: R-8

Lab ID: HN2601842-018

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	306		ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	1970		ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	3000		ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	19.7	1	02/11/26 08:41	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	345		ng/L	19.7	1	02/11/26 08:41	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	400		ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/13/26 23:31	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	49.2	1	02/13/26 23:31	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	150		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	168	S	%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	181	S	%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	133		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	122		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	125		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	103		%REC	27-134	1	02/13/26 23:31	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	124		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	121		%REC	41-142	1	02/11/26 08:41	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/31/26 11:57
Date Received: 02/07/26 10:30

CLIENT ID: R-8	Lab ID: HN2601842-018

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	129		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	129		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	133		%REC	42-141	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	136		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	120		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	136		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	121		%REC	43-138	1	02/11/26 08:41	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	107		%REC	30-122	1	02/11/26 08:41	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	120		%REC	50-150	1	02/11/26 08:41	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	95.6		%REC	35-136	1	02/11/26 08:41	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	109		%REC	34-142	1	02/11/26 08:41	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 02/01/26 18:17
Date Received: 02/07/26 10:30

CLIENT ID: R-9

Lab ID: HN2601842-019

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	145		ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	251		ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 02/01/26 18:17
Date Received: 02/07/26 10:30

CLIENT ID: R-9

Lab ID: HN2601842-019

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	336		ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	2610		ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2860		ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	ND	U	ng/L	20.1	1	02/11/26 09:24	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	444		ng/L	20.1	1	02/11/26 09:24	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	381		ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/13/26 23:45	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	50.3	1	02/13/26 23:45	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	50.3	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	136		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	160	S	%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	151	S	%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	128		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	110		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	117		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	98.4		%REC	27-134	1	02/13/26 23:45	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	116		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	113		%REC	41-142	1	02/11/26 09:24	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 02/01/26 18:17
Date Received: 02/07/26 10:30

CLIENT ID: R-9

Lab ID: HN2601842-019

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	124		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	116		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	130		%REC	42-141	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	121		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	110		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	117		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	113		%REC	43-138	1	02/11/26 09:24	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	99.7		%REC	30-122	1	02/11/26 09:24	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	122		%REC	50-150	1	02/11/26 09:24	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	93.0		%REC	35-136	1	02/11/26 09:24	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	101		%REC	34-142	1	02/11/26 09:24	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/21/26 09:00
Date Received: 02/07/26 10:30

CLIENT ID: IN-01

Lab ID: HN2601842-020

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	405		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	145		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	229		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/21/26 09:00
Date Received: 02/07/26 10:30

CLIENT ID: IN-01

Lab ID: HN2601842-020

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	396		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	340		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	12800		ng/L	246	5	02/11/26 12:03	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	5430		ng/L	246	5	02/11/26 12:03	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2450		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	107		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	2220		ng/L	19.7	1	02/11/26 09:39	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1570		ng/L	19.7	1	02/11/26 09:39	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	1050		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	363		ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/14/26 00:00	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	49.2	1	02/14/26 00:00	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	49.2	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	148		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	146		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	156	S	%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	122		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	112		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	122		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	102		%REC	27-134	1	02/14/26 00:00	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	114		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	121		%REC	41-142	1	02/11/26 09:39	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 01/21/26 09:00
Date Received: 02/07/26 10:30

CLIENT ID: IN-01

Lab ID: HN2601842-020

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	128		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	120		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	89.9		%REC	42-141	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	117		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	115		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	102		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	120		%REC	43-138	1	02/11/26 09:39	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	101		%REC	30-122	1	02/11/26 09:39	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	95.7		%REC	50-150	1	02/11/26 09:39	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	99.5		%REC	35-136	1	02/11/26 09:39	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	105		%REC	34-142	1	02/11/26 09:39	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 02/02/26 15:00
Date Received: 02/07/26 10:30

CLIENT ID: IN-02

Lab ID: HN2601842-021

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Per- and Polyfluorinated Alkyl Substances by LC-MS								
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorobutane sulfonic acid (PFBS)	EPA 537Mod	414		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorobutanoic acid (PFBA)	EPA 537Mod	148		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorobutylsulfonamide (PFBSA)	EPA 537Mod	226		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorodecane sulfonic acid (PFDS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 02/02/26 15:00
Date Received: 02/07/26 10:30

CLIENT ID: IN-02

Lab ID: HN2601842-021

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Perfluorodecanoic acid (PFDA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorododecanoic acid (PFDOA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluoroheptane sulfonic acid (PFHpS)	EPA 537Mod	1180		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluoroheptanoic acid (PFHpA)	EPA 537Mod	344		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorohexane sulfonic acid (PFHxS)	EPA 537Mod	17200		ng/L	247	5	02/11/26 12:18	02/10/26 15:58
Perfluorohexanesulfonamide (PFHxSA)	EPA 537Mod	5790		ng/L	247	5	02/11/26 12:18	02/10/26 15:58
Perfluorohexanoic acid (PFHxA)	EPA 537Mod	2370		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorononane sulfonic acid (PFNS)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorononanoic acid (PFNA)	EPA 537Mod	113		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorooctane sulfonamide (PFOSAm)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorooctane sulfonic acid (PFOS)	EPA 537Mod	16600		ng/L	98.7	5	02/11/26 12:18	02/10/26 15:58
Perfluorooctanoic acid (PFOA)	EPA 537Mod	1720		ng/L	19.7	1	02/11/26 09:53	02/10/26 15:58
Perfluoropentane sulfonic acid (PFPeS)	EPA 537Mod	1350		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluoropentanoic acid (PFPeA)	EPA 537Mod	356		ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Perfluorotetradecanoic acid (PFTDA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/14/26 00:14	02/10/26 15:58
Perfluorotridecanoic acid (PFTTrDA)	EPA 537Mod	ND	SU	ng/L	49.3	1	02/14/26 00:14	02/10/26 15:58
Perfluoroundecanoic acid (PFUnDA)	EPA 537Mod	ND	U	ng/L	49.3	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-FtS 4:2	EPA 537Mod	123		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-FtS 6:2	EPA 537Mod	131		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-FtS 8:2	EPA 537Mod	137		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-PFDA	EPA 537Mod	103		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-PFDoA	EPA 537Mod	93.8		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-PFHxA	EPA 537Mod	101		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C2-PFTeA	EPA 537Mod	83.4		%REC	27-134	1	02/14/26 00:14	02/10/26 15:58
Surr: 13C2-PFUnA	EPA 537Mod	89.9		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C3-HFPO-DA	EPA 537Mod	97.3		%REC	41-142	1	02/11/26 09:53	02/10/26 15:58

Analytical Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER

Work Order: HN2601842
Date Collected: 02/02/26 15:00
Date Received: 02/07/26 10:30

CLIENT ID: IN-02

Lab ID: HN2601842-021

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
Surr: 13C3-PFBS	EPA 537Mod	106		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C4-PFBA	EPA 537Mod	101		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C4-PFHpA	EPA 537Mod	72.2		%REC	42-141	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C4-PFOA	EPA 537Mod	94.5		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C4-PFOS	EPA 537Mod	83.5		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C5-PFNA	EPA 537Mod	78.6		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C5-PFPeA	EPA 537Mod	98.9		%REC	43-138	1	02/11/26 09:53	02/10/26 15:58
Surr: 13C8-FOSA	EPA 537Mod	84.9		%REC	30-122	1	02/11/26 09:53	02/10/26 15:58
Surr: 18O2-PFHxS	EPA 537Mod	71.3		%REC	50-150	1	02/11/26 09:53	02/10/26 15:58
Surr: d3-N-MeFOSAA	EPA 537Mod	81.6		%REC	35-136	1	02/11/26 09:53	02/10/26 15:58
Surr: d5-N-EtFOSAA	EPA 537Mod	85.9		%REC	34-142	1	02/11/26 09:53	02/10/26 15:58



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

Per- and Polyfluorinated Alkyl Substances by LC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2448088-001

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/10/26 21:20**Prep Date:** 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND	ng/L	5.00							U
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	ng/L	5.00							U
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	ng/L	5.00							U
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	ng/L	5.00							U
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND	ng/L	5.00							U
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND	ng/L	5.00							U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND	ng/L	5.00							U
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND	ng/L	5.00							U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND	ng/L	5.00							U
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND	ng/L	5.00							U
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND	ng/L	5.00							U
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND	ng/L	5.00							U
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND	ng/L	5.00							U
Perfluorobutane sulfonic acid (PFBS)	ND	ng/L	5.00							U
Perfluorobutanoic acid (PFBA)	ND	ng/L	5.00							U
Perfluorobutylsulfonamide (PFBSA)	ND	ng/L	5.00							U
Perfluorodecane sulfonic acid (PFDS)	ND	ng/L	5.00							U
Perfluorodecanoic acid (PFDA)	ND	ng/L	5.00							U
Perfluorododecanoic acid (PFDOA)	ND	ng/L	5.00							U
Perfluoroheptane sulfonic acid (PFHpS)	ND	ng/L	5.00							U
Perfluoroheptanoic acid (PFHpA)	ND	ng/L	5.00							U
Perfluorohexane sulfonic acid (PFHxS)	ND	ng/L	5.00							U
Perfluorohexanesulfonamide (PFHxSA)	ND	ng/L	5.00							U
Perfluorohexanoic acid (PFHxA)	ND	ng/L	5.00							U
Perfluorononane sulfonic acid (PFNS)	ND	ng/L	5.00							U
Perfluorononanoic acid (PFNA)	ND	ng/L	5.00							U
Perfluorooctane sulfonamide (PFOSAm)	ND	ng/L	5.00							U
Perfluorooctane sulfonic acid (PFOS)	ND	ng/L	2.00							U

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

MB	CLIENT ID: Method Blank	Lab ID: QC-2448088-001

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/10/26 21:20

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorooctanoic acid (PFOA)	ND	ng/L	2.00							U
Perfluoropentane sulfonic acid (PFPeS)	ND	ng/L	5.00							U
Perfluoropentanoic acid (PFPeA)	ND	ng/L	5.00							U
Perfluoroundecanoic acid (PFUnDA)	ND	ng/L	5.00							U
Surr: 13C2-FtS 4:2	133	ng/L		149.44		89.0	50-150			
Surr: 13C2-FtS 6:2	155	ng/L		152		102	50-150			
Surr: 13C2-FtS 8:2	159	ng/L		153.28		103	50-150			
Surr: 13C2-PFDA	140	ng/L		160		87.3	50-150			
Surr: 13C2-PFDoA	119	ng/L		160		74.4	50-150			
Surr: 13C2-PFHxA	143	ng/L		160		89.2	50-150			
Surr: 13C2-PFUnA	138	ng/L		160		86.3	50-150			
Surr: 13C3-HFPO-DA	142	ng/L		160		88.8	41-142			
Surr: 13C3-PFBS	132	ng/L		148.8		88.9	50-150			
Surr: 13C4-PFBA	149	ng/L		160		92.9	50-150			
Surr: 13C4-PFHpA	157	ng/L		160		97.8	42-141			
Surr: 13C4-PFOA	142	ng/L		160		89.1	50-150			
Surr: 13C4-PFOS	128	ng/L		152.8		83.6	50-150			
Surr: 13C5-PFNA	145	ng/L		160		90.5	50-150			
Surr: 13C5-PFPeA	137	ng/L		160		85.8	43-138			
Surr: 13C8-FOSA	123	ng/L		160		76.7	30-122			
Surr: 18O2-PFHxS	137	ng/L		151.2		90.9	50-150			
Surr: d3-N-MeFOSAA	118	ng/L		160		73.8	35-136			
Surr: d5-N-EtFOSAA	124	ng/L		160		77.6	34-142			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448088-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/10/26 21:34

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	30.1	ng/L	5.00	32		94.0	61-128			
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	32.9	ng/L	5.00	32		103	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	36.6	ng/L	5.00	32		114	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	34.3	ng/L	5.00	32		107	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	25.4	ng/L	5.00	32		79.2	39-117			
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	35.3	ng/L	5.00	32		110	71-138			
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	30.1	ng/L	5.00	32		94.2	64-134			

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448088-002

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/10/26 21:34

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	33.4	ng/L	5.00	32		104	74-135			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	30.6	ng/L	5.00	32		95.6	69-133			
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	34.1	ng/L	5.00	32		106	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	27.8	ng/L	5.00	32		86.9	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	28.9	ng/L	5.00	32		90.2	67-133			
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	31.9	ng/L	5.00	28.8		111	74-131			
Perfluorobutane sulfonic acid (PFBS)	33.2	ng/L	5.00	32		104	69-131			
Perfluorobutanoic acid (PFBA)	32.4	ng/L	5.00	32		101	73-139			
Perfluorobutylsulfonamide (PFBSA)	39.7	ng/L	5.00	32		124	68-164			
Perfluorodecane sulfonic acid (PFDS)	29.1	ng/L	5.00	32		90.8	64-128			
Perfluorodecanoic acid (PFDA)	31.3	ng/L	5.00	32		97.7	77-135			
Perfluorododecanoic acid (PFDOA)	32.8	ng/L	5.00	32		102	77-137			
Perfluoroheptane sulfonic acid (PFHpS)	30.9	ng/L	5.00	32		96.4	70-137			
Perfluoroheptanoic acid (PFHpA)	33.6	ng/L	5.00	32		105	67-130			
Perfluorohexane sulfonic acid (PFHxS)	31.8	ng/L	5.00	32		99.5	68-131			
Perfluorohexanesulfonamide (PFHxSA)	33.2	ng/L	5.00	32		104	69-135			
Perfluorohexanoic acid (PFHxA)	31.4	ng/L	5.00	32		98.0	72-129			
Perfluorononane sulfonic acid (PFNS)	32.6	ng/L	5.00	32		102	70-132			
Perfluorononanoic acid (PFNA)	34.2	ng/L	5.00	32		107	75-131			
Perfluorooctane sulfonamide (PFOSAm)	32.6	ng/L	5.00	32		102	66-140			
Perfluorooctane sulfonic acid (PFOS)	32.3	ng/L	2.00	32		101	72-133			
Perfluorooctanoic acid (PFOA)	34.0	ng/L	2.00	32		106	71-133			
Perfluoropentane sulfonic acid (PFPeS)	32.0	ng/L	5.00	32		100.0	73-137			
Perfluoropentanoic acid (PFPeA)	34.3	ng/L	5.00	32		107	72-129			
Perfluoroundecanoic acid (PFUnDA)	33.9	ng/L	5.00	32		106	80-135			
Surr: 13C2-FtS 4:2	129	ng/L		149.44		86.1	50-150			
Surr: 13C2-FtS 6:2	145	ng/L		152		95.1	50-150			
Surr: 13C2-FtS 8:2	168	ng/L		153.28		110	50-150			
Surr: 13C2-PFDA	141	ng/L		160		88.3	50-150			
Surr: 13C2-PFDoA	135	ng/L		160		84.5	50-150			
Surr: 13C2-PFHxA	144	ng/L		160		90.0	50-150			
Surr: 13C2-PFUnA	128	ng/L		160		79.8	50-150			
Surr: 13C3-HFPO-DA	134	ng/L		160		84.0	41-142			
Surr: 13C3-PFBS	128	ng/L		148.8		86.1	50-150			
Surr: 13C4-PFBA	145	ng/L		160		90.8	50-150			
Surr: 13C4-PFHpA	146	ng/L		160		91.2	42-141			
Surr: 13C4-PFOA	144	ng/L		160		90.2	50-150			



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448088-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/10/26 21:34
Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 13C4-PFOS	134	ng/L		152.8		88.0	50-150			
Surr: 13C5-PFNA	138	ng/L		160		86.4	50-150			
Surr: 13C5-PFPeA	134	ng/L		160		83.7	43-138			
Surr: 13C8-FOSA	117	ng/L		160		73.4	30-122			
Surr: 18O2-PFHxS	136	ng/L		151.2		89.9	50-150			
Surr: d3-N-MeFOSAA	115	ng/L		160		72.1	35-136			
Surr: d5-N-EtFOSAA	119	ng/L		160		74.4	34-142			

MS	CLIENT ID: R-5	Lab ID: QC-2448088-005

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/11/26 00:44
Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	308	ng/L	49.9	319.23	ND	96.6	61-128			
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	368	ng/L	49.9	319.23	ND	115	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	313	ng/L	49.9	319.23	ND	97.9	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	274	ng/L	49.9	319.23	ND	85.8	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	279	ng/L	49.9	319.23	ND	86.9	39-117			
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	346	ng/L	49.9	319.23	ND	108	71-138			
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	348	ng/L	49.9	319.23	29.0	99.8	64-134			
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	333	ng/L	49.9	319.23	ND	104	74-135			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	303	ng/L	49.9	319.23	ND	94.9	69-133			
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	316	ng/L	49.9	319.23	ND	98.8	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	405	ng/L	49.9	319.23	ND	127	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	293	ng/L	49.9	319.23	ND	91.6	67-133			
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	341	ng/L	49.9	287.31	ND	118	74-131			
Perfluorobutane sulfonic acid (PFBS)	310	ng/L	49.9	319.23	ND	96.7	69-141			
Perfluorobutanoic acid (PFBA)	454	ng/L	49.9	319.23	146	96.5	73-139			
Perfluorobutylsulfonamide (PFBSA)	609	ng/L	49.9	319.23	255	111	68-164			
Perfluorodecane sulfonic acid (PFDS)	277	ng/L	49.9	319.23	ND	86.4	64-128			
Perfluorodecanoic acid (PFDA)	304	ng/L	49.9	319.23	ND	94.9	77-135			
Perfluorododecanoic acid (PFDOA)	347	ng/L	49.9	319.23	ND	109	77-137			

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

MS	CLIENT ID: R-5	Lab ID: QC-2448088-005

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/11/26 00:44

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoroheptane sulfonic acid (PFHpS)	319	ng/L	49.9	319.23	ND	99.8	70-137			
Perfluoroheptanoic acid (PFHpA)	387	ng/L	49.9	319.23	90.0	93.0	67-130			
Perfluorohexane sulfonic acid (PFHxS)	329	ng/L	49.9	319.23	ND	101	68-131			
Perfluorohexanesulfonamide (PFHxSA)	668	ng/L	49.9	319.23	346	101	69-135			
Perfluorohexanoic acid (PFHxA)	3400	ng/L	49.9	32	3230	NC	72-129			O
Perfluorononane sulfonic acid (PFNS)	310	ng/L	49.9	319.23	ND	96.9	70-132			
Perfluorononanoic acid (PFNA)	321	ng/L	49.9	319.23	ND	100	75-131			
Perfluorooctane sulfonamide (PFOSAm)	360	ng/L	49.9	319.23	ND	115	66-140			
Perfluorooctane sulfonic acid (PFOS)	320	ng/L	20.0	319.23	ND	98.0	72-133			
Perfluorooctanoic acid (PFOA)	330	ng/L	20.0	319.23	54.0	86.6	71-133			
Perfluoropentane sulfonic acid (PFPeS)	348	ng/L	49.9	319.23	ND	109	73-137			
Perfluoropentanoic acid (PFPeA)	699	ng/L	49.9	319.23	389	97.2	72-129			
Perfluoroundecanoic acid (PFUnDA)	342	ng/L	49.9	319.23	ND	107	80-135			
Surr: 13C2-FtS 4:2	1630	ng/L		1490.8		109	50-150			
Surr: 13C2-FtS 6:2	1760	ng/L		1516.4		116	50-150			
Surr: 13C2-FtS 8:2	1540	ng/L		1529.1		101	50-150			
Surr: 13C2-PFDA	1300	ng/L		1596.2		81.5	50-150			
Surr: 13C2-PFDoA	1290	ng/L		1596.2		80.9	50-150			
Surr: 13C2-PFHxA	1320	ng/L		1596.2		82.8	50-150			
Surr: 13C2-PFUnA	1270	ng/L		1596.2		79.6	50-150			
Surr: 13C3-HFPO-DA	1430	ng/L		1596.2		89.3	41-142			
Surr: 13C3-PFBS	1350	ng/L		1484.4		90.7	50-150			
Surr: 13C4-PFBA	1440	ng/L		1596.2		90.0	50-150			
Surr: 13C4-PFHpA	1500	ng/L		1596.2		94.0	42-141			
Surr: 13C4-PFOA	1480	ng/L		1596.2		92.4	50-150			
Surr: 13C4-PFOS	1260	ng/L		1524.3		82.9	50-150			
Surr: 13C5-PFNA	1330	ng/L		1596.2		83.1	50-150			
Surr: 13C5-PFPeA	1370	ng/L		1596.2		85.8	43-138			
Surr: 13C8-FOSA	1290	ng/L		1596.2		80.7	30-122			
Surr: 18O2-PFHxS	1200	ng/L		1508.4		79.7	50-150			
Surr: d3-N-MeFOSAA	1220	ng/L		1596.2		76.4	35-136			
Surr: d5-N-EtFOSAA	1220	ng/L		1596.2		76.4	34-142			

MSD	CLIENT ID: R-5	Lab ID: QC-2448088-006

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/11/26 00:59

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	298	ng/L	49.9	319.49	ND	93.3	61-128	3.39	30	

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

MSD	CLIENT ID: R-5	Lab ID: QC-2448088-006

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/11/26 00:59

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	350	ng/L	49.9	319.49	ND	110	61-148	4.85	30	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	342	ng/L	49.9	319.49	ND	107	67-143	8.79	30	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	351	ng/L	49.9	319.49	ND	110	66-151	24.6	30	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	267	ng/L	49.9	319.49	ND	83.1	39-117	4.33	30	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	328	ng/L	49.9	319.49	ND	103	71-138	5.57	30	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	363	ng/L	49.9	319.49	29.0	105	64-134	4.34	30	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	334	ng/L	49.9	319.49	ND	105	74-135	0.377	30	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	311	ng/L	49.9	319.49	ND	97.3	69-133	2.55	30	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	333	ng/L	49.9	319.49	ND	104	65-139	5.30	30	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	438	ng/L	49.9	319.49	ND	137	67-140	7.66	30	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	292	ng/L	49.9	319.49	ND	91.3	67-133	0.281	30	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	321	ng/L	49.9	287.54	ND	111	74-131	5.96	30	
Perfluorobutane sulfonic acid (PFBS)	318	ng/L	49.9	319.49	ND	99.1	69-141	2.46	30	
Perfluorobutanoic acid (PFBA)	465	ng/L	49.9	319.49	146	99.8	73-139	2.33	30	
Perfluorobutylsulfonamide (PFBSA)	616	ng/L	49.9	319.49	255	113	68-164	1.09	30	
Perfluorodecane sulfonic acid (PFDS)	272	ng/L	49.9	319.49	ND	84.7	64-128	1.98	30	
Perfluorodecanoic acid (PFDA)	306	ng/L	49.9	319.49	ND	95.3	77-135	0.499	30	
Perfluorododecanoic acid (PFDOA)	327	ng/L	49.9	319.49	ND	102	77-137	5.94	30	
Perfluoroheptane sulfonic acid (PFHpS)	300	ng/L	49.9	319.49	ND	93.7	70-137	6.26	30	
Perfluoroheptanoic acid (PFHpA)	406	ng/L	49.9	319.49	90.0	98.8	67-130	4.75	30	
Perfluorohexane sulfonic acid (PFHxS)	340	ng/L	49.9	319.49	ND	105	68-131	3.16	30	
Perfluorohexanesulfonamide (PFHxSA)	660	ng/L	49.9	319.49	346	98.2	69-135	1.19	30	
Perfluorohexanoic acid (PFHxA)	3380	ng/L	49.9	32	3230	NC	72-129	0.578	30	O
Perfluorononane sulfonic acid (PFNS)	294	ng/L	49.9	319.49	ND	91.8	70-132	5.35	30	
Perfluorononanoic acid (PFNA)	333	ng/L	49.9	319.49	ND	104	75-131	3.63	30	
Perfluorooctane sulfonamide (PFOSAm)	333	ng/L	49.9	319.49	ND	106	66-140	7.74	30	
Perfluorooctane sulfonic acid (PFOS)	300	ng/L	20.0	319.49	ND	91.5	72-133	6.57	30	
Perfluorooctanoic acid (PFOA)	319	ng/L	20.0	319.49	54.0	83.0	71-133	3.53	30	
Perfluoropentane sulfonic acid (PFPeS)	339	ng/L	49.9	319.49	ND	106	73-137	2.63	30	
Perfluoropentanoic acid (PFPeA)	689	ng/L	49.9	319.49	389	93.8	72-129	1.51	30	

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874147

MSD	CLIENT ID: R-5	Lab ID: QC-2448088-006

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/11/26 00:59

Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoroundecanoic acid (PFUnDA)	350	ng/L	49.9	319.49	ND	109	80-135	2.51	30	
Surr: 13C2-FtS 4:2	1480	ng/L		1492		99.2	50-150	9.53	30	
Surr: 13C2-FtS 6:2	1520	ng/L		1517.6		100	50-150	14.5	30	
Surr: 13C2-FtS 8:2	1690	ng/L		1530.4		110	50-150	8.81	30	
Surr: 13C2-PFDA	1270	ng/L		1597.4		79.8	50-150	2.11	30	
Surr: 13C2-PFDoA	1310	ng/L		1597.4		82.2	50-150	1.77	30	
Surr: 13C2-PFHxA	1290	ng/L		1597.4		80.6	50-150	2.62	30	
Surr: 13C2-PFUnA	1270	ng/L		1597.4		79.2	50-150	0.411	30	
Surr: 13C3-HFPO-DA	1270	ng/L		1597.4		79.4	41-142	11.6	30	
Surr: 13C3-PFBS	1310	ng/L		1485.6		88.5	50-150	2.45	30	
Surr: 13C4-PFBA	1340	ng/L		1597.4		84.1	50-150	6.73	30	
Surr: 13C4-PFHpA	1420	ng/L		1597.4		89.1	42-141	5.30	30	
Surr: 13C4-PFOA	1420	ng/L		1597.4		88.7	50-150	4.05	30	
Surr: 13C4-PFOS	1310	ng/L		1525.6		85.7	50-150	3.32	30	
Surr: 13C5-PFNA	1290	ng/L		1597.4		80.7	50-150	2.77	30	
Surr: 13C5-PFPeA	1320	ng/L		1597.4		82.9	43-138	3.33	30	
Surr: 13C8-FOSA	1240	ng/L		1597.4		77.7	30-122	3.70	30	
Surr: 18O2-PFHxS	1170	ng/L		1509.6		77.4	50-150	2.96	30	
Surr: d3-N-MeFOSAA	1170	ng/L		1597.4		73.0	35-136	4.47	30	
Surr: d5-N-EtFOSAA	1130	ng/L		1597.4		70.9	34-142	7.37	30	

The following samples were analyzed in this batch: HN2601842-001, HN2601842-002, HN2601842-003, HN2601842-004, HN2601842-005, HN2601842-006, HN2601842-007, HN2601842-008, HN2601842-009, HN2601842-011, HN2601842-015



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448088

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3883626

Per- and Polyfluorinated Alkyl Substances by LC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2448088-001

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 09:02
Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	ND	ng/L	5.00							U
Perfluorotridecanoic acid (PFTrDA)	ND	ng/L	5.00							U
<i>Surr: 13C2-PFTeA</i>	72.5	<i>ng/L</i>		160		45.3	27-134			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448088-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 09:16
Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	32.8	ng/L	5.00	32		103	62-139			
Perfluorotridecanoic acid (PFTrDA)	36.6	ng/L	5.00	32		114	47-147			
<i>Surr: 13C2-PFTeA</i>	117	<i>ng/L</i>		160		73.2	27-134			

MS	CLIENT ID: R-5	Lab ID: QC-2448088-005

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 15:34
Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	266	ng/L	49.9	319.23	ND	83.0	62-139			
Perfluorotridecanoic acid (PFTrDA)	369	ng/L	49.9	319.23	ND	115	47-147			
<i>Surr: 13C2-PFTeA</i>	1180	<i>ng/L</i>		1596.2		73.8	27-134			

MSD	CLIENT ID: R-5	Lab ID: QC-2448088-006

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 15:49
Prep Date: 02/10/26 16:30

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	280	ng/L	49.9	319.49	ND	87.4	62-139	5.14	30	
Perfluorotridecanoic acid (PFTrDA)	361	ng/L	49.9	319.49	ND	113	47-147	2.08	30	
<i>Surr: 13C2-PFTeA</i>	1220	<i>ng/L</i>		1597.4		76.4	27-134	3.62	30	

The following samples were analyzed in this batch: HN2601842-001, HN2601842-002, HN2601842-003, HN2601842-004, HN2601842-005, HN2601842-006, HN2601842-007, HN2601842-008, HN2601842-009, HN2601842-011, HN2601842-015



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

Per- and Polyfluorinated Alkyl Substances by LC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2448089-001

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/10/26 22:46**Prep Date:** 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	ND	ng/L	5.00							U
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	ng/L	5.00							U
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	ng/L	5.00							U
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	ng/L	5.00							U
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	ND	ng/L	5.00							U
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	ND	ng/L	5.00							U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	ND	ng/L	5.00							U
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	ND	ng/L	5.00							U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	ND	ng/L	5.00							U
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	ND	ng/L	5.00							U
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	ND	ng/L	5.00							U
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	ND	ng/L	5.00							U
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	ND	ng/L	5.00							U
Perfluorobutane sulfonic acid (PFBS)	ND	ng/L	5.00							U
Perfluorobutanoic acid (PFBA)	ND	ng/L	5.00							U
Perfluorobutylsulfonamide (PFBSA)	ND	ng/L	5.00							U
Perfluorodecane sulfonic acid (PFDS)	ND	ng/L	5.00							U
Perfluorodecanoic acid (PFDA)	ND	ng/L	5.00							U
Perfluorododecanoic acid (PFDOA)	ND	ng/L	5.00							U
Perfluoroheptane sulfonic acid (PFHpS)	ND	ng/L	5.00							U
Perfluoroheptanoic acid (PFHpA)	ND	ng/L	5.00							U
Perfluorohexane sulfonic acid (PFHxS)	ND	ng/L	5.00							U
Perfluorohexanesulfonamide (PFHxSA)	ND	ng/L	5.00							U
Perfluorohexanoic acid (PFHxA)	ND	ng/L	5.00							U
Perfluorononane sulfonic acid (PFNS)	ND	ng/L	5.00							U
Perfluorononanoic acid (PFNA)	ND	ng/L	5.00							U
Perfluorooctane sulfonamide (PFOSAm)	ND	ng/L	5.00							U
Perfluorooctane sulfonic acid (PFOS)	ND	ng/L	2.00							U

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

MB	CLIENT ID: Method Blank	Lab ID: QC-2448089-001

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/10/26 22:46
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorooctanoic acid (PFOA)	ND	ng/L	2.00							U
Perfluoropentane sulfonic acid (PFPeS)	ND	ng/L	5.00							U
Perfluoropentanoic acid (PFPeA)	ND	ng/L	5.00							U
Perfluoroundecanoic acid (PFUnDA)	ND	ng/L	5.00							U
Surr: 13C2-FtS 4:2	174	ng/L		149.44		116	50-150			
Surr: 13C2-FtS 6:2	199	ng/L		152		131	50-150			
Surr: 13C2-FtS 8:2	210	ng/L		153.28		137	50-150			
Surr: 13C2-PFDA	151	ng/L		160		94.4	50-150			
Surr: 13C2-PFDoA	148	ng/L		160		92.4	50-150			
Surr: 13C2-PFHxA	165	ng/L		160		103	50-150			
Surr: 13C2-PFUnA	148	ng/L		160		92.5	50-150			
Surr: 13C3-HFPO-DA	181	ng/L		160		113	41-142			
Surr: 13C3-PFBS	164	ng/L		148.8		110	50-150			
Surr: 13C4-PFBA	159	ng/L		160		99.3	50-150			
Surr: 13C4-PFHpA	189	ng/L		160		118	42-141			
Surr: 13C4-PFOA	174	ng/L		160		109	50-150			
Surr: 13C4-PFOS	135	ng/L		152.8		88.3	50-150			
Surr: 13C5-PFNA	167	ng/L		160		104	50-150			
Surr: 13C5-PFPeA	170	ng/L		160		106	43-138			
Surr: 13C8-FOSA	152	ng/L		160		94.9	30-122			
Surr: 18O2-PFHxS	141	ng/L		151.2		93.1	50-150			
Surr: d3-N-MeFOSAA	144	ng/L		160		90.0	35-136			
Surr: d5-N-EtFOSAA	146	ng/L		160		91.1	34-142			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448089-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/10/26 23:01
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	31.3	ng/L	5.00	32		97.7	61-128			
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	40.7	ng/L	5.00	32		127	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	36.0	ng/L	5.00	32		113	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	30.6	ng/L	5.00	32		95.7	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	24.2	ng/L	5.00	32		75.8	39-117			
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	37.0	ng/L	5.00	32		116	71-138			
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	31.4	ng/L	5.00	32		98.0	64-134			

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448089-002

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/10/26 23:01

Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	31.3	ng/L	5.00	32		97.8	74-135			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	30.4	ng/L	5.00	32		94.9	69-133			
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	38.7	ng/L	5.00	32		121	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	40.2	ng/L	5.00	32		126	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	36.3	ng/L	5.00	32		114	67-133			
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	33.7	ng/L	5.00	28.8		117	74-131			
Perfluorobutane sulfonic acid (PFBS)	32.7	ng/L	5.00	32		102	69-131			
Perfluorobutanoic acid (PFBA)	32.6	ng/L	5.00	32		102	73-139			
Perfluorobutylsulfonamide (PFBSA)	39.4	ng/L	5.00	32		123	68-164			
Perfluorodecane sulfonic acid (PFDS)	27.2	ng/L	5.00	32		85.1	64-128			
Perfluorodecanoic acid (PFDA)	32.3	ng/L	5.00	32		101	77-135			
Perfluorododecanoic acid (PFDOA)	34.1	ng/L	5.00	32		107	77-137			
Perfluoroheptane sulfonic acid (PFHpS)	35.3	ng/L	5.00	32		110	70-137			
Perfluoroheptanoic acid (PFHpA)	32.6	ng/L	5.00	32		102	67-130			
Perfluorohexane sulfonic acid (PFHxS)	37.0	ng/L	5.00	32		116	68-131			
Perfluorohexanesulfonamide (PFHxSA)	33.7	ng/L	5.00	32		105	69-135			
Perfluorohexanoic acid (PFHxA)	32.4	ng/L	5.00	32		101	72-129			
Perfluorononane sulfonic acid (PFNS)	32.6	ng/L	5.00	32		102	70-132			
Perfluorononanoic acid (PFNA)	31.5	ng/L	5.00	32		98.5	75-131			
Perfluorooctane sulfonamide (PFOSAm)	29.3	ng/L	5.00	32		91.4	66-140			
Perfluorooctane sulfonic acid (PFOS)	32.3	ng/L	2.00	32		101	72-133			
Perfluorooctanoic acid (PFOA)	30.2	ng/L	2.00	32		94.4	71-133			
Perfluoropentane sulfonic acid (PFPeS)	38.1	ng/L	5.00	32		119	73-137			
Perfluoropentanoic acid (PFPeA)	33.0	ng/L	5.00	32		103	72-129			
Perfluoroundecanoic acid (PFUnDA)	33.8	ng/L	5.00	32		106	80-135			
Surr: 13C2-FtS 4:2	194	ng/L		149.44		130	50-150			
Surr: 13C2-FtS 6:2	204	ng/L		152		134	50-150			
Surr: 13C2-FtS 8:2	218	ng/L		153.28		142	50-150			
Surr: 13C2-PFDA	170	ng/L		160		106	50-150			
Surr: 13C2-PFDoA	165	ng/L		160		103	50-150			
Surr: 13C2-PFHxA	190	ng/L		160		119	50-150			
Surr: 13C2-PFUnA	173	ng/L		160		108	50-150			
Surr: 13C3-HFPO-DA	168	ng/L		160		105	41-142			
Surr: 13C3-PFBS	173	ng/L		148.8		116	50-150			
Surr: 13C4-PFBA	190	ng/L		160		119	50-150			
Surr: 13C4-PFHpA	186	ng/L		160		116	42-141			
Surr: 13C4-PFOA	191	ng/L		160		120	50-150			



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448089-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/10/26 23:01
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Surr: 13C4-PFOS	169	ng/L		152.8		110	50-150			
Surr: 13C5-PFNA	182	ng/L		160		114	50-150			
Surr: 13C5-PFPeA	177	ng/L		160		110	43-138			
Surr: 13C8-FOSA	157	ng/L		160		98.3	30-122			
Surr: 18O2-PFHxS	146	ng/L		151.2		96.8	50-150			
Surr: d3-N-MeFOSAA	139	ng/L		160		86.6	35-136			
Surr: d5-N-EtFOSAA	146	ng/L		160		91.2	34-142			

MS	CLIENT ID: R-6	Lab ID: QC-2448089-005

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/11/26 01:28
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	306	ng/L	49.4	316.21	ND	96.6	61-128			
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	377	ng/L	49.4	316.21	ND	122	61-148			
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	363	ng/L	49.4	316.21	ND	115	67-143			
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	313	ng/L	49.4	316.21	ND	100	66-151			
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	292	ng/L	49.4	316.21	ND	91.7	39-117			
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	371	ng/L	49.4	316.21	ND	117	71-138			
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	366	ng/L	49.4	316.21	26.0	107	64-134			
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	347	ng/L	49.4	316.21	ND	110	74-135			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	312	ng/L	49.4	316.21	ND	98.7	69-133			
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	359	ng/L	49.4	316.21	ND	113	65-139			
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	386	ng/L	49.4	316.21	ND	122	67-140			
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	356	ng/L	49.4	316.21	ND	113	67-133			
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	334	ng/L	49.4	284.58	ND	117	74-131			
Perfluorobutane sulfonic acid (PFBS)	318	ng/L	49.4	316.21	ND	99.8	69-141			
Perfluorobutanoic acid (PFBA)	479	ng/L	49.4	316.21	150	104	73-139			
Perfluorobutylsulfonamide (PFBSA)	638	ng/L	49.4	316.21	256	121	68-164			
Perfluorodecane sulfonic acid (PFDS)	293	ng/L	49.4	316.21	ND	92.8	64-128			
Perfluorodecanoic acid (PFDA)	332	ng/L	49.4	316.21	ND	105	77-135			
Perfluorododecanoic acid (PFDOA)	332	ng/L	49.4	316.21	ND	105	77-137			

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

MS	CLIENT ID: R-6	Lab ID: QC-2448089-005

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/11/26 01:28**Prep Date:** 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoroheptane sulfonic acid (PFHpS)	288	ng/L	49.4	316.21	ND	91.1	70-137			
Perfluoroheptanoic acid (PFHpA)	491	ng/L	49.4	316.21	154	107	67-130			
Perfluorohexane sulfonic acid (PFHxS)	303	ng/L	49.4	316.21	ND	93.4	68-131			
Perfluorohexanesulfonamide (PFHxSA)	1310	ng/L	49.4	316.21	909	128	69-135			
Perfluorohexanoic acid (PFHxA)	3720	ng/L	49.4	32	3450	NC	72-129			O
Perfluorononane sulfonic acid (PFNS)	300	ng/L	49.4	316.21	ND	95.0	70-132			
Perfluorononanoic acid (PFNA)	339	ng/L	49.4	316.21	ND	106	75-131			
Perfluorooctane sulfonamide (PFOSAm)	367	ng/L	49.4	316.21	ND	118	66-140			
Perfluorooctane sulfonic acid (PFOS)	310	ng/L	19.8	316.21	ND	95.3	72-133			
Perfluorooctanoic acid (PFOA)	466	ng/L	19.8	316.21	132	106	71-133			
Perfluoropentane sulfonic acid (PFPeS)	317	ng/L	49.4	316.21	ND	100	73-137			
Perfluoropentanoic acid (PFPeA)	728	ng/L	49.4	316.21	375	112	72-129			
Perfluoroundecanoic acid (PFUnDA)	353	ng/L	49.4	316.21	ND	111	80-135			
Surr: 13C2-FtS 4:2	1930	ng/L		1476.7		131	50-150			
Surr: 13C2-FtS 6:2	2240	ng/L		1502		149	50-150			
Surr: 13C2-FtS 8:2	2290	ng/L		1514.6		151	50-150			S
Surr: 13C2-PFDA	1700	ng/L		1581		107	50-150			
Surr: 13C2-PFDoA	1670	ng/L		1581		106	50-150			
Surr: 13C2-PFHxA	1670	ng/L		1581		105	50-150			
Surr: 13C2-PFUnA	1610	ng/L		1581		102	50-150			
Surr: 13C3-HFPO-DA	1600	ng/L		1581		101	41-142			
Surr: 13C3-PFBS	1680	ng/L		1470.4		114	50-150			
Surr: 13C4-PFBA	1730	ng/L		1581		109	50-150			
Surr: 13C4-PFHpA	1960	ng/L		1581		124	42-141			
Surr: 13C4-PFOA	1680	ng/L		1581		106	50-150			
Surr: 13C4-PFOS	1550	ng/L		1509.9		103	50-150			
Surr: 13C5-PFNA	1610	ng/L		1581		102	50-150			
Surr: 13C5-PFPeA	1660	ng/L		1581		105	43-138			
Surr: 13C8-FOSA	1550	ng/L		1581		98.2	30-122			
Surr: 18O2-PFHxS	1670	ng/L		1494.1		111	50-150			
Surr: d3-N-MeFOSAA	1400	ng/L		1581		88.5	35-136			
Surr: d5-N-EtFOSAA	1440	ng/L		1581		90.8	34-142			

MSD	CLIENT ID: R-6	Lab ID: QC-2448089-006

Method: EPA 537Mod**Dilution:** 1**Analysis Date:** 02/11/26 01:42**Prep Date:** 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
11-Chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	300	ng/L	49.3	315.58	ND	95.1	61-128	1.78	30	

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

MSD		CLIENT ID: R-6				Lab ID: QC-2448089-006				
Method: EPA 537Mod		Dilution: 1				Analysis Date: 02/11/26 01:42				
						Prep Date: 02/10/26 15:59				
Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)	404	ng/L	49.3	315.58	ND	130	61-148	6.84	30	
1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)	366	ng/L	49.3	315.58	ND	116	67-143	0.661	30	
1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)	346	ng/L	49.3	315.58	ND	111	66-151	9.95	30	
2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)	309	ng/L	49.3	315.58	ND	97.3	39-117	5.68	30	
2H,2H,3H,3H-Perfluorohexanoic acid (3:3 FTCA)	375	ng/L	49.3	315.58	ND	118	71-138	1.04	30	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	369	ng/L	49.3	315.58	26.0	109	64-134	0.783	30	
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	318	ng/L	49.3	315.58	ND	101	74-135	8.80	30	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	312	ng/L	49.3	315.58	ND	98.7	69-133	0.127	30	
Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)	355	ng/L	49.3	315.58	ND	112	65-139	0.967	30	
N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)	414	ng/L	49.3	315.58	ND	131	67-140	7.11	30	
N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)	391	ng/L	49.3	315.58	ND	124	67-133	9.31	30	
Perfluoro-4-ethylcyclohexanesulfonic Acid (PFecHS)	322	ng/L	49.3	284.02	ND	113	74-131	3.61	30	
Perfluorobutane sulfonic acid (PFBS)	331	ng/L	49.3	315.58	ND	104	69-141	3.94	30	
Perfluorobutanoic acid (PFBA)	470	ng/L	49.3	315.58	150	101	73-139	1.77	30	
Perfluorobutylsulfonamide (PFBSA)	653	ng/L	49.3	315.58	256	126	68-164	2.31	30	
Perfluorodecane sulfonic acid (PFDS)	302	ng/L	49.3	315.58	ND	95.6	64-128	2.79	30	
Perfluorodecanoic acid (PFDA)	317	ng/L	49.3	315.58	ND	100	77-135	4.41	30	
Perfluorododecanoic acid (PFDOA)	351	ng/L	49.3	315.58	ND	111	77-137	5.52	30	
Perfluoroheptane sulfonic acid (PFHpS)	286	ng/L	49.3	315.58	ND	90.7	70-137	0.692	30	
Perfluoroheptanoic acid (PFHpA)	494	ng/L	49.3	315.58	154	108	67-130	0.604	30	
Perfluorohexane sulfonic acid (PFHxS)	293	ng/L	49.3	315.58	ND	90.5	68-131	3.33	30	
Perfluorohexanesulfonamide (PFHxSA)	1270	ng/L	49.3	315.58	909	114	69-135	3.50	30	
Perfluorohexanoic acid (PFHxA)	3670	ng/L	49.3	32	3450	NC	72-129	1.25	30	O
Perfluorononane sulfonic acid (PFNS)	304	ng/L	49.3	315.58	ND	96.4	70-132	1.31	30	
Perfluorononanoic acid (PFNA)	336	ng/L	49.3	315.58	ND	106	75-131	0.797	30	
Perfluorooctane sulfonamide (PFOSAm)	343	ng/L	49.3	315.58	ND	110	66-140	6.89	30	
Perfluorooctane sulfonic acid (PFOS)	313	ng/L	19.7	315.58	ND	96.7	72-133	1.23	30	
Perfluorooctanoic acid (PFOA)	479	ng/L	19.7	315.58	132	110	71-133	2.77	30	
Perfluoropentane sulfonic acid (PFPeS)	314	ng/L	49.3	315.58	ND	99.3	73-137	1.06	30	
Perfluoropentanoic acid (PFPeA)	746	ng/L	49.3	315.58	375	118	72-129	2.49	30	

QA/QC Report



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3874149

MSD	CLIENT ID: R-6	Lab ID: QC-2448089-006

Method: EPA 537Mod

Dilution: 1

Analysis Date: 02/11/26 01:42

Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluoroundecanoic acid (PFUnDA)	354	ng/L	49.3	315.58	ND	112	80-135	0.366	30	
Surr: 13C2-FtS 4:2	1650	ng/L		1473.8		112	50-150	15.8	30	
Surr: 13C2-FtS 6:2	1840	ng/L		1499		123	50-150	19.6	30	
Surr: 13C2-FtS 8:2	1760	ng/L		1511.6		116	50-150	26.3	30	
Surr: 13C2-PFDA	1470	ng/L		1577.9		93.0	50-150	14.6	30	
Surr: 13C2-PFDoA	1380	ng/L		1577.9		87.7	50-150	18.7	30	
Surr: 13C2-PFHxA	1410	ng/L		1577.9		89.6	50-150	16.3	30	
Surr: 13C2-PFUnA	1360	ng/L		1577.9		86.2	50-150	16.6	30	
Surr: 13C3-HFPO-DA	1340	ng/L		1577.9		84.7	41-142	17.7	30	
Surr: 13C3-PFBS	1390	ng/L		1467.5		94.9	50-150	18.9	30	
Surr: 13C4-PFBA	1500	ng/L		1577.9		95.0	50-150	14.2	30	
Surr: 13C4-PFHpA	1630	ng/L		1577.9		103	42-141	18.4	30	
Surr: 13C4-PFOA	1460	ng/L		1577.9		92.6	50-150	13.7	30	
Surr: 13C4-PFOS	1360	ng/L		1506.9		90.1	50-150	13.2	30	
Surr: 13C5-PFNA	1440	ng/L		1577.9		91.3	50-150	11.1	30	
Surr: 13C5-PFPeA	1370	ng/L		1577.9		86.8	43-138	19.0	30	
Surr: 13C8-FOSA	1260	ng/L		1577.9		79.7	30-122	21.0	30	
Surr: 18O2-PFHxS	1450	ng/L		1491.1		97.0	50-150	14.1	30	
Surr: d3-N-MeFOSAA	1200	ng/L		1577.9		76.0	35-136	15.4	30	
Surr: d5-N-EtFOSAA	1210	ng/L		1577.9		76.7	34-142	17.0	30	

The following samples were analyzed in this batch: HN2601842-010, HN2601842-012, HN2601842-013, HN2601842-014, HN2601842-016, HN2601842-017, HN2601842-018, HN2601842-019, HN2601842-020, HN2601842-021



Client: Xylem
Project: Arcadis PFAS
Matrix: WATER
QC Lot: 2448089

Work Order: HN2601842
Date Collected: NA
Date Received: NA
Run ID: 3883629

Per- and Polyfluorinated Alkyl Substances by LC-MS

MB	CLIENT ID: Method Blank	Lab ID: QC-2448089-001

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 09:31
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	ND	ng/L	5.00							U
Perfluorotridecanoic acid (PFTrDA)	ND	ng/L	5.00							U
Surr: 13C2-PFTeA	121	ng/L		160		75.5	27-134			

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-2448089-002

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 09:45
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	33.7	ng/L	5.00	32		105	62-139			
Perfluorotridecanoic acid (PFTrDA)	47.3	ng/L	5.00	32		148	47-147			S
Surr: 13C2-PFTeA	137	ng/L		160		85.9	27-134			

MS	CLIENT ID: R-6	Lab ID: QC-2448089-005

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 16:18
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	278	ng/L	49.4	316.21	ND	87.5	62-139			
Perfluorotridecanoic acid (PFTrDA)	373	ng/L	49.4	316.21	ND	118	47-147			
Surr: 13C2-PFTeA	1430	ng/L		1581		90.3	27-134			

MSD	CLIENT ID: R-6	Lab ID: QC-2448089-006

Method: EPA 537Mod **Dilution:** 1 **Analysis Date:** 02/13/26 16:32
Prep Date: 02/10/26 15:59

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Perfluorotetradecanoic acid (PFTDA)	289	ng/L	49.3	315.58	ND	91.3	62-139	4.08	30	
Perfluorotridecanoic acid (PFTrDA)	338	ng/L	49.3	315.58	ND	107	47-147	9.79	30	
Surr: 13C2-PFTeA	1200	ng/L		1577.9		76.2	27-134	17.1	30	

The following samples were analyzed in this batch: HN2601842-010, HN2601842-012, HN2601842-013, HN2601842-014, HN2601842-016, HN2601842-017, HN2601842-018, HN2601842-019, HN2601842-020, HN2601842-021

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