

NOVEMBER 27, 2024

Project Name:	FTP IC Compliance
Client:	Fairbanks International Airport ADOT&PF
S&W Project Number:	102519-032
Subject:	Mann-Kendall Trend Summary Report

INTRODUCTION

We conducted an evaluation of concentration trends for per- and polyfluoroalkyl substances (PFAS) in eight groundwater monitoring wells associated with Fire Training Pit (FTP) institutional controls (IC) compliance at the Fairbanks International Airport. The information in this report is intended to supplement the *Final 2024 Fairbanks International Airport Fire Training Pit Institutional Control Documentation, Fairbanks, Alaska*, dated November 18, 2024.

The trend analyses were conducted using a Mann-Kendall statistical analysis in combination with the Monitoring and Remediation Optimization System (MAROS) decision matrix for groundwater analytical data and visual inspection of the concentration graphs. The MAROS software decision matrix was developed by the Air Force Center for Engineering and the Environment to evaluate concentration trends. Shannon & Wilson, Inc. uses the ProUCL version 5.2 EPA Software capable of performing the Mann-Kendall test and provides each dataset's coefficient of variation (COV).

The MAROS evaluation of concentration trends depends on the result of a Mann-Kendall trend analysis, coupled with information about the COV. A statistically significant increasing or decreasing trend will be identified by the Mann-Kendall analysis if the probability of a false-negative assessment is less than 5 percent (i.e., $p < 0.05$); MAROS refers to this condition as a "confidence in trend" above 95 percent. MAROS discriminates between "no trend" and a "stable" contaminant concentration by evaluating the COV of a given dataset. The COV is defined as the ratio of a dataset's standard deviation to its mean. COV values less than or near one indicate that data form a relatively close group around the mean value; values larger than one indicate data exhibit a greater degree of scatter around the mean. The MAROS decision matrix is presented in the table below:

Mann-Kendall Statistic (S)	Confidence in Trend	Concentration in Trend
S > 0	> 95 percent	Increasing
	90 – 95 percent	Probably Increasing
	< 90 percent	No Trend
S ≤ 0	<90 percent and COV ≥ 1	No Trend
	<90 percent and COV < 1	Stable
S < 0	90 – 95 percent	Probably Decreasing
	> 95 percent	Decreasing

The following sections describe our statistical assessment of the historical results and corresponding trend analyses.

EVALUATION OF HISTORICAL RESULTS

As part of the FTP IC compliance, Shannon & Wilson sampled the monitoring wells upgradient (MW-1902) and downgradient (MW-1901) of the former FTP approximately quarterly for two years and was changed to annual in July 2023. The monitoring wells monitor groundwater from various depths (15 feet, 40 feet, 80 feet, and 150 feet) to assess potential differences in the various strata of the subsurface.

Prior to assessment of potential trends, the historical data set is reviewed to limit the assessment to data sets with sufficient detected results in order to provide a meaningful statistical assessment (Table 1). Only well/analyte pairs with a minimum of three detected results were included in this trend analysis. The historical data included 18 PFAS analytes that were routinely reported for ten separate sampling events. Several of the routinely reported PFAS analytes did not have sufficient detections in the historical data for the statistical assessment. A total of seven PFAS analytes have sufficient detections in at least one well to perform a meaningful statistical assessment, including:

- Perfluorooctanesulfonic acid (PFOS)
- Perfluorooctanoic acid (PFOA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)
- Perfluorohexanoic acid (PFHxA)
- Perfluorononanoic acid (PFNA)

TREND SUMMARY RESULTS

The available data sets with sufficient detections were evaluated for potential trends (Table 2). We note that upon review of the data, the elevated non-detect result for PFNA in June 2020 was removed from the data set to avoid potential false trends.

The p-value is an estimate of the probability that we would wrongly reject the null hypothesis that there is no trend in the data in favor of the alternative hypothesis that there is a linear trend in the data. The confidence in the trend is calculated as follows:

$$Confidence = [1 - (p - value)] \times 100\%$$

The findings for the trend assessment are presented in Table 3. In general, where there were sufficient data to allow for an assessment, the evaluation indicated mostly a decreasing, probably decreasing, or stable trends. However, there were some instances where a trend could not be assessed and one instance with a probably increasing trend (PFOS for MW-1902-150). However, there were some recent non-detect results that were higher than the detected results for PFOS in MW-1902-150. This may be the reason for the probably increasing trend.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON, INC.

Ashley Jaramillo
Senior Chemist

Enc: Table 1 – Historical PFAS Monitoring Well Summary
Table 2 – ProUCL Input Table
Table 3 – Summary of Mann-Kendall Trend Assessment

TABLE 1

HISTORICAL PFAS MONITORING WELL SUMMARY

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorooctanesulfonic acid	Perfluorooctanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorobutanesulfonic acid	Perfluorodecanoic acid
				(PFOS) µg/L	(PFOA) µg/L	(HFPO-DA) µg/L	(PFBS) µg/L	(PFDA) µg/L
MW-1901-15	09/12/2019	MW-1901-15		0.0870 J*	0.120	<0.00390	0.410 J*	<0.00190
	09/12/2019	MW-1901-115	DUP	0.0950 J*	0.120	<0.00390	0.410 J*	<0.00190
	06/25/2020	MW-1901-15		0.0640 J	0.150 J	<0.340	0.520	<0.170
	12/07/2020	MW-1901-15		0.0740	0.0740	<0.00370	0.340	<0.00190
	12/07/2020	MW-2901-15	DUP	0.0760	0.0760	<0.00390	0.330	<0.00190
	02/02/2021	MW-1901-15		0.0500	0.0800	<0.00360	0.380	<0.00180
	04/13/2021	MW-1901-15		0.0460	0.0880	<0.00360	0.420	<0.00180
	04/13/2021	MW-1901-115	DUP	0.0470	0.0910	<0.00370	0.460	<0.00180
	10/06/2021	MW-1901-15		0.0200	0.0510	<0.00370	0.270	<0.00180
	10/06/2021	MW-2001-15	DUP	0.0200	0.0510	<0.00350	0.270	<0.00180
	01/24/2022	MW-1901-15		0.0420	0.0590	<0.00370	0.290	<0.00190
	04/28/2022	MW-1901-15		0.0300	0.0410	<0.00380	0.250	<0.00190
	07/05/2023	MW-1901-15		0.0240 N*	0.0600 N*	<0.00360 N*	0.340 N*	<0.00180 N*
	07/05/2023	MW-2001-15	DUP	0.0240 N*	0.0590 N*	<0.00350 N*	0.310 N*	<0.00180 N*
	07/24/2024	MW-1901-15		0.0400	0.0310	<0.00350	0.130	<0.00180
MW-1901-40	09/12/2019	MW-1901-40		0.180	0.0720	<0.00400	0.340	<0.00200
	06/25/2020	MW-1901-40		0.170 J	<0.180	<0.370	0.470	<0.180
	12/07/2020	MW-1901-40		0.280	0.150	<0.00380	0.890	<0.00190
	02/02/2021	MW-1901-40		0.300	0.140	<0.00370	0.880	<0.00180
	04/13/2021	MW-1901-40		0.450	0.170	<0.00350	0.940	<0.00180
	10/06/2021	MW-1901-40		0.290	0.140	<0.00380	0.830	<0.00190
	01/24/2022	MW-1901-40		0.290	0.150	<0.00340	0.930	<0.00170
	04/28/2022	MW-1901-40		0.350	0.150	<0.00360	0.880	<0.00180
	07/05/2023	MW-1901-40		0.240 N*	0.0760 N*	<0.00330 N*	0.570 N*	<0.00170 N*
	07/24/2024	MW-1901-40		0.190	0.0750	<0.00340	0.520	<0.00170
MW-1901-80	09/12/2019	MW-1901-80		0.00160 J	<0.00180	<0.00360	0.000550 J	<0.00180
	06/25/2020	MW-1901-80		0.000980 J	<0.00180	<0.00360	0.000280 J	<0.00180
	12/07/2020	MW-1901-80		0.00120 J	<0.00190	<0.00380	0.000600 J	<0.00190

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorododecanoic acid	Perfluoroheptanoic acid	Perfluorohexanesulfonic acid	Perfluorohexanoic acid	Perfluorononanoic acid
				(PFDoA) µg/L	(PFHpA) µg/L	(PFHxS) µg/L	(PFHxA) µg/L	(PFNA) µg/L
MW-1901-15	09/12/2019	MW-1901-15		<0.00190	0.0860	1.70 J*	0.740 J*	0.0120 J*
	09/12/2019	MW-1901-115	DUP	<0.00190	0.0840	1.70 J*	0.750 J*	0.0120 J*
	06/25/2020	MW-1901-15		<0.170	0.0890 J	3.40	1.00	<0.170
	12/07/2020	MW-1901-15		<0.00190	0.0390	1.40	0.630	<0.00190
	12/07/2020	MW-2901-15	DUP	<0.00190	0.0430	1.50	0.590	<0.00190
	02/02/2021	MW-1901-15		<0.00180	0.0640	2.10	0.770	<0.00180
	04/13/2021	MW-1901-15		<0.00180	0.0650	1.70	0.750	<0.00180
	04/13/2021	MW-1901-115	DUP	<0.00180	0.0640	1.90	0.740	<0.00180
	10/06/2021	MW-1901-15		<0.00180	0.0310	0.980	0.410	<0.00180
	10/06/2021	MW-2001-15	DUP	<0.00180	0.0290	0.970	0.380	<0.00180
	01/24/2022	MW-1901-15		<0.00190 J*	0.0660	1.10	0.630	<0.00190
	04/28/2022	MW-1901-15		<0.00190	0.0260	0.740	0.520	<0.00190
	07/05/2023	MW-1901-15		<0.00180 N*	0.0500 N*	1.30 N*	0.660 N*	<0.00180 N*
	07/05/2023	MW-2001-15	DUP	<0.00180 N*	0.0450 N*	1.20 N*	0.620 N*	<0.00180 N*
	07/24/2024	MW-1901-15		<0.00180	0.0180	0.490	0.180	0.00740
MW-1901-40	09/12/2019	MW-1901-40		<0.00200	0.0590	1.00 J*	0.570 J*	<0.00200
	06/25/2020	MW-1901-40		<0.180	0.0570 J	1.00	0.760	<0.180
	12/07/2020	MW-1901-40		<0.00190	0.120	2.60	1.50	0.000350 J
	02/02/2021	MW-1901-40		<0.00180	0.140	2.70	1.30	0.000250 J
	04/13/2021	MW-1901-40		<0.00180	0.150	2.60	1.20	<0.00180
	10/06/2021	MW-1901-40		<0.00190	0.120	2.60	1.40	<0.00190
	01/24/2022	MW-1901-40		<0.00170	0.140	3.40	1.50	<0.00170
	04/28/2022	MW-1901-40		<0.00180	0.140	2.60	1.40	0.000310 J
	07/05/2023	MW-1901-40		<0.00170 N*	0.0840 N*	1.60 N*	1.10 N*	0.000240 N*
	07/24/2024	MW-1901-40		<0.00170	0.0710	1.20	0.690	0.00390
MW-1901-80	09/12/2019	MW-1901-80		<0.00180	<0.00180	0.00270 JH*	0.00120 J	<0.00180
	06/25/2020	MW-1901-80		<0.00180	<0.00180	<0.00180 B*	<0.00180	<0.00180
	12/07/2020	MW-1901-80		<0.00190	<0.00190	0.00340	0.00120 J	<0.00190

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorotetradecanoic acid	Perfluorotridecanoic acid	Perfluoroundecanoic acid	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
				(PFTeA) µg/L	(PFTrDA) µg/L	(PFUnA) µg/L	(9Cl-PF3ONS) µg/L	(11Cl-PF3OUdS) µg/L
MW-1901-15	09/12/2019	MW-1901-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	09/12/2019	MW-1901-115	DUP	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	06/25/2020	MW-1901-15		<0.170	<0.170	<0.170	<0.170	<0.170
	12/07/2020	MW-1901-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	12/07/2020	MW-2901-15	DUP	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	02/02/2021	MW-1901-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/13/2021	MW-1901-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/13/2021	MW-1901-115	DUP	<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-1901-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-2001-15	DUP	<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	01/24/2022	MW-1901-15		<0.00190 J*	<0.00190	<0.00190	<0.00190	<0.00190
	04/28/2022	MW-1901-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	07/05/2023	MW-1901-15		<0.00180 N*	<0.00180 N*	<0.00180 N*	<0.00180 N*	<0.00180 N*
	07/05/2023	MW-2001-15	DUP	<0.00180 N*	<0.00180 N*	<0.00180 N*	<0.00180 N*	<0.00180 N*
	07/24/2024	MW-1901-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
MW-1901-40	09/12/2019	MW-1901-40		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	06/25/2020	MW-1901-40		<0.180	<0.180	<0.180	<0.180	<0.180
	12/07/2020	MW-1901-40		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	02/02/2021	MW-1901-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/13/2021	MW-1901-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-1901-40		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	01/24/2022	MW-1901-40		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-1901-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	07/05/2023	MW-1901-40		<0.00170 N*	<0.00170 N*	<0.00170 N*	<0.00170 N*	<0.00170 N*
	07/24/2024	MW-1901-40		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
MW-1901-80	07/24/2024	MW-2001-40	DUP	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	09/12/2019	MW-1901-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	06/25/2020	MW-1901-80		0.000300 J	<0.00180	<0.00180	<0.00180	<0.00180
	12/07/2020	MW-1901-80		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	4,8-Dioxa-3H-perfluorononanoic acid	N-Ethyl perfluorooctane sulfonamidoacetic acid	N-Methyl perfluorooctane sulfonamidoacetic acid
				(DONA) µg/L	(N-EtFOSAA) µg/L	(N-MeFOSAA) µg/L
MW-1901-15	09/12/2019	MW-1901-15		<0.00190	<0.0190	<0.0190
	09/12/2019	MW-1901-115	DUP	<0.00190	<0.0190	<0.0190
	06/25/2020	MW-1901-15		<0.170	<1.70	<1.70
	12/07/2020	MW-1901-15		<0.00190	<0.00470	<0.00470
	12/07/2020	MW-2901-15	DUP	<0.00190	<0.00490	<0.00490
	02/02/2021	MW-1901-15		<0.00180	<0.00460	<0.00460
	04/13/2021	MW-1901-15		<0.00180	<0.00460	<0.00460
	04/13/2021	MW-1901-115	DUP	<0.00180	<0.00460	<0.00460
	10/06/2021	MW-1901-15		<0.00180	<0.00460	<0.00460
	10/06/2021	MW-2001-15	DUP	<0.00180	<0.00440	<0.00440
	01/24/2022	MW-1901-15		<0.00190	<0.00470 J*	<0.00470 J*
	04/28/2022	MW-1901-15		<0.00190	<0.00480	<0.00480
	07/05/2023	MW-1901-15		<0.00180 N*	<0.00450 N*	<0.00450 N*
	07/05/2023	MW-2001-15	DUP	<0.00180 N*	<0.00440 N*	<0.00440 N*
	07/24/2024	MW-1901-15		<0.00180	<0.00440	<0.00440
MW-1901-40	09/12/2019	MW-1901-40		<0.00200	<0.0200	<0.0200
	06/25/2020	MW-1901-40		<0.180	<1.80	<1.80
	12/07/2020	MW-1901-40		<0.00190	<0.00470	<0.00470
	02/02/2021	MW-1901-40		<0.00180	<0.00460	<0.00460
	04/13/2021	MW-1901-40		<0.00180	<0.00440	<0.00440
	10/06/2021	MW-1901-40		<0.00190	<0.00480	<0.00480
	01/24/2022	MW-1901-40		<0.00170	<0.00420	<0.00420
	04/28/2022	MW-1901-40		<0.00180	<0.00450	<0.00450
	07/05/2023	MW-1901-40		<0.00170 N*	<0.00420 N*	<0.00420 N*
	07/24/2024	MW-1901-40		<0.00170	<0.00420	<0.00420
MW-1901-80	07/24/2024	MW-2001-40	DUP	<0.00170	<0.00420	<0.00420
	09/12/2019	MW-1901-80		<0.00180	<0.0180	<0.0180
	06/25/2020	MW-1901-80		<0.00180	<0.0180	<0.0180
	12/07/2020	MW-1901-80		<0.00190	<0.00480	<0.00480

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorooctanesulfonic acid	Perfluorooctanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorobutanesulfonic acid	Perfluorodecanoic acid
				(PFOS) µg/L	(PFOA) µg/L	(HFPO-DA) µg/L	(PFBS) µg/L	(PFDA) µg/L
MW-1901-80	02/02/2021	MW-1901-80		0.000860 J	<0.00180	<0.00370	0.000360 J	<0.00180
	02/02/2021	MW-1901-80DUP	DUP	0.000900 J	<0.00190	<0.00380	0.000280 J*	<0.00190
	04/13/2021	MW-1901-80		<0.00180 B*	<0.00180	<0.00360	<0.00180 B*	<0.00180
	10/06/2021	MW-1901-80		0.00110 J	<0.00190	<0.00370	0.00100 J	<0.00190
	01/24/2022	MW-1901-80		0.000820 J	<0.00170	<0.00340	0.000260 J	<0.00170
	04/28/2022	MW-1901-80		0.000930 J	<0.00180	<0.00360	0.000280 J	<0.00180
	07/05/2023	MW-1901-80		0.000790 N*	<0.00210 N*	<0.00410 N*	<0.00210 N*	<0.00210 N*
	07/24/2024	MW-1901-80		0.000710 J	<0.00180	<0.00350	0.000250 J	<0.00180
MW-1901-150	09/12/2019	MW-1901-150		<0.00170	<0.00170	<0.00340	<0.00170	<0.00170
	06/25/2020	MW-1901-150		0.000580 J	<0.00190	<0.00380	<0.00190	<0.00190
	12/07/2020	MW-1901-150		<0.00190 J*	<0.00190 J*	<0.00380 J*	<0.00190 J*	<0.00190 J*
	02/02/2021	MW-1901-150		<0.00180	<0.00180	<0.00370	0.000180 J	<0.00180
	04/13/2021	MW-1901-150		<0.00180	<0.00180	<0.00360	<0.00180	<0.00180
	10/06/2021	MW-1901-150		<0.00180	<0.00180	<0.00370	<0.00180	<0.00180
	01/24/2022	MW-1901-150		<0.00180	<0.00180	<0.00350	<0.00180	<0.00180
	04/28/2022	MW-1901-150		0.000510 J	<0.00180	<0.00350	<0.00180	<0.00180
	04/28/2022	MW-2001-150	DUP	0.000530 J	<0.00170	<0.00350	<0.00170	<0.00170
	07/05/2023	MW-1901-150		0.000620 N*	<0.00190 N*	<0.00380 N*	<0.00190 N*	<0.00190 N*
	07/24/2024	MW-1901-150		<0.00160	<0.00160	<0.00330	<0.00160	<0.00160
MW-1902-15	09/12/2019	MW-1902-15		0.0250	0.0140	<0.00360	0.0220	<0.00180
	06/25/2020	MW-1902-15		0.0120	0.00270	<0.00360	0.00350	<0.00180
	06/25/2020	MW-2002-15	DUP	0.0120	0.00260	<0.00370	0.00360	<0.00190
	12/07/2020	MW-1902-15		0.0170	0.00830	<0.00390	0.0120	<0.00190
	12/07/2020	MW-2902-15	DUP	0.0180	0.00910	<0.00400	0.0130	<0.00200
	02/02/2021	MW-1902-15		0.0130	0.00500	<0.00380	0.00600	<0.00190
	02/02/2021	MW-1902-15DUP	DUP	0.0120	0.00420	<0.00380	0.00590	<0.00190
	04/13/2021	MW-1902-15		0.0130	0.00460	<0.00370	<0.00510 B*	<0.00190
	10/06/2021	MW-1902-15		0.0130	0.00810	<0.00380	0.00970	<0.00190
	10/06/2021	MW-2002-15	DUP	0.0150	0.00920	<0.00360	0.0110	<0.00180

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorododecanoic acid	Perfluoroheptanoic acid	Perfluorohexanesulfonic acid	Perfluorohexanoic acid	Perfluorononanoic acid
				(PFD _o A) µg/L	(PFHpA) µg/L	(PFHxS) µg/L	(PFHxA) µg/L	(PFNA) µg/L
MW-1901-80	02/02/2021	MW-1901-80		<0.00180	<0.00180	0.00140 J	<0.00180	<0.00180
	02/02/2021	MW-1901-80DUP	DUP	<0.00190	<0.00190	0.00140 J	<0.00190	<0.00190
	04/13/2021	MW-1901-80		<0.00180	<0.00180	<0.00260 B*	<0.00180 B*	<0.00180
	10/06/2021	MW-1901-80		<0.00190	<0.00190	0.00360	0.00170 J*	<0.00190
	01/24/2022	MW-1901-80		<0.00170	<0.00170	0.00140 J	<0.00170	<0.00170
	04/28/2022	MW-1901-80		<0.00180	<0.00180	0.00140 J	<0.00180	<0.00180
	07/05/2023	MW-1901-80		<0.00210 N*	<0.00210 N*	0.00120 N*	<0.00210 N*	<0.00210 N*
	07/24/2024	MW-1901-80		<0.00180	<0.00180	0.00120 J	<0.00180	<0.00180
MW-1901-150	09/12/2019	MW-1901-150		<0.00170	0.000270 J	<0.00170 B*	<0.00170	<0.00170
	06/25/2020	MW-1901-150		<0.00190	<0.00190	<0.00190 B*	<0.00190	<0.00190
	12/07/2020	MW-1901-150		<0.00190 J*	<0.00190 J*	0.000990 J*	<0.00190 J*	<0.00190 J*
	02/02/2021	MW-1901-150		<0.00180	<0.00180	0.00100 J	<0.00180	<0.00180
	04/13/2021	MW-1901-150		<0.00180	<0.00180	<0.00180 B*	<0.00180	<0.00180
	10/06/2021	MW-1901-150		<0.00180	<0.00180	0.00110 J	<0.00180	<0.00180
	01/24/2022	MW-1901-150		<0.00180	<0.00180	0.000850 J	<0.00180	<0.00180
	04/28/2022	MW-1901-150		<0.00180	<0.00180	0.000870 J	<0.00180	<0.00180
	04/28/2022	MW-2001-150	DUP	<0.00170	<0.00170	0.000800 J	<0.00170	<0.00170
	07/05/2023	MW-1901-150		<0.00190 N*	<0.00190 N*	0.00110 N*	<0.00190 N*	<0.00190 N*
	07/24/2024	MW-1901-150		<0.00160	<0.00160	0.000940 J	<0.00160	<0.00160
MW-1902-15	09/12/2019	MW-1902-15		<0.00180	0.00800	0.110 B	0.0600	<0.00180
	06/25/2020	MW-1902-15		<0.00180	0.00140 J	0.0220	0.00820	<0.00180
	06/25/2020	MW-2002-15	DUP	<0.00190	0.00150 J	0.0220	0.00840	<0.00190
	12/07/2020	MW-1902-15		<0.00190	0.00450	0.0990	0.0300	<0.00190
	12/07/2020	MW-2902-15	DUP	<0.00200	0.00470	0.100	0.0320	<0.00200
	02/02/2021	MW-1902-15		<0.00190	0.00250	0.0450	0.0140	<0.00190
	02/02/2021	MW-1902-15DUP	DUP	<0.00190	0.00220	0.0470	0.0140	<0.00190
	04/13/2021	MW-1902-15		<0.00190	0.00220	0.0450	0.0110 JH*	<0.00190
	10/06/2021	MW-1902-15		<0.00190	0.00410	0.0810	0.0260	<0.00190
	10/06/2021	MW-2002-15	DUP	<0.00180	0.00440	0.0920	0.0290	<0.00180

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorotetradecanoic acid	Perfluorotridecanoic acid	Perfluoroundecanoic acid	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
				(PFTeA)	(PFTrDA)	(PFUnA)	(9Cl-PF3ONS)	(11Cl-PF3OUdS)
				µg/L	µg/L	µg/L	µg/L	µg/L
MW-1901-80	02/02/2021	MW-1901-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	02/02/2021	MW-1901-80DUP	DUP	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	04/13/2021	MW-1901-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-1901-80		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	01/24/2022	MW-1901-80		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-1901-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	07/05/2023	MW-1901-80		<0.00210 N*	<0.00210 N*	<0.00210 N*	<0.00210 N*	<0.00210 N*
	07/24/2024	MW-1901-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
MW-1901-150	09/12/2019	MW-1901-150		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	06/25/2020	MW-1901-150		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	12/07/2020	MW-1901-150		<0.00190 J*	<0.00190 J*	<0.00190 J*	<0.00190 J*	<0.00190 J*
	02/02/2021	MW-1901-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/13/2021	MW-1901-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-1901-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	01/24/2022	MW-1901-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/28/2022	MW-1901-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/28/2022	MW-2001-150	DUP	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	07/05/2023	MW-1901-150		<0.00190 N*	<0.00190 N*	<0.00190 N*	<0.00190 N*	<0.00190 N*
	07/24/2024	MW-1901-150		<0.00160	<0.00160	<0.00160	<0.00160	<0.00160
MW-1902-15	09/12/2019	MW-1902-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	06/25/2020	MW-1902-15		0.000400 J	<0.00180	<0.00180	<0.00180	<0.00180
	06/25/2020	MW-2002-15	DUP	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	12/07/2020	MW-1902-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	12/07/2020	MW-2902-15	DUP	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	02/02/2021	MW-1902-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	02/02/2021	MW-1902-15DUP	DUP	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	04/13/2021	MW-1902-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	10/06/2021	MW-1902-15		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	10/06/2021	MW-2002-15	DUP	<0.00180	<0.00180	<0.00180	<0.00180	<0.00180

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	4,8-Dioxa-3H-perfluorononanoic acid	N-Ethyl perfluorooctane sulfonamidoacetic acid	N-Methyl perfluorooctane sulfonamidoacetic acid
				(DONA) µg/L	(N-EtFOSAA) µg/L	(N-MeFOSAA) µg/L
MW-1901-80	02/02/2021	MW-1901-80		<0.00180	<0.00460	<0.00460
	02/02/2021	MW-1901-80DUP	DUP	<0.00190	<0.00480	<0.00480
	04/13/2021	MW-1901-80		<0.00180	<0.00450	<0.00450
	10/06/2021	MW-1901-80		<0.00190	<0.00460	<0.00460
	01/24/2022	MW-1901-80		<0.00170	<0.00420	<0.00420
	04/28/2022	MW-1901-80		<0.00180	<0.00450	<0.00450
	07/05/2023	MW-1901-80		<0.00210 N*	<0.00520 N*	<0.00520 N*
	07/24/2024	MW-1901-80		<0.00180	<0.00440	<0.00440
MW-1901-150	09/12/2019	MW-1901-150		<0.00170	<0.0170	<0.0170
	06/25/2020	MW-1901-150		<0.00190	<0.0190	<0.0190
	12/07/2020	MW-1901-150		<0.00190 J*	<0.00480 J*	<0.00480 J*
	02/02/2021	MW-1901-150		<0.00180	<0.00460	<0.00460
	04/13/2021	MW-1901-150		<0.00180	<0.00450	<0.00450
	10/06/2021	MW-1901-150		<0.00180	<0.00460	<0.00460
	01/24/2022	MW-1901-150		<0.00180	<0.00440	<0.00440
	04/28/2022	MW-1901-150		<0.00180	<0.00440	<0.00440
	04/28/2022	MW-2001-150	DUP	<0.00170	<0.00430	<0.00430
	07/05/2023	MW-1901-150		<0.00190 N*	<0.00480 N*	<0.00480 N*
	07/24/2024	MW-1901-150		<0.00160	<0.00410	<0.00410
MW-1902-15	09/12/2019	MW-1902-15		<0.00180	<0.0180	<0.0180
	06/25/2020	MW-1902-15		<0.00180	<0.0180	<0.0180
	06/25/2020	MW-2002-15	DUP	<0.00190	<0.0190	<0.0190
	12/07/2020	MW-1902-15		<0.00190	<0.00480	<0.00480
	12/07/2020	MW-2902-15	DUP	<0.00200	<0.00500	<0.00500
	02/02/2021	MW-1902-15		<0.00190	<0.00470	<0.00470
	02/02/2021	MW-1902-15DUP	DUP	<0.00190	<0.00470	<0.00470
	04/13/2021	MW-1902-15		<0.00190	<0.00470	<0.00470
	10/06/2021	MW-1902-15		<0.00190	<0.00470	<0.00470
	10/06/2021	MW-2002-15	DUP	<0.00180	<0.00450	<0.00450

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorooctanesulfonic acid	Perfluorooctanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorobutanesulfonic acid	Perfluorodecanoic acid
				(PFOS) µg/L	(PFOA) µg/L	(HFPO-DA) µg/L	(PFBS) µg/L	(PFDA) µg/L
MW-1902-15	01/24/2022	MW-1902-15		0.0110	0.00650	<0.00360	0.00830	<0.00180
	01/24/2022	MW-2002-15	DUP	0.00990	0.00650	<0.00350	0.00770	<0.00170
	04/28/2022	MW-1902-15		0.0140	0.00610	<0.00360	0.00650	<0.00180
	07/05/2023	MW-1902-15		0.0100 N*	0.00410 N*	<0.00380 N*	0.00450 N*	<0.00190 N*
	07/05/2023	MW-2002-15	DUP	0.0110 N*	0.00430 N*	<0.00400 N*	0.00500 N*	<0.00200 N*
	07/24/2024	MW-1902-15		0.00900	0.00290	<0.00340	0.00320	<0.00170
MW-1902-40	09/12/2019	MW-1902-40		0.00320	0.000910 J	<0.00370	0.000650 J	<0.00190
	06/25/2020	MW-1902-40		0.00180	<0.00180	<0.00370	0.000380 J	<0.00180
	12/07/2020	MW-1902-40		0.00330	<0.00190	<0.00390	0.000620 J	<0.00190
	02/02/2021	MW-1902-40		0.00160 J	<0.00180	<0.00370	0.000300 J	<0.00180
	04/13/2021	MW-1902-40		<0.00210 B*	<0.00180	<0.00360	<0.00180	<0.00180
	10/06/2021	MW-1902-40		0.00250	<0.00180	<0.00370	0.000510 J	<0.00180
	01/24/2022	MW-1902-40		0.00170	<0.00170	<0.00340	0.000480 J	<0.00170
	04/28/2022	MW-1902-40		0.00190	<0.00160	<0.00320	0.000330 J	<0.00160
	07/05/2023	MW-1902-40		0.00160 N*	<0.00170 N*	<0.00340 N*	0.000330 N*	<0.00170 N*
	07/24/2024	MW-1902-40		0.00160	<0.00160	<0.00330	0.000340 J	<0.00160
MW-1902-80	09/12/2019	MW-1902-80		0.00220	<0.00190	<0.00370	<0.00190	<0.00190
	06/25/2020	MW-1902-80		0.000730 J	<0.00180	<0.00350	0.000230 J	<0.00180
	12/07/2020	MW-1902-80		0.000890 J*	<0.00200	<0.00390	0.000240 J	<0.00200
	02/02/2021	MW-1902-80		0.000670 J	<0.00180	<0.00360	0.000210 J	<0.00180
	04/13/2021	MW-1902-80		<0.00180	<0.00180	<0.00370	<0.00180	<0.00180
	10/06/2021	MW-1902-80		0.000690 J	<0.00180	<0.00360	0.000270 J	<0.00180
	01/24/2022	MW-1902-80		<0.00170	<0.00170	<0.00340	0.000180 J	<0.00170
	04/28/2022	MW-1902-80		<0.00170	<0.00170	<0.00340	<0.00170	<0.00170
	07/05/2023	MW-1902-80		0.000660 N*	<0.00180 N*	<0.00370 N*	<0.00180 N*	<0.00180 N*
	07/24/2024	MW-1902-80		0.000530 J	<0.00170	<0.00330	<0.00170	<0.00170
MW-1902-150	09/12/2019	MW-1902-150		0.000570 J	<0.00190	<0.00380	<0.00190	<0.00190
	06/25/2020	MW-1902-150		0.000490 J	<0.00180	<0.00360	0.000200 J	<0.00180
	12/07/2020	MW-1902-150		0.000560 J	<0.00200	<0.00390	<0.00200	<0.00200

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorododecanoic acid	Perfluoroheptanoic acid	Perfluorohexanesulfonic acid	Perfluorohexanoic acid	Perfluorononanoic acid
				(PFDoA) µg/L	(PFHpA) µg/L	(PFHxS) µg/L	(PFHxA) µg/L	(PFNA) µg/L
MW-1902-15	01/24/2022	MW-1902-15		<0.00180	0.00310	0.0780	0.0220	<0.00180
	01/24/2022	MW-2002-15	DUP	<0.00170	0.00310	0.0720	0.0210	<0.00170
	04/28/2022	MW-1902-15		<0.00180	0.00200	0.0560	0.0140	<0.00180
	07/05/2023	MW-1902-15		<0.00190 N*	0.00180 N*	0.0420 N*	0.0120 N*	<0.00190 N*
	07/05/2023	MW-2002-15	DUP	<0.00200 N*	0.00190 N*	0.0500 N*	0.0140 N*	<0.00200 N*
	07/24/2024	MW-1902-15		<0.00170	0.00100 J	0.0240	0.00590	0.00100 J
MW-1902-40	09/12/2019	MW-1902-40		<0.00190	0.000500 J	0.00230 JH*	0.00140 J	<0.00190
	06/25/2020	MW-1902-40		<0.00180	0.000260 J	<0.00180 B*	0.000710 J	<0.00180
	12/07/2020	MW-1902-40		<0.00190	0.000260 J	0.00200	0.000880 J	<0.00190
	02/02/2021	MW-1902-40		<0.00180	<0.00180	0.00150 J	<0.00180	<0.00180
	04/13/2021	MW-1902-40		<0.00180	<0.00180	<0.00180 B*	<0.00180 B*	<0.00180
	10/06/2021	MW-1902-40		<0.00180	<0.00180	0.00200	0.000660 J	<0.00180
	01/24/2022	MW-1902-40		<0.00170	<0.00170	0.00180	0.000610 J	<0.00170
	04/28/2022	MW-1902-40		<0.00160	<0.00160	0.00150 J	<0.00160	<0.00160
	07/05/2023	MW-1902-40		<0.00170 N*	<0.00170 N*	0.00160 N*	<0.00170 N*	<0.00170 N*
	07/24/2024	MW-1902-40		<0.00160	<0.00160	0.00160	<0.00160	<0.00160
MW-1902-80	09/12/2019	MW-1902-80		<0.00190	<0.00190	<0.00190 B*	<0.00190	<0.00190
	06/25/2020	MW-1902-80		<0.00180	<0.00180	<0.00180 B*	<0.00180	<0.00180
	12/07/2020	MW-1902-80		<0.00200	<0.00200	0.00110 J*	<0.00200	<0.00200
	02/02/2021	MW-1902-80		<0.00180	<0.00180	0.00120 J	<0.00180	<0.00180
	04/13/2021	MW-1902-80		<0.00180	<0.00180	<0.00180 B*	<0.00180	<0.00180
	10/06/2021	MW-1902-80		<0.00180	<0.00180	0.00100 J	<0.00180	<0.00180
	01/24/2022	MW-1902-80		<0.00170	<0.00170	0.00100 J	<0.00170	<0.00170
	04/28/2022	MW-1902-80		<0.00170	<0.00170	0.00120 J	<0.00170	<0.00170
	07/05/2023	MW-1902-80		<0.00180 N*	<0.00180 N*	0.000850 N*	<0.00180 N*	<0.00180 N*
	07/24/2024	MW-1902-80		<0.00170	<0.00170	0.000850 J	<0.00170	<0.00170
MW-1902-150	09/12/2019	MW-1902-150		<0.00190	<0.00190	<0.00190 B*	<0.00190	<0.00190
	06/25/2020	MW-1902-150		<0.00180	<0.00180	<0.00180 B*	<0.00180	<0.00180
	12/07/2020	MW-1902-150		<0.00200	<0.00200	0.00110 J	<0.00200	<0.00200

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorotetradecanoic acid	Perfluorotridecanoic acid	Perfluoroundecanoic acid	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
				(PFTeA)	(PFTrDA)	(PFUnA)	(9Cl-PF3ONS)	(11Cl-PF3OUdS)
				µg/L	µg/L	µg/L	µg/L	µg/L
MW-1902-15	01/24/2022	MW-1902-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	01/24/2022	MW-2002-15	DUP	<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-1902-15		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	07/05/2023	MW-1902-15		<0.00190 N*	<0.00190 N*	<0.00190 N*	<0.00190 N*	<0.00190 N*
	07/05/2023	MW-2002-15	DUP	<0.00200 N*	<0.00200 N*	<0.00200 N*	<0.00200 N*	<0.00200 N*
	07/24/2024	MW-1902-15		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
MW-1902-40	09/12/2019	MW-1902-40		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	06/25/2020	MW-1902-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	12/07/2020	MW-1902-40		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	02/02/2021	MW-1902-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/13/2021	MW-1902-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-1902-40		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	01/24/2022	MW-1902-40		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-1902-40		<0.00160	<0.00160	<0.00160	<0.00160	<0.00160
	07/05/2023	MW-1902-40		<0.00170 N*	<0.00170 N*	<0.00170 N*	<0.00170 N*	<0.00170 N*
	07/24/2024	MW-1902-40		<0.00160	<0.00160	<0.00160	<0.00160	<0.00160
MW-1902-80	09/12/2019	MW-1902-80		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	06/25/2020	MW-1902-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	12/07/2020	MW-1902-80		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	02/02/2021	MW-1902-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	04/13/2021	MW-1902-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	10/06/2021	MW-1902-80		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	01/24/2022	MW-1902-80		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-1902-80		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	07/05/2023	MW-1902-80		<0.00180 N*	<0.00180 N*	<0.00180 N*	<0.00180 N*	<0.00180 N*
	07/24/2024	MW-1902-80		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
MW-1902-150	09/12/2019	MW-1902-150		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	06/25/2020	MW-1902-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	12/07/2020	MW-1902-150		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	4,8-Dioxa-3H-perfluorononanoic acid	N-Ethyl perfluorooctane sulfonamidoacetic acid	N-Methyl perfluorooctane sulfonamidoacetic acid
				(DONA) µg/L	(N-EtFOSAA) µg/L	(N-MeFOSAA) µg/L
MW-1902-15	01/24/2022	MW-1902-15		<0.00180	<0.00450	<0.00450
	01/24/2022	MW-2002-15	DUP	<0.00170	<0.00430	<0.00430
	04/28/2022	MW-1902-15		<0.00180	<0.00450	<0.00450
	07/05/2023	MW-1902-15		<0.00190 N*	<0.00470 N*	<0.00470 N*
	07/05/2023	MW-2002-15	DUP	<0.00200 N*	<0.00500 N*	<0.00500 N*
	07/24/2024	MW-1902-15		<0.00170	<0.00420	<0.00420
MW-1902-40	09/12/2019	MW-1902-40		<0.00190	<0.0190	<0.0190
	06/25/2020	MW-1902-40		<0.00180	<0.0180	<0.0180
	12/07/2020	MW-1902-40		<0.00190	<0.00480	<0.00480
	02/02/2021	MW-1902-40		<0.00180	<0.00460	<0.00460
	04/13/2021	MW-1902-40		<0.00180	<0.00440	<0.00440
	10/06/2021	MW-1902-40		<0.00180	<0.00460	<0.00460
	01/24/2022	MW-1902-40		<0.00170	<0.00430	<0.00430
	04/28/2022	MW-1902-40		<0.00160	<0.00400	<0.00400
	07/05/2023	MW-1902-40		<0.00170 N*	<0.00430 N*	<0.00430 N*
	07/24/2024	MW-1902-40		<0.00160	<0.00410	<0.00410
MW-1902-80	09/12/2019	MW-1902-80		<0.00190	<0.0190	<0.0190
	06/25/2020	MW-1902-80		<0.00180	<0.0180	<0.0180
	12/07/2020	MW-1902-80		<0.00200	<0.00490	<0.00490
	02/02/2021	MW-1902-80		<0.00180	<0.00460	<0.00460
	04/13/2021	MW-1902-80		<0.00180	<0.00460	<0.00460
	10/06/2021	MW-1902-80		<0.00180	<0.00450	<0.00450
	01/24/2022	MW-1902-80		<0.00170	<0.00430	<0.00430
	04/28/2022	MW-1902-80		<0.00170	<0.00420	<0.00420
	07/05/2023	MW-1902-80		<0.00180 N*	<0.00460 N*	<0.00460 N*
	07/24/2024	MW-1902-80		<0.00170	<0.00420	<0.00420
MW-1902-150	09/12/2019	MW-1902-150		<0.00190	<0.0190	<0.0190
	06/25/2020	MW-1902-150		<0.00180	<0.0180	<0.0180
	12/07/2020	MW-1902-150		<0.00200	<0.00490	<0.00490

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorooctanesulfonic acid	Perfluorooctanoic acid	Hexafluoropropylene oxide dimer acid	Perfluorobutanesulfonic acid	Perfluorodecanoic acid
				(PFOS) µg/L	(PFOA) µg/L	(HFPO-DA) µg/L	(PFBS) µg/L	(PFDA) µg/L
MW-1902-150	02/02/2021	MW-1902-150		0.000680 J	<0.00190	<0.00370	0.000190 J	<0.00190
	04/13/2021	MW-1902-150		<0.00200 B*	<0.00200	<0.00390	<0.00200	<0.00200
	10/06/2021	MW-1902-150		0.000720 J	<0.00180	<0.00370	<0.00180	<0.00180
	01/24/2022	MW-1902-150		<0.00170	<0.00170	<0.00330	<0.00170	<0.00170
	04/28/2022	MW-1902-150		<0.00170	<0.00170	<0.00340	<0.00170	<0.00170
	04/28/2022	MW-2002-150	DUP	<0.00160	<0.00160	<0.00320	<0.00160	<0.00160
	07/05/2023	MW-1902-150		0.000690 N*	<0.00170 N*	<0.00350 N*	<0.00170 N*	<0.00170 N*
	07/24/2024	MW-1902-150		0.000530 J	<0.00160	<0.00330	<0.00160	<0.00160

- Notes:
- Duplicate information included in the historical summary table. Highest detected duplicate result used for statistical analysis.
- µg/L
- micrograms per liter
- DUP
- field duplicate
- <
- Analyte not detected; listed as less than the reporting limit (RL) unless otherwise flagged due to quality-control failures.
- J
- Estimated concentration, detected greater than the detection limit (DL) and less than the RL. Flag applied by the laboratory.
- B*
- Result is included in the same preparatory batch as a blank detection for the associated analyte. Flag applied by Shannon & Wilson, Inc. (*)
- J*
- Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH*
- Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- N*
- Result is tentatively identified due to hold time or temperature exceeadances. Flag applied by Shannon & Wilson, Inc. (*)

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorododecanoic acid	Perfluoroheptanoic acid	Perfluorohexanesulfonic acid	Perfluorohexanoic acid	Perfluorononanoic acid
				(PFDoA) µg/L	(PFHpA) µg/L	(PFHxS) µg/L	(PFHxA) µg/L	(PFNA) µg/L
MW-1902-150	02/02/2021	MW-1902-150		<0.00190	<0.00190	0.00110 J	<0.00190	<0.00190
	04/13/2021	MW-1902-150		<0.00200	<0.00200	<0.00200 B*	<0.00200	<0.00200
	10/06/2021	MW-1902-150		<0.00180	<0.00180	0.000690 J	<0.00180	<0.00180
	01/24/2022	MW-1902-150		<0.00170	<0.00170	0.000730 J	<0.00170	<0.00170
	04/28/2022	MW-1902-150		<0.00170	<0.00170	0.000900 J	<0.00170	<0.00170
	04/28/2022	MW-2002-150	DUP	<0.00160	<0.00160	0.000980 J	<0.00160	<0.00160
	07/05/2023	MW-1902-150		<0.00170 N*	<0.00170 N*	0.000920 N*	<0.00170 N*	<0.00170 N*
	07/24/2024	MW-1902-150		<0.00160	<0.00160	0.000900 J	<0.00160	<0.00160

- Notes:
- Duplicate information included in the historical summary table. Highest detected duplicate result used for statistical analysis.
- µg/L
- micrograms per liter
- DUP
- field duplicate
- <
- Analyte not detected; listed as less than the reporting limit (RL) unless otherwise flagged due to quality-control failures.
- J
- Estimated concentration, detected greater than the detection limit (DL) and less than the RL. Flag applied by the laboratory.
- B*
- Result is included in the same preparatory batch as a blank detection for the associated analyte. Flag applied by Shannon & Wilson, Inc. (*)
- J*
- Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH*
- Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- N*
- Result is tentatively identified due to hold time or temperature exceeadances. Flag applied by Shannon & Wilson, Inc. (*)

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	Perfluorotetradecanoic acid	Perfluorotridecanoic acid	Perfluoroundecanoic acid	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
				(PFTeA) µg/L	(PFTrDA) µg/L	(PFUnA) µg/L	(9CI-PF3ONS) µg/L	(11CI-PF3OUdS) µg/L
MW-1902-150	02/02/2021	MW-1902-150		<0.00190	<0.00190	<0.00190	<0.00190	<0.00190
	04/13/2021	MW-1902-150		<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
	10/06/2021	MW-1902-150		<0.00180	<0.00180	<0.00180	<0.00180	<0.00180
	01/24/2022	MW-1902-150		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-1902-150		<0.00170	<0.00170	<0.00170	<0.00170	<0.00170
	04/28/2022	MW-2002-150	DUP	<0.00160	<0.00160	<0.00160	<0.00160	<0.00160
	07/05/2023	MW-1902-150		<0.00170 N*	<0.00170 N*	<0.00170 N*	<0.00170 N*	<0.00170 N*
	07/24/2024	MW-1902-150		<0.00160	<0.00160	<0.00160	<0.00160	<0.00160

- Notes: Duplicate information included in the historical summary table. Highest detected duplicate result used for statistical analysis.
- µg/L micrograms per liter
- DUP field duplicate
- < Analyte not detected; listed as less than the reporting limit (RL) unless otherwise flagged due to quality-control failures.
- J Estimated concentration, detected greater than the detection limit (DL) and less than the RL. Flag applied by the laboratory.
- B* Result is included in the same preparatory batch as a blank detection for the associated analyte. Flag applied by Shannon & Wilson, Inc. (*)
- J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- N* Result is tentatively identified due to hold time or temperature exceeadances. Flag applied by Shannon & Wilson, Inc. (*)

Table 1 — Historical PFAS Monitoring Well Summary

Event Name	Event Date	Sample Name	Sample Type	4,8-Dioxa-3H-perfluorononanoic acid	N-Ethyl perfluorooctane sulfonamidoacetic acid	N-Methyl perfluorooctane sulfonamidoacetic acid
				(DONA) µg/L	(N-EtFOSAA) µg/L	(N-MeFOSAA) µg/L
MW-1902-150	02/02/2021	MW-1902-150		<0.00190	<0.00470	<0.00470
	04/13/2021	MW-1902-150		<0.00200	<0.00490	<0.00490
	10/06/2021	MW-1902-150		<0.00180	<0.00460	<0.00460
	01/24/2022	MW-1902-150		<0.00170	<0.00410	<0.00410
	04/28/2022	MW-1902-150		<0.00170	<0.00420	<0.00420
	04/28/2022	MW-2002-150	DUP	<0.00160	<0.00400	<0.00400
	07/05/2023	MW-1902-150		<0.00170 N*	<0.00430 N*	<0.00430 N*
	07/24/2024	MW-1902-150		<0.00160	<0.00410	<0.00410

- Notes: Duplicate information included in the historical summary table. Highest detected duplicate result used for statistical analysis.
- µg/L micrograms per liter
- DUP field duplicate
- < Analyte not detected; listed as less than the reporting limit (RL) unless otherwise flagged due to quality-control failures.
- J Estimated concentration, detected greater than the detection limit (DL) and less than the RL. Flag applied by the laboratory.
- B* Result is included in the same preparatory batch as a blank detection for the associated analyte. Flag applied by Shannon & Wilson, Inc. (*)
- J* Estimated concentration due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- JH* Estimated concentration, biased high due to quality control failures. Flag applied by Shannon & Wilson, Inc. (*)
- N* Result is tentatively identified due to hold time or temperature exceeadances. Flag applied by Shannon & Wilson, Inc. (*)

TALBE 2

PROUCL INPUT TABLE

Table 2 — ProUCL Input Table

Location	EventDate	PFOS	D_PFOS	PFOA	D_PFOA	PFBS	D_PFBS	PFHpA	D_PFHpA	PFHxS	D_PFHxS	PFHxA	D_PFHxA	PFNA	D_PFNA
MW-1901-15	09/12/2019	95	1	120	1	410	1	86	1	1700	1	750	1	12	1
MW-1901-15	06/25/2020	64	1	150	1	520	1	89	1	3400	1	1000	1	170	0
MW-1901-15	12/07/2020	76	1	76	1	340	1	43	1	1500	1	630	1	1.9	0
MW-1901-15	02/02/2021	50	1	80	1	380	1	64	1	2100	1	770	1	1.8	0
MW-1901-15	04/13/2021	47	1	91	1	460	1	65	1	1900	1	750	1	1.8	0
MW-1901-15	10/06/2021	20	1	51	1	270	1	31	1	980	1	410	1	1.8	0
MW-1901-15	01/24/2022	42	1	59	1	290	1	66	1	1100	1	630	1	1.9	0
MW-1901-15	04/28/2022	30	1	41	1	250	1	26	1	740	1	520	1	1.9	0
MW-1901-15	07/05/2023	24	1	60	1	340	1	50	1	1300	1	660	1	1.8	0
MW-1901-40	09/12/2019	180	1	72	1	340	1	59	1	1000	1	570	1	2	0
MW-1901-40	06/25/2020	170	1	180	0	470	1	57	1	1000	1	760	1	180	0
MW-1901-40	12/07/2020	280	1	150	1	890	1	120	1	2600	1	1500	1	0.35	1
MW-1901-40	02/02/2021	300	1	140	1	880	1	140	1	2700	1	1300	1	0.25	1
MW-1901-40	04/13/2021	450	1	170	1	940	1	150	1	2600	1	1200	1	1.8	0
MW-1901-40	10/06/2021	290	1	140	1	830	1	120	1	2600	1	1400	1	1.9	0
MW-1901-40	01/24/2022	290	1	150	1	930	1	140	1	3400	1	1500	1	1.7	0
MW-1901-40	04/28/2022	350	1	150	1	880	1	140	1	2600	1	1400	1	0.31	1
MW-1901-40	07/05/2023	240	1	76	1	570	1	84	1	1600	1	1100	1	0.24	1
MW-1901-80	09/12/2019	1.6	1	1.8	0	0.55	1	1.8	0	2.7	1	1.2	1	1.8	0
MW-1901-80	06/25/2020	0.98	1	1.8	0	0.28	1	1.8	0	1.8	0	1.8	0	1.8	0
MW-1901-80	12/07/2020	1.2	1	1.9	0	0.6	1	1.9	0	3.4	1	1.2	1	1.9	0
MW-1901-80	02/02/2021	0.9	1	1.9	0	0.36	1	1.9	0	1.4	1	1.9	0	1.9	0
MW-1901-80	04/13/2021	1.8	0	1.8	0	1.8	0	1.8	0	2.6	0	1.8	0	1.8	0
MW-1901-80	10/06/2021	1.1	1	1.9	0	1	1	1.9	0	3.6	1	1.7	1	1.9	0
MW-1901-80	01/24/2022	0.82	1	1.7	0	0.26	1	1.7	0	1.4	1	1.7	0	1.7	0
MW-1901-80	04/28/2022	0.93	1	1.8	0	0.28	1	1.8	0	1.4	1	1.8	0	1.8	0
MW-1901-80	07/05/2023	0.79	1	2.1	0	2.1	0	2.1	0	1.2	1	2.1	0	2.1	0
MW-1901-150	09/12/2019	1.7	0	1.7	0	1.7	0	0.27	1	1.7	0	1.7	0	1.7	0
MW-1901-150	06/25/2020	0.58	1	1.9	0	1.9	0	1.9	0	1.9	0	1.9	0	1.9	0
MW-1901-150	12/07/2020	1.9	0	1.9	0	1.9	0	1.9	0	0.99	1	1.9	0	1.9	0

Table 2 — ProUCL Input Table

Location	EventDate	PFOS	D_PFOS	PFOA	D_PFOA	PFBS	D_PFBS	PFHpA	D_PFHpA	PFHxS	D_PFHxS	PFHxA	D_PFHxA	PFNA	D_PFNA
MW-1901-150	02/02/2021	1.8	0	1.8	0	0.18	1	1.8	0	1	1	1.8	0	1.8	0
MW-1901-150	04/13/2021	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0
MW-1901-150	10/06/2021	1.8	0	1.8	0	1.8	0	1.8	0	1.1	1	1.8	0	1.8	0
MW-1901-150	01/24/2022	1.8	0	1.8	0	1.8	0	1.8	0	0.85	1	1.8	0	1.8	0
MW-1901-150	04/28/2022	0.53	1	1.8	0	1.8	0	1.8	0	0.87	1	1.8	0	1.8	0
MW-1901-150	07/05/2023	0.62	1	1.9	0	1.9	0	1.9	0	1.1	1	1.9	0	1.9	0
MW-1902-15	09/12/2019	25	1	14	1	22	1	8	1	110	1	60	1	1.8	0
MW-1902-15	06/25/2020	12	1	2.7	1	3.6	1	1.5	1	22	1	8.4	1	1.9	0
MW-1902-15	12/07/2020	18	1	9.1	1	13	1	4.7	1	100	1	32	1	2	0
MW-1902-15	02/02/2021	13	1	5	1	6	1	2.5	1	47	1	14	1	1.9	0
MW-1902-15	04/13/2021	13	1	4.6	1	5.1	0	2.2	1	45	1	11	1	1.9	0
MW-1902-15	10/06/2021	15	1	9.2	1	11	1	4.4	1	92	1	29	1	1.9	0
MW-1902-15	01/24/2022	11	1	6.5	1	8.3	1	3.1	1	78	1	22	1	1.8	0
MW-1902-15	04/28/2022	14	1	6.1	1	6.5	1	2	1	56	1	14	1	1.8	0
MW-1902-15	07/05/2023	11	1	4.3	1	5	1	1.9	1	50	1	14	1	2	0
MW-1902-40	09/12/2019	3.2	1	0.91	1	0.65	1	0.5	1	2.3	1	1.4	1	1.9	0
MW-1902-40	06/25/2020	1.8	1	1.8	0	0.38	1	0.26	1	1.8	0	0.71	1	1.8	0
MW-1902-40	12/07/2020	3.3	1	1.9	0	0.62	1	0.26	1	2	1	0.88	1	1.9	0
MW-1902-40	02/02/2021	1.6	1	1.8	0	0.3	1	1.8	0	1.5	1	1.8	0	1.8	0
MW-1902-40	04/13/2021	2.1	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0
MW-1902-40	10/06/2021	2.5	1	1.8	0	0.51	1	1.8	0	2	1	0.66	1	1.8	0
MW-1902-40	01/24/2022	1.7	1	1.7	0	0.48	1	1.7	0	1.8	1	0.61	1	1.7	0
MW-1902-40	04/28/2022	1.9	1	1.6	0	0.33	1	1.6	0	1.5	1	1.6	0	1.6	0
MW-1902-40	07/05/2023	1.6	1	1.7	0	0.33	1	1.7	0	1.6	1	1.7	0	1.7	0
MW-1902-80	09/12/2019	2.2	1	1.9	0	1.9	0	1.9	0	1.9	0	1.9	0	1.9	0
MW-1902-80	06/25/2020	0.73	1	1.8	0	0.23	1	1.8	0	1.8	0	1.8	0	1.8	0
MW-1902-80	12/07/2020	0.89	1	2	0	0.24	1	2	0	1.1	1	2	0	2	0
MW-1902-80	02/02/2021	0.67	1	1.8	0	0.21	1	1.8	0	1.2	1	1.8	0	1.8	0
MW-1902-80	04/13/2021	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0	1.8	0
MW-1902-80	10/06/2021	0.69	1	1.8	0	0.27	1	1.8	0	1	1	1.8	0	1.8	0

Table 2 — ProUCL Input Table

Location	EventDate	PFOS	D_PFOS	PFOA	D_PFOA	PFBS	D_PFBS	PFHpA	D_PFHpA	PFHxS	D_PFHxS	PFHxA	D_PFHxA	PFNA	D_PFNA
MW-1902-80	01/24/2022	1.7	0	1.7	0	0.18	1	1.7	0	1	1	1.7	0	1.7	0
MW-1902-80	04/28/2022	1.7	0	1.7	0	1.7	0	1.7	0	1.2	1	1.7	0	1.7	0
MW-1902-80	07/05/2023	0.66	1	1.8	0	1.8	0	1.8	0	0.85	1	1.8	0	1.8	0
MW-1902-150	09/12/2019	0.57	1	1.9	0	1.9	0	1.9	0	1.9	0	1.9	0	1.9	0
MW-1902-150	06/25/2020	0.49	1	1.8	0	0.2	1	1.8	0	1.8	0	1.8	0	1.8	0
MW-1902-150	12/07/2020	0.56	1	2	0	2	0	2	0	1.1	1	2	0	2	0
MW-1902-150	02/02/2021	0.68	1	1.9	0	0.19	1	1.9	0	1.1	1	1.9	0	1.9	0
MW-1902-150	04/13/2021	2	0	2	0	2	0	2	0	2	0	2	0	2	0
MW-1902-150	10/06/2021	0.72	1	1.8	0	1.8	0	1.8	0	0.69	1	1.8	0	1.8	0
MW-1902-150	01/24/2022	1.7	0	1.7	0	1.7	0	1.7	0	0.73	1	1.7	0	1.7	0
MW-1902-150	04/28/2022	1.7	0	1.7	0	1.7	0	1.7	0	0.98	1	1.7	0	1.7	0
MW-1902-150	07/05/2023	0.69	1	1.7	0	1.7	0	1.7	0	0.92	1	1.7	0	1.7	0

Notes: The column "D_analyte" identifies a detection from a non-detect result.

0 Analyte not detected

1 Analyte detected

 Elevated reporting limit. Remove from trend assessment

TABLE 3

SUMMARY OF MANN-KENDALL TREND ASSESSMENT

Table 3 - Summary of Mann-Kendall Trend Assessment

Location	Analyte	%ND	N	Detections	S	p-value	Confidence	COV	Trend?
MW-1901-15	PFBS	0.0%	9	9	-16	0.06	94.0%	0.248	Probably decreasing
	PFHpA	0.0%	9	9	-14	0.09	91.0%	0.384	Probably decreasing
	PFHxA	0.0%	9	9	-14	0.09	91.0%	0.246	Probably decreasing
	PFHxS	0.0%	9	9	-18	0.038	96.2%	0.486	Decreasing
	PFNA	88.9%	9	1	--	--	--	--	Insufficient data
	PFOA	0.0%	9	9	-20	0.022	97.8%	0.433	Decreasing
	PFOS	0.0%	9	9	-28	0.001	99.9%	0.499	Decreasing
MW-1901-40	PFBS	0.0%	9	9	7	0.306	69.4%	0.302	No trend
	PFHpA	0.0%	9	9	10	0.179	82.1%	0.323	No trend
	PFHxA	0.0%	9	9	10	0.179	82.1%	0.277	No trend
	PFHxS	0.0%	9	9	9	0.238	76.2%	0.373	No trend
	PFNA	55.6%	8	4	-12	0.089	91.1%	0.786	Probably Decreasing
	PFOA	11.1%	9	8	-4	0.381	61.9%	0.277	Stable
	PFOS	0.0%	9	9	11	0.179	82.1%	0.301	No trend
MW-1901-80	PFBS	22.2%	9	7	5	0.381	61.9%	0.864	No trend
	PFHpA	100.0%	9	0	--	--	--	--	Insufficient data
	PFHxA	66.7%	9	3	13	0.13	87.0%	0.179	No trend
	PFHxS	22.2%	9	7	-15	0.09	91.0%	0.428	Probably decreasing
	PFNA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOS	11.1%	9	8	-18	0.038	96.2%	0.315	Decreasing
MW-1901-150	PFBS	88.9%	9	1	--	--	--	--	Insufficient data
	PFHpA	88.9%	9	1	--	--	--	--	Insufficient data
	PFHxA	100.0%	9	0	--	--	--	--	Insufficient data
	PFHxS	33.3%	9	6	-11	0.179	82.1%	0.334	Stable
	PFNA	100.0%	9	0	--	--	--	--	Insufficient data

Table 3 - Summary of Mann-Kendall Trend Assessment

Location	Analyte	%ND	N	Detections	S	p-value	Confidence	COV	Trend?
MW-1901-150 continued	PFOA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOS	66.7%	9	3	-6	0.306	69.4%	0.441	Stable
MW-1902-15	PFBS	11.1%	9	8	-10	0.179	82.1%	0.644	Stable
	PFHpA	0.0%	9	9	-14	0.09	91.0%	0.612	Probably decreasing
	PFHxA	0.0%	9	9	-7	0.306	69.4%	0.711	Stable
	PFHxS	0.0%	9	9	-6	0.306	69.4%	0.444	Stable
	PFNA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOA	0.0%	9	9	-8	0.238	76.2%	0.503	Stable
	PFOS	0.0%	9	9	-14	0.09	91.0%	0.303	Probably decreasing
MW-1902-40	PFBS	11.1%	9	8	-13	0.13	87.0%	0.779	Stable
	PFHpA	66.7%	9	3	8	0.238	76.2%	0.554	No trend
	PFHxA	44.4%	9	5	1	0.54	46.0%	0.417	No trend
	PFHxS	22.2%	9	7	-15	0.09	91.0%	0.145	Probably decreasing
	PFNA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOA	88.9%	9	1	--	--	--	--	Insufficient data
	PFOS	11.1%	9	8	-13	0.13	87.0%	0.303	Stable
MW-1902-80	PFBS	44.4%	9	5	1	0.54	46.0%	0.898	No trend
	PFHpA	100.0%	9	0	--	--	--	--	Insufficient data
	PFHxA	100.0%	9	0	--	--	--	--	Insufficient data
	PFHxS	33.3%	9	6	-21	0.022	97.8%	0.306	Decreasing
	PFNA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOS	33.3%	9	6	-9	0.238	76.2%	0.499	Stable
MW-1902-150	PFBS	77.8%	9	2	--	--	--	--	Insufficient data
	PFHpA	100.0%	9	0	--	--	--	--	Insufficient data
	PFHxA	100.0%	9	0	--	--	--	--	Insufficient data

Table 3 - Summary of Mann-Kendall Trend Assessment

Location	Analyte	%ND	N	Detections	S	p-value	Confidence	COV	Trend?
MW-1902-150 continued	PFHxS	33.3%	9	6	-17	0.06	94.0%	0.411	Probably decreasing
	PFNA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOA	100.0%	9	0	--	--	--	--	Insufficient data
	PFOS	33.3%	9	6	17	0.06	94.0%	0.594	Probably increasing

COV = coefficient of variation; N = number of observations; %ND = percent non-detect; PFOA = perfluorooctanoic acid; PFOS = perfluorooctanesulfonic acid; S = Mann-Kendall Statistic