



Geosyntec Consultants of NC, P.C.
NC License No.: C-3500 and C-295

GROUNDWATER AND SEEPS REMEDIATION REPORT #1

JANUARY – MARCH 2023

Chemours Fayetteville Works

Prepared for

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June 29, 2023



EXECUTIVE SUMMARY

This Groundwater and Seeps Remediation Report #1 (“Report”) has been prepared to document the commissioning and startup activities of the groundwater extraction and conveyance system (GWEC) and the groundwater treatment plant (GWTP) from the period of January 1 through March 31, 2023. These remedy components began commissioning in February and were operational by March 14, 2023. Baseline sampling and monitoring activities, which include water level gauging, sampling of extraction wells and select observation wells, deployment of Passive Flux Meters (PFMs), and sampling of Willis Creek surface water, are also documented in this Report. The GWEC and GWTP systems collectively extracted, treated, and discharged approximately 25,900,000 gallons of groundwater and removed greater than 99% of PFAS indicator compounds in this reporting period. Approximately 45.9 pounds (lbs) of Table 3+ PFAS (20 compounds) was removed. The average total extraction rate during operation, after commissioning was complete, was approximately 534 gallons per minute (gpm).

The next report will cover the period of April 1 through June 30, 2023 (Report #2), which will include the completion of the construction of the barrier wall and the commissioning and startup of the ex-situ capture ponds. In addition, the interim seep Flow-Through Cells, which have been documented in 14 bimonthly reports thus far, including through the reporting period of this Report, will be incorporated in Report #2.

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LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
COA	Addendum to Consent Order Paragraph 12
eDMR	electronic Discharge Monitoring Reports
EPA	Environmental Protection Agency
EW	extraction well
gpm	gallons per minute
GWEC	groundwater extraction and conveyance
GWTP	groundwater treatment plant
HFPO-DA	hexafluoropropylene oxide dimer
lbs	pounds
µg/L	micrograms per liter
NCDEQ	North Carolina Department of Environmental Quality
NAVD88	North American Vertical Datum of 1988
NPDES	National Pollutant Discharge Elimination System
NTU	nephelometric turbidity units
OM&M	Operations, Maintenance, and Monitoring
OW	observation well
PFAS	per- and polyfluoroalkyl substances
PFM	Passive Flux Meter
PFMOAA	perfluoro-2-methoxyacetic acid
PMP	Performance Monitoring Plan
PMPA	perfluoromethoxypropyl carboxylic acid
QA/QC	quality assurance/quality control
USGS	United States Geological Survey
WC	Willis Creek

1. INTRODUCTION

Geosyntec Consultants of NC, P.C. (Geosyntec) has prepared this Groundwater and Seeps Remediation Report #1 (“Report”) on behalf of The Chemours Company FC, LLC (Chemours) to provide a summary report of Operations, Maintenance, and Monitoring (OM&M) for the groundwater and seep remedies installed at the Chemours Fayetteville Works Site (the Site) pursuant to the Addendum to the Consent Order Paragraph 12 [COA] Paragraph 2.c.v.

This Report #1 has been prepared for the period of January 1 through March 31, 2023 which included the commissioning of two remedy components that were installed pursuant to COA Paragraph 3.b: the groundwater extraction and conveyance (GWEC) system, and the groundwater treatment plant (GWTP). Commissioning activities were conducted primarily from February through mid-March, at which point the GWEC and GWTP components were operational.

The ex-situ seeps capture systems (COA Paragraph 2.c.i) and the barrier wall (COA Paragraph 3.b.) were under construction in this reporting period. As such, this Report #1 is focused on the GWEC and GWTP elements, as well as the baseline sampling and monitoring activities that were conducted prior to startup, which will be used in future evaluations of the performance of the remedy. The subsequent Report #2 will cover the quarterly period of April 1 through June 30, 2023 and will include operational information for the ex-situ seep capture ponds and barrier wall.

The interim in-situ flow-through cells have been documented in 14 bimonthly reports thus far. The periods of January–February and March–April 2023 have been previously documented in the Interim Seep Remediation Operation and Maintenance Reports #13 and #14, respectively. Beginning with Report #2, the results from the flow-through cells will be incorporated into the quarterly reports.

1.1 Background

The design of the groundwater and seep remedies discussed in this Report were provided as 60% Design and 90% Design Submittals in August 2021 and March 2022, respectively. The components of the remedies are shown in an overview layout in Figure 1-1. In parallel to the design, a Performance Monitoring Plan (PMP) was prepared to address long-term groundwater remedial action effectiveness and was included as Appendix G of the 90% Design Report. The PMP proposed to demonstrate the effectiveness of the remedy with multiple lines of evidence, which are discussed in more detail in Section 6 of this Report:

- Hydraulic head both along the barrier wall alignment and downgradient of the barrier wall between the wall and the Cape Fear River, to assess groundwater capture and the reduction in hydraulic gradient downgradient of the remedy alignment;
- Passive flux meters (PFMs), to evaluate downgradient groundwater Darcy flux;

- Surface water samples at Willis Creek, to evaluate reduction in PFAS loading to Willis Creek;
- Surface water samples at Tar Heel Ferry Road, to evaluate PFAS concentrations and mass loads in the well-mixed Cape Fear River downstream of the facility; and
- Groundwater sampling at extraction and monitoring wells between the groundwater remedy alignment and the Cape Fear River or Willis Creek.

On October 25, 2022, North Carolina Department of Environmental Quality (NCDEQ) approved the 90% Design Report as supplemented in the October 25, 2022 response by Chemours to NCDEQ comments.

1.1.1 Permitting

This section discusses the two major permits required to construct the remedy: the NPDES permit for GWTP discharge, and the 401/404 permit for potential impacts to streams and wetlands. The other permits required to construct the remedy included land disturbance permits, erosion and sediment control (E&SC) plans, electrical permits, well permits, extraction permits, and building permits for permanent structures.

NPDES Permit

Chemours submitted a NPDES permit application on June 14, 2021 for discharges from the GWTP. A Draft Permit and Draft Fact Sheet was issued to Chemours on November 3, 2021, with designation of the GWTP discharge as Outfall 004. After a public comment period and resolution of comments, a settlement agreement between NCDEQ and Chemours was reached in November 2022 and the final permit became effective.

401/404 Permit

The long-term groundwater remediation project was permitted as a modification to the existing 401/404 permit (SAW-2019-00206) that was originally developed for the interim seep remediation project. Chemours submitted a permit modification application on August 13, 2021. As design progressed and the ex-situ design changed based on the inclusion of the Willis Creek tributary and revised drawdown maps, a revised permit modification application was submitted on February 9, 2022. Comments were received from NCDEQ on the 401 permit modification on August 25, 2022 and final approval of the 401 and 404 permit modifications was received on October 4, 2022 and October 14, 2022, respectively.

1.1.2 Overview of GWEC Construction

Access clearing and road grading was performed to provide access for drill rigs to install the Extraction Wells (EWs). The drilling team mobilized with two sonic drill rigs in February 2022;

the installation, airlifting, and development of 68 EWs¹ was completed in July 2022. Well construction details for the EWs are provided in Table 1-1. Construction of the infrastructure components to support the EWs (i.e., pads, conduit runs, disconnects, control panels, wellheads, enclosures) also began in February 2022 and continued through November 2022.

Drilling and installation of Observation Wells (OWs) was performed periodically throughout 2022 and 2023 as access became available. As of March 31, 2023, 51 OWs have been installed, with six OWs still remaining to be installed once the construction of the barrier wall is complete. Well construction details for the OWs are also provided in Table 1-1.

Subsurface construction of the GWEC system conveyance forcemain and laterals began in March 2022 and was completed in September 2022. Incremental hydrotesting was conducted on sections of the forcemain as they were constructed. A final full system hydrotest was completed on the full length of forcemain in late 2022. Construction efforts of the GWEC system were largely completed with the connection of the system influent manifold to the break tank in January 2023. Refer to section 4.1.1 for the timeline associated with commissioning, startup and operations, post construction.

1.1.3 Overview of GWTP Construction

Preliminary clearing and grading of the GWTP area occurred in December 2021. The foundation and pad for the GWTP was completed in May 2022 and placement of treatment plant equipment from Veolia began in June 2022. The interconnecting piping, pipe racks, and power and instrumentation terminations were completed in February 2023.

The system break tank went into fabrication in July 2022 and onsite work to prepare the foundations for the tank was completed and the tank assembly was completed in December 2022. Hydrotesting of the tank was completed in January 2023.

Power to the remedy systems was brought on incrementally as the transformer locations received inspections and approval to energize. The GWTP and the full GWEC system were energized in January 2023.

1.2 Overview of Reporting Period

Precipitation during the reporting period is provided in Table 1-2 and compared to the available historical record (2004-2020). These data were obtained from the United States Geological Survey

¹ At one drilling location, EW-59, Black Creek aquifer material was not encountered, therefore there was not a suitable interval to install the well screen. This borehole was abandoned prior to well installation. In total, 68 out of 69 design locations were completed as extraction wells. The well identification (ID) nomenclature was not changed overall to maintain consistency with ongoing construction (i.e., changing the well ID at one location would cascade changes through the alignment). Therefore, the last EW at the southern end of the alignment was still designated EW-69.

(USGS) weather monitoring station at the W.O. Huske Dam (gauge 02105500), which is just downstream of the Site.

The GWEC and GWTP components were operational beginning March 14, 2023. These groundwater components extracted, treated, and discharged approximately 25,900,000 gallons during the reporting period.

Various monitoring and sampling activities were conducted prior to (for baseline purposes) and during the reporting period, as summarized in Table 1-3. Results from the activities are discussed in the pertinent sections below.

The barrier wall construction was initiated in the vicinity of Seep B (near EW-40) and proceeded in a northerly direction. By the end of this reporting period (March 31), it had advanced to the utility corridor (i.e., in the vicinity of Seep A Tributary, near EW-16). In the next reporting period, the barrier wall trencher will reposition at the Seep B starting location, proceed southward, and complete the southern section of the wall.

2. IN-SITU SEEP FLOW-THROUGH CELLS (RESERVED)

Section 2 is reserved for the in-situ Flow-Through Cell remedies that have been in operation beginning with Seep C since December 2020. Reporting of Flow-Through Cell performance has been on a bimonthly period to date, with the most recent Report #13 and Report #14 covering the January-February and March-April periods, respectively. Since this Quarterly Report #1 of January-March has already been covered by Reports #13 and #14, reproduction is not necessary herein.

Report #14 will be the last bimonthly report for the flow-through cells. Beginning with Quarterly Report #2 for the period April-June, flow-through cell operations will be documented in this Section.

3. EX-SITU SEEPS AND WEEPS CAPTURE (RESERVED)

Section 3 is reserved for the ex-situ Seeps and Weeps Capture remedies that began operating in late April 2023 (i.e., outside of this January-March reporting period). Commissioning and startup of this remedy component will therefore be discussed in the next Groundwater and Seeps Remediation Report #2. This section is anticipated to include operational and maintenance activities, provide flow data that were collected, and discuss the performance of the ex-situ remedies relative to the design objectives.

4. GROUNDWATER EXTRACTION AND CONVEYANCE

Section 4 describes the GWEC operation, maintenance, and monitoring activities that were conducted, provides a summary of the critical operational data that were collected, and discusses the monitoring results from extraction well sampling activities during the reporting period.

4.1 Operation and Maintenance

4.1.1 Work Performed

Preliminary stages of commissioning for the GWEC system began in September 2022 when the first control panels could be functionally tested. The functional testing of panels continued through January 2023. More comprehensive commissioning efforts on a well-by-well basis began in February 2023, when the GWTP was ready to receive and treat system groundwater. The well-by-well commissioning process continued through March 7, 2023. A subset of the GWEC system was tested in 24/7 operation mode in February 2023 and the full system began operating 24 hours 7 days a week on March 14, 2023.

4.2 Data Collected

4.2.1 Extraction Well Operational Data

Table 4-1 provides a summary of flow rate data (average daily flow and total daily volumes) for the GWEC system. Additional EW data collected for system OM&M that is not presented in this Report for brevity includes pressure, motor speed, EW water levels, and various alarm and interlock notifications. These measurements, including flow rates, are collected at a 15-minute frequency.

4.2.2 PFAS Data

Prior to startup, between January 24, 2023, and March 14, 2023, 66 out of the 68 extraction wells were sampled for laboratory analysis of PFAS with Table 3+ and EPA Method 537 MOD. EW-44 and EW-46 could not be sampled because these wells were consistently dry. To sample the EWs, the pumps were turned on and groundwater was collected for measurement of turbidity. If turbidity was measured less than 50 Nephelometric Turbidity Units (NTU), PFAS samples were collected. If turbidity was measured greater than 50 NTU, both unfiltered and field-filtered samples were collected at that location to evaluate potential effects of dissolved/suspended solids on PFAS concentration. For quality assurance/quality control purposes (QA/QC), three duplicate EW samples (two unfiltered and one filtered), nine equipment blanks, and seven field blanks were collected.

Post-startup samples will be collected in April 2023 (approximately one month after startup) and will be provided in Report #2.

4.3 Results

4.3.1 Groundwater Extraction

The GWEC system extracted approximately 25,700,000 gallons during the reporting period, with 1,400,000 gallons from surficial aquifer wells and 24,300,000 gallons from Black Creek aquifer wells. The average total extraction rate during the last half of March 2023, after commissioning was complete and the components were operational, was approximately 534 gallons per minute (gpm).

4.3.2 Analytical Results

The PFAS analytical results for the baseline Extraction Well sampling program are provided in Table 4-2 and shown on Figure 4-1. The Total Table 3+ (20 Compounds) concentration of the unfiltered dataset ranged from being below laboratory detection up to 510 µg/L, with an approximate median value of 81 µg/L (note that this is not weighted by flow rate, and thus not representative of the combined influent received by the GWTP). The highest EW PFAS concentrations are generally in the mid-section of the alignment, in the vicinity of Seeps A and B, which is consistent with previous assessment activities at the Site.

The field-filtered dataset is similar to the unfiltered data set, with a median value of 86.5 µg/L. For future EW sampling activities, field-filtering of the actively pumping wells is not necessary.

The QA/QC sampling results show that the difference in concentration of the three PFAS indicator compounds (HFPO-DA, PMPA, and PFMOAA) between the duplicate sample pairs is less than 10%. In the equipment blanks and field blanks, HFPO-DA and PMPA were not detected, while PFMOAA was detected in only two equipment blanks at concentrations lower than 0.5% of the median HFPO-DA concentration in the EW samples. Laboratory analytical results for EW PFAS samples are compiled in Appendix A.

5. 004 TREATMENT PLANT

Section 5 provides GWTP operational data, collected by Veolia, and discusses the performance of the treatment relative to the design objectives and the COA, which requires that extracted groundwater is treated to remove PFAS compounds² by at least 99%.

Chemours reports various GWTP performance data in electronic Discharge Monitoring Reports (eDMRs) per the NPDES permit NC0090042, and additionally provides laboratory reports and an analysis of the treatment efficiency (in percent removal of the indicator compounds HFPO-DA, PMPA, and PFMOAA) in a data transmittal process to NCDEQ. This Report does not reproduce that effort, and only reports on the flow and treatment aspects to comply with COA Paragraph 2.c.v. The following data are consistent with the eDMRs and data transmittals.

5.1 Data Collected

5.1.1 Flow Rates

Veolia measures flow at the combined influent and effluent monitoring locations as required by the NPDES permit. Flow measurements are obtained by the meters at a 15-minute frequency.

5.1.2 PFAS Influent and Effluent

Veolia collects weekly (at a minimum) samples of the total influent and effluent per NPDES reporting requirements. Once per month, the samples are analyzed for Table 3+ PFAS, and once per quarter, the samples are analyzed for Table 3+ and EPA Method 537 MOD. The remaining weekly samples are analyzed for indicator compounds HFPO-DA, PFMOAA, and PMPA. All samples are analyzed by Eurofins TestAmerica Laboratories.

5.2 Results

5.2.1 Flow Rates

The daily total volume treated and discharged, and the average daily discharge flow rate, are provided in Table 5-1. As shown, the GWTP treated and discharged a total volume of 25,900,000 gallons over the reporting period (beginning with the first batch of commissioning water discharged on February 11). The average daily flow rate in the latter period (March 14 through March 31) when the GWEC system had completed commissioning and was operational was 534 gpm.

² As measured by indicator parameters hexafluoropropylene oxide dimer (HFPO-DA, i.e. GenX), perfluoromethoxypropyl carboxylic acid (PMPA), and perfluoro-2-methoxyaceticacid (PFMOAA)

5.2.2 Analytical Results

The laboratory analytical results for the influent and effluent samples are provided in Table 5-2. Laboratory analytical results for 004 samples are compiled in Appendix A. As shown, the Total Table 3+ (20 Compounds) PFAS concentration in the influent ranged from 140 to 270 µg/L (this excludes the first sample on February 7, which was a clean water sampling for commissioning purposes). PFAS constituents were not detected in any effluent sample, indicating at least 99% removal, as documented in data transmittals from Chemours to NCDEQ.

5.2.3 PFAS Mass Removal

The flow rate data (monthly totals) and PFAS concentration data (monthly representative concentration per the monthly or quarterly samples, which in this reporting period were collected on February 21 and March 28) were used to calculate Table 3+ PFAS mass removal. As shown below, the total Table 3+ PFAS mass removed (20 compounds) by the GWTP in the reporting period was 45.9 lbs.

Reporting Month	Total Volume Treated by GWTP, in gallons	Total Table 3+ (20 Compounds) PFAS Concentration per Monthly/Quarterly Sample, in µg/L	Table 3+ (20 Compounds) PFAS Mass Removed, in lbs
February	4,606,386	270	10.4
March	21,294,614	200	35.5
Q12023 Total	25,901,000	N/A	45.9

6. PERFORMANCE MONITORING EVALUATION

The start-up of the groundwater extraction system occurred near the end of this reporting period. Additionally, the barrier wall and ex-situ seep capture remedy components were still under construction. Therefore, the evaluation of the performance of the groundwater extraction remedy component is considered preliminary, and this report is focused on describing the baseline and commissioning activities that took place.

6.1 Data Collected

6.1.1 Hydraulic Head

Baseline gauging events were performed on August 4 and August 17, 2022 (during the dry summer season) and on January 30, 2023 (during the wet winter season). Gauging events were then conducted during commissioning activities (February 28, 2023) and after commencing operation (March 29, 2023). Each gauging event was completed in a synoptic manner within 24 hours.

The three baseline gauging events performed between August 4, 2022, and January 30, 2023, involved the collection of water level measurements from the combined set of EWs (not yet operating) and observation wells (OWs). After startup of the system, since EWs are equipped with transducers that measure water level at a 15-minute frequency, manual gauging events were performed in the OWs only.

6.1.2 Passive Flux Meters

A total of three deployments of PFM^s were conducted prior to the implementation of groundwater remedy components. This section briefly summarizes the third deployment of the PFM^s in July 2022, which has not been previously documented. Detailed information relating to this event (Tables, Figures, and laboratory analytical data) is provided in a separate memorandum in Appendix B. This third deployment was generally similar to the previous October 2020 and November 2021 deployments, which were summarized previously in a memorandum attached to the 90% Design submittal (Geosyntec, 2022). As before, PFM^s were utilized in July 2022 to continue to evaluate baseline groundwater flux through the Black Creek Aquifer.

6.1.3 PFAS Concentrations in Groundwater and Surface Water

At three locations within Willis Creek (WC) and at eight recently installed downgradient observation wells (OWs), sampling was performed to provide a snapshot of pre-remedy PFAS concentrations. The sampling procedures were in accordance with the Cape Fear River PFAS Mass Loading Assessment Report series (Geosyntec 2023a). WC-1, WC-2, and WC-3 were sampled on February 25, 2023. The observations wells, OW-28, OW-30, OW-33, OW-40, OW-54, OW-55, OW-56, and OW-57 were sampled between February 14 and 21, 2023. The collected samples were sent to Eurofins TestAmerica Laboratories for analysis by Table 3+ and EPA Method 537 MOD.

6.2 Results

6.2.1 Hydraulic Head

This section discusses hydraulic head which is a critical line of evidence for evaluating groundwater extraction effectiveness, particularly in the short-term. As the Cape Fear River can affect some wells screened in the Black Creek aquifer, this section will first discuss the river conditions during each gauging event, to evaluate the comparability of the gauging events to each other. The drawdown in the Black Creek aquifer is discussed next, focusing on the most recent gauging event (late March, with the system operational) as compared to the late January baseline event. Finally, this section discusses early trends observed in the Surficial aquifer.

Potential Effect of River on Black Creek OWS

Connectivity between some Black Creek wells (both extraction and observation) and the Cape Fear River has been observed during prior assessment activities at the Site, and during recent OM&M of the groundwater remedy, particularly in wells that have been operating prior to barrier wall installation in the local area. Notably, in high stage river events (floods), there can be a corresponding increase in groundwater elevation in some wells. This could potentially result in bias when interpreting data, for example if the baseline event was conducted during a high river stage, and a subsequent performance monitoring event was conducted during a drought, this would potentially result in higher calculated drawdown values.

River levels for each gauging event were obtained from the USGS Huske station 02105500. The average river elevation for the duration of the gauging event (e.g., from 8AM to 4PM) was calculated from the 15-minute frequency data available from USGS. These average levels were compared to the available historical dataset (2007 to 2020) to calculate the corresponding percentile values, to show whether those gauging events were performed on relatively high or low river conditions. As shown below, the multiple baseline events capture a wide range of river conditions (from 37th to 79th percentile of the historical average). Of the two performance monitoring events, the March 29 event closely matches the conditions of the January 30 event (81st versus 79th percentile values). Therefore, the January and March 2023 datasets allow for a reasonable comparison, and calculated drawdown values within the vicinity of the alignment can be attributed to the remedy.

Date	Type	Average River Level During Gauging Event (NAVD88)	Percentile (Gauging Event River Level compared to Historical Dataset)
8/4/2022	Baseline (dry summer)	30.38	52%
8/17/2022	Baseline (dry summer)	29.80	37%
1/30/2023	Baseline (wet winter)	32.50	79%
2/28/2023	Mid-Commissioning	30.76	60%
3/29/2023	Post-Startup	32.72	81%

Drawdown in Black Creek Aquifer

Table 6-1 provides the groundwater elevations measured during the five events listed above, along with the most recent drawdown (with positive values indicating drawdown in the observation well) as calculated from the March post-startup event compared to the January baseline event. For clarity, since the number of wells included in the gauging program is large (64), the wells are organized into four categories: (1) those located within 200 feet upgradient of the remedy; (2) those located within 200 feet downgradient of the remedy; (3) those located more than 200 feet downgradient of the remedy; and (3) those located more than 200 feet upgradient of the remedy. The purpose of this categorization is to evaluate the contrasting impacts, in order of expected impact: the most significant drawdown is expected near the extraction wells; some drawdown is expected downgradient, with the barrier wall potentially limiting the influence of the pumping; and little to no impact is expected significantly upgradient of the remedy. Drawdown as calculated with the January and March 2023 datasets is additionally shown in Figure 6-1.

As shown, widespread drawdown was observed, with a median drawdown of approximately 7.6 feet in wells within 200 feet upgradient of the remedy, and 6.3 feet in wells within 200 feet downgradient of the remedy. In wells more than 200 feet downgradient of the remedy, median drawdown was 2.6 feet. In wells more than 200 feet upgradient of the remedy, the median decrease in groundwater elevation was 0.26 feet, which is attributed to seasonal fluctuation, as these wells are likely not within a capture zone of an EW.

As noted previously, the barrier wall was under construction in late March 2023, and the GWEC system had only been operational for two weeks. Therefore, conclusions based on the drawdown data presented on Table 6-1 and Figure 6-1 should be considered preliminary, and this Report is generally focused on providing the data obtained and reserving conclusions on performance until the full-scale remedy is complete.

Changes in Surficial Aquifer

Table 6-1 shows measured changes in the surficial aquifer water levels, notably in wells upgradient of the remedy, to evaluate the potential mounding effects of the barrier wall. At OW-34 in the vicinity of Seep A, which is located upgradient of the completed barrier wall at the time of the March 29 gauging event, the water table increased 4.33 feet (i.e., evidence of mounding behind the wall). Note that surficial aquifer EWs were monitored for mounding, and flow rates were increased in these wells periodically as conditions allowed.

At OW-35 and OW-36, where the barrier wall had not yet been installed as of March 29, the water table decreased between 0.22 and 0.43 feet, which is attributed to nearby pumping of the surficial aquifer.

6.2.2 Passive Flux Meters

For the July 2022 deployment, dry weight Table 3+ PFAS concentrations are reported in Table 3 of Appendix B, and flux values for each Table 3+ compound are shown in Table 4 of Appendix B, as reported by Enviroflux. It is noted that in the approval of the 90% Design in October 2022, which occurred after the July 2022 deployment, Chemours has agreed to not use PFM to estimate mass flux and will only use them for estimating Darcy flux in future deployments. Therefore, PFAS flux values are provided in Appendix B for comprehensive and consistency purposes but are not anticipated to be relied upon when comparing data from future PFM deployments. Consistent with prior events, the results from the July 2022 deployment indicate that PFAS mass flux in the northern portion of the remedy alignment is significantly smaller than the mass flux in the southern and central portions.

Darcy velocity values are also provided in Table 4 of Appendix B. As shown, the average Darcy velocity for each deployment has ranged from 4.1 cm/day, 7.3 cm/day, and 7.6 cm/day in October 2020, November 2021, and July 2022 respectively. These results provide a set of baseline values for expected groundwater flux prior to the groundwater remedy installation. Post-remedy PFM deployments will be used to evaluate potential reductions in groundwater flux in the Black Creek Aquifer.

6.2.3 PFAS Concentrations

Baseline results for the Willis Creek PFAS samples are shown in Table 6-2. Baseline results for the downgradient OW PFAS samples are shown in Table 6-3. Laboratory analytical results for Willis Creek and OW samples are compiled in Appendix A. Future reports will evaluate potential long-term impacts to PFAS concentrations in these locations. At this early stage in the remedy commissioning process, no conclusions can be made at this time.

7. SUMMARY

This reporting period (January 1 to March 31, 2023) included the startup and commissioning of the GWEC and GWTP remedy components, which extracted, treated, and discharged approximately 25,900,000 gallons of groundwater. The GWTP removed a greater than 99% of PFAS (there were no detections of PFAS in any effluent sample), for an estimated total Table 3+ PFAS (20 compounds) mass removal of 45.9 lbs.

Based on drawdown observed in OWs, the groundwater extraction appears to be having a measurable effect on water levels in the Black Creek aquifer, with a median drawdown of approximately 7.6 feet for OWs that are within 200 feet upgradient of the remedy alignment, and 6.3 feet for OWs that are within 200 feet downgradient of the barrier wall. However, the reporting period included only a few weeks of full operation of these components, and the barrier wall was still under construction, therefore the performance evaluation of the long-term remedy at mitigating migration of groundwater is preliminary.

The next report will cover the period of April 1 to June 30, 2023 (Report #2), which will include the completion of the construction of the barrier wall and the commissioning and startup of the ex-situ capture ponds. The performance of the flow-through cells, which have been documented in 14 interim reports, will also be incorporated in Report #2.

8. REFERENCES

Geosyntec, 2020. Matrix Interference During Analysis of Table 2+ Compounds. Chemours Fayetteville Works. June 30, 2020.

Geosyntec, 2021a. Pre-Design Investigation Summary (Version 2). Chemours Fayetteville Works. June 29, 2021.

Geosyntec, 2021b. Groundwater and Seeps Remedy 60% Design Submittal. Chemours Fayetteville Works. August 13, 2021.

Geosyntec, 2022. Groundwater and Seeps Remedy 90% Design Submittal. Chemours Fayetteville Works. March 25, 2022.

NCDEQ, 2020. Addendum to Consent Order Paragraph 12. General Court of Justice Superior Court Division. Bladen County, North Carolina. October 12, 2020.

TABLES

Table 1-1
Extraction and Observation Well Construction Details
Quarterly Report #1 (Jan - Mar 2023)

Chemours Fayetteville Works
Fayetteville, North Carolina

WELL ID	TARGET AQUIFER	NORTHING (NAD83)	EASTING (NAD83)	TOP OF CASING ELEVATION (NAVD88)	WELL DIAMETER (INCHES)	WELL DEPTH (FT BGS)	WELL SCREEN INTERVAL (FT BGS)
EW-01	Black Creek Aquifer	401683.69	2049951.04	92.04	6	85	60-80
EW-02	Black Creek Aquifer	401683.61	2050289.26	87.97	6	65	40-60
EW-03	Black Creek Aquifer	401723.50	2050594.78	84.67	6	72	57-67
EW-04	Black Creek Aquifer	401714.92	2050848.03	80.00	6	65	50-60
EW-05	Black Creek Aquifer	401654.63	2051059.46	82.93	6	78	63-73
EW-06	Black Creek Aquifer	401489.44	2051117.72	83.58	6	75	50-70
EW-07	Black Creek Aquifer	401350.61	2051160.78	86.45	6	68	53-63
EW-08	Black Creek Aquifer	401184.55	2051164.30	89.05	6	73	58-68
EW-09	Black Creek Aquifer	401008.87	2051129.57	81.08	6	65	40-60
EW-10	Black Creek Aquifer	400870.94	2051128.67	74.12	6	55	30-50
EW-11	Black Creek Aquifer	400683.82	2051280.71	93.12	6	75	60-70
EW-12	Black Creek Aquifer	400591.86	2051415.21	92.10	6	75	50-70
EW-13	Black Creek Aquifer	400527.75	2051513.14	87.95	6	79	54-74
EW-14	Black Creek Aquifer	400375.11	2051570.80	82.23	6	62	47-57
EW-15	Black Creek Aquifer	400223.63	2051556.86	77.23	6	53	38-48
EW-16	Black Creek Aquifer	400042.92	2051489.09	88.11	6	65	50-60
EW-17	Black Creek Aquifer	399975.22	2051517.08	87.84	6	65	40-60
EW-18	Surficial Aquifer	399828.16	2051586.65	74.56	6	30	15-25
EW-19	Black Creek Aquifer	399819.25	2051590.67	74.65	6	51	36-46
EW-20	Surficial Aquifer	399696.08	2051667.78	78.48	6	30	15-25
EW-21	Black Creek Aquifer	399549.59	2051687.61	84.66	6	62	47-57
EW-22	Surficial Aquifer	399298.40	2051754.69	82.54	6	37	22-32
EW-23	Black Creek Aquifer	399289.65	2051759.07	83.05	6	70	45-65
EW-24	Surficial Aquifer	399105.96	2051845.20	83.63	6	31	16-26
EW-25	Black Creek Aquifer	399097.14	2051848.27	83.44	6	75	60-70
EW-26D	Surficial Aquifer	398992.13	2051869.73	83.50	6	30	15-25
EW-27	Surficial Aquifer	398883.14	2051881.19	85.81	6	33	18-28
EW-28	Black Creek Aquifer	398873.71	2051882.01	85.83	6	55	40-50
EW-29	Surficial Aquifer	398743.82	2051874.08	80.62	6	34	19-29
EW-30	Black Creek Aquifer	398733.15	2051872.90	82.01	6	80	55-75
EW-31	Surficial Aquifer	398619.06	2051860.80	80.84	6	33	18-28
EW-32	Black Creek Aquifer	398606.76	2051858.39	81.55	6	53	38-48
EW-33	Surficial Aquifer	398413.39	2051843.45	78.32	6	25	10-20
EW-34	Black Creek Aquifer	398403.44	2051844.29	77.11	6	75	40-70
EW-35	Surficial Aquifer	398342.37	2051862.99	74.44	6	18	8-13
EW-36	Black Creek Aquifer	398333.72	2051867.55	73.98	6	73	38-48, 58-68
EW-37	Surficial Aquifer	398234.57	2051923.02	74.03	6	54	39-49
EW-38	Black Creek Aquifer	398229.45	2051926.24	74.19	6	80	55-75
EW-39	Surficial Aquifer	398113.89	2051992.69	77.19	6	21	6-16
EW-40	Black Creek Aquifer	398104.84	2051997.57	77.00	6	85	60-80
EW-41	Black Creek Aquifer	397944.33	2052019.70	84.99	6	75	50-70
EW-42	Black Creek Aquifer	397792.20	2052011.87	81.93	6	74	49-69

Table 1-1
Extraction and Observation Well Construction Details
Quarterly Report #1 (Jan - Mar 2023)

Chemours Fayetteville Works
Fayetteville, North Carolina

WELL ID	TARGET AQUIFER	NORTHING (NAD83)	EASTING (NAD83)	TOP OF CASING ELEVATION (NAVD88)	WELL DIAMETER (INCHES)	WELL DEPTH (FT BGS)	WELL SCREEN INTERVAL (FT BGS)
EW-43	Black Creek Aquifer	397657.42	2052005.16	81.80	6	76	51-71
EW-44	Surficial Aquifer	397520.77	2051997.72	75.22	6	18	8-13
EW-45	Black Creek Aquifer	397511.10	2051997.30	75.33	6	71	46-66
EW-46	Surficial Aquifer	397374.10	2051993.17	74.94	6	32	17-27
EW-47	Black Creek Aquifer	397364.92	2051992.87	75.02	6	68	43-63
EW-48	Surficial Aquifer	397290.64	2052028.52	79.87	6	31	16-26
EW-49	Black Creek Aquifer	397282.27	2052032.79	79.65	6	79	54-74
EW-50	Surficial Aquifer	397105.59	2052107.53	77.80	6	30	15-25
EW-51	Black Creek Aquifer	397096.10	2052109.76	78.36	6	70	45-65
EW-52	Black Creek Aquifer	396902.85	2052151.05	75.84	6	70	45-65
EW-53	Black Creek Aquifer	396713.03	2052190.03	76.33	6	67	42-62
EW-54	Black Creek Aquifer	396559.35	2052223.00	75.31	6	65	40-60
EW-55	Black Creek Aquifer	396358.87	2052225.92	86.59	6	80	55-75
EW-56	Black Creek Aquifer	396173.96	2052249.38	79.69	6	71	46-66
EW-57	Black Creek Aquifer	395992.47	2052247.52	84.92	6	70	45-65
EW-58	Black Creek Aquifer	395810.15	2052290.53	74.69	6	65	40-60
EW-59	Black Creek Aquifer	395425.21	2052313.29	77.65	6	68	43-63
EW-61	Black Creek Aquifer	395283.80	2052271.16	78.46	6	75	50-70
EW-62	Black Creek Aquifer	395170.54	2052195.07	83.12	6	65	40-60
EW-63	Black Creek Aquifer	395055.17	2052033.12	122.53	6	103	88-98
EW-64	Black Creek Aquifer	394924.16	2051976.78	121.67	6	85	60-80
EW-65	Black Creek Aquifer	394819.93	2051918.54	116.36	6	75	50-70
EW-66	Black Creek Aquifer	394823.51	2051780.19	115.77	6	101	76-96
EW-67	Black Creek Aquifer	394780.57	2051655.69	103.22	6	98	73-93
EW-68	Black Creek Aquifer	394728.65	2051563.34	96.82	6	92	67-87
EW-69	Black Creek Aquifer	394649.04	2051478.42	87.55	6	85	60-80
OW-11	Black Creek Aquifer	401683.391	2049913.61	94.92	1	84	74-84
OW-12	Black Creek Aquifer	401731.327	2050721.09	83.65	1	60	50-60
OW-13	Black Creek Aquifer	400769.329	2051210.62	85.12	1	60	50-60
OW-14	Black Creek Aquifer	400311.42	2051608.03	80.67	1	56	46-56
OW-15	Black Creek Aquifer	399719.905	2051608.62	87.86	1	44	34-44
OW-16	Black Creek Aquifer	399828.657	2051993.25	52.94	1	25	15-25
OW-17	Black Creek Aquifer	399433.025	2051661.47	89.67	1	68	58-68
OW-18	Black Creek Aquifer	398846.694	2051836.19	90.88	1	55	45-55
OW-19	Black Creek Aquifer	398067.234	2051976.5	86.68	1	80	70-80
OW-20	Black Creek Aquifer	398229.853	2052080.86	69.59	1	58	48-58
OW-21	Black Creek Aquifer	397521.827	2051950.75	80.85	1	67	57-67
OW-22	Black Creek Aquifer	397325.336	2052218.74	66.63	1	53	43-53
OW-23	Black Creek Aquifer	396776.729	2052355.66	67.83	1	55	45-55
OW-24	Black Creek Aquifer	396677.423	2052158.17	78.67	1	60	50-60
OW-25	Black Creek Aquifer	396182.381	2052428.46	70.91	1	55	45-55
OW-26	Black Creek Aquifer	395503.738	2052268.81	80.85	1	60	50-60

Table 1-1
Extraction and Observation Well Construction Details
Quarterly Report #1 (Jan - Mar 2023)

Chemours Fayetteville Works
Fayetteville, North Carolina

WELL ID	TARGET AQUIFER	NORTHING (NAD83)	EASTING (NAD83)	TOP OF CASING ELEVATION (NAVD88)	WELL DIAMETER (INCHES)	WELL DEPTH (FT BGS)	WELL SCREEN INTERVAL (FT BGS)	
OW-27	Black Creek Aquifer	395555.173	2052622.16	55.6	1	43	33-43	
OW-28	Black Creek Aquifer	395570.57	2052838.21	48.49	2	30	20-30	
OW-29	Black Creek Aquifer	395193.449	2052143.81	85.67	1	52	42-52	
OW-30	Black Creek Aquifer	394988.715	2052537.53	70.92	2	59	49-59	
OW-31	Black Creek Aquifer	394812.074	2051595.9	106.1	1	95	85-95	
OW-32	Black Creek Aquifer			Not Yet Constructed - Barrier Wall Conflict				
OW-33	Black Creek Aquifer	395116.901	2052806.54	48.59	2	29	19-29	
OW-34	Surficial Aquifer	398593.539	2051813.31	83.76	1	33	23-33	
OW-35	Surficial Aquifer	398060.781	2051977.75	87.45	1	30	20-30	
OW-36	Surficial Aquifer	397257.463	2051997.45	80.61	1	21	11-21	
OW-37	Surficial Aquifer			Not Yet Constructed - Barrier Wall Conflict				
OW-38	Black Creek Aquifer	394885.224	2051883.97	123.7	1	70	60-70	
OW-39	Black Creek Aquifer			Not Yet Constructed - Barrier Wall Conflict				
OW-40	Black Creek Aquifer	394588.05	2052521.39	72.88	2	59	49-59	
OW-41	Black Creek Aquifer	401683.739	2050119.92	93.66	1	92	82-92	
OW-42	Black Creek Aquifer	401696.045	2050448.24	87.37	1	68	58-68	
OW-43	Black Creek Aquifer	400937.725	2051116.17	76.94	1	50	40-50	
OW-44	Black Creek Aquifer	399741.484	2051736.45	73.18	1	44	34-44	
OW-45	Black Creek Aquifer	398836.07	2051955.99	77.1	1	60	50-60	
OW-46	Black Creek Aquifer	398164.944	2052050.69	72.05	1	69	59-69	
OW-47	Black Creek Aquifer	397243.894	2052136.32	71.47	1	59	49-59	
OW-48	Black Creek Aquifer	396698.386	2052275.93	69.54	1	52	42-52	
OW-49	Black Creek Aquifer	396180.56	2052348.51	79.56	1	63	53-63	
OW-50	Black Creek Aquifer	395529.592	2052379.97	71.53	1	53	43-53	
OW-51	Black Creek Aquifer			Not Yet Constructed - Barrier Wall Conflict				
OW-52	Black Creek Aquifer			Not Yet Constructed - Barrier Wall Conflict				
OW-53	Black Creek Aquifer			Not Yet Constructed - Barrier Wall Conflict				
OW-54	Black Creek Aquifer			Not Yet Surveyed		2	12	7-12
OW-55	Black Creek Aquifer	401761.922	2050875.02	75.45	2	58	43-58	
OW-56	Black Creek Aquifer			Not Yet Surveyed		2	12	7-12
OW-57	Black Creek Aquifer	401781.195	2050174.65	68.87	2	43	33-43	

Notes

BGS: below ground surface

EW: extraction well

NAD83: North American Datum of 1983

NAVD88: North American Vertical Datum of 1988

OW: observation well

Table 1-2
Precipitation Statistics
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, North Carolina

Precipitation (inches)	
Current Reporting Period (January - March 2023)	9.13
Current Reporting Period Historical Average (January - March 2004-2020)	7.96
2023 Year-to-Date	9.13
Historical Year-to-Date Average (2004-2020)	7.96
Historical Annual Average (2004-2020)	43.44

Notes

1. Precipitation data obtained from the USGS gauge #02105500 at the William O. Huske Lock and Dam.
2. The historical average was calculated over 2004-2020 using available data when the William O. Huske rain gauge was operable.

Table 1-3
Summary of Sampling and Monitoring Activities
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, North Carolina

Remedy Component	Sampling and Monitoring Activities in Reporting Period (Jan-Mar)	Sampling and Monitoring Activities Anticipated in Next Reporting Period (Apr-Jun)
Groundwater Extraction	<ul style="list-style-type: none"> ▪ Baseline Sampling of Extraction Wells for PFAS (66 of 68 wells from Jan 24 - Mar 14; two wells were consistently dry) ▪ Extraction Well Operational Data (flow, pressure, motor speed, and water level) every 15 minutes 	<ul style="list-style-type: none"> ▪ Sampling of Extraction Wells for PFAS (1-month post startup) anticipated early- to mid-April ▪ Extraction Well Operational Data (flow, pressure, motor speed, and water level) every 15 minutes
004 Treatment Plant	<ul style="list-style-type: none"> ▪ Weekly grab sampling of Effluent for PFAS indicator compounds HFPO-DA, PFMOAA, and PMPA ▪ Monthly grab sampling of Influent and Effluent for Table 3+ ▪ Quarterly grab sampling of Influent and Effluent for Table 3+ and EPA Method 537 MOD ▪ <i>Various other parameters required per the NPDES permit and reported in the eDMR, but not reproduced here</i> 	<ul style="list-style-type: none"> ▪ No anticipated changes from prior reporting period
Performance Evaluation	<ul style="list-style-type: none"> ▪ Baseline Passive Flux Meter deployment (June 2022) in 15 wells <ul style="list-style-type: none"> ▪ Baseline water level gauging (August 4, 2022) ▪ Baseline water level gauging (August 17, 2022) ▪ Baseline water level gauging (January 30, 2023) ▪ Baseline PFAS sampling (February 14-21, 2023) of 8 new OWs ▪ Baseline PFAS sampling (February 13 and 25, 2023) of Willis Creek stations WC-1, 2, 3 <ul style="list-style-type: none"> ▪ Mid-commissioning water level gauging (February 28, 2023) ▪ Post-startup water level gauging (March 29, 2023) 	<ul style="list-style-type: none"> ▪ Monthly gauging (April, May, June) ▪ Quarterly sampling event of Willis Creek stations WC-1, 2, 3 (May)

Notes

1. For performance evaluation, some baseline activities in 2022 that precede the reporting period (i.e., the August 2022 gauging events and June 2022 passive flux meter deployment) have not been previously reported and are therefore included here for comprehensive purposes.
2. Additional sampling details (e.g., Sample IDs, composite periods, etc.) are provided in subsequent tables.
3. Dates listed in the Anticipated column are estimates and subject to change.

Table 4-1
Summary of GWEC Flow Data
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, North Carolina

Date	Average Extraction Flow Rate (gpm)	Cumulative Volume Extracted (gallons)
2/6/2023	68	250
2/7/2023	70	5,881
2/8/2023	39	41,725
2/9/2023	19	69,120
2/10/2023	42	126,415
2/11/2023	1	126,415
2/12/2023	0	126,415
2/13/2023	47	190,442
2/14/2023	89	301,607
2/15/2023	88	425,010
2/16/2023	112	585,803
2/17/2023	121	759,308
2/18/2023	159	963,348
2/19/2023	169	1,170,471
2/20/2023	144	1,361,934
2/21/2023	140	1,561,115
2/22/2023	283	1,959,656
2/23/2023	351	2,471,390
2/24/2023	384	3,023,215
2/25/2023	339	3,509,240
2/26/2023	336	3,984,665
2/27/2023	386	4,537,790
2/28/2023	337	5,018,240
3/1/2023	400	5,594,665
3/2/2023	378	6,137,090
3/3/2023	314	6,585,365
3/4/2023	340	7,072,415
3/5/2023	336	7,553,740
3/6/2023	343	8,046,090
3/7/2023	344	8,546,640
3/8/2023	360	9,055,890
3/9/2023	364	9,577,440
3/10/2023	366	10,101,315
3/11/2023	362	10,620,265
3/12/2023	364	11,120,790
3/13/2023	346	11,609,490
3/14/2023	431	12,225,190
3/15/2023	566	13,049,065
3/16/2023	571	13,880,540
3/17/2023	573	14,699,315
3/18/2023	571	15,519,590
3/19/2023	566	16,337,190
3/20/2023	565	17,149,090
3/21/2023	571	17,973,890
3/22/2023	521	18,750,940
3/23/2023	541	19,519,315
3/24/2023	532	20,284,715
3/25/2023	558	21,082,365
3/26/2023	282	21,482,639
3/27/2023	164	22,097,665
3/28/2023	442	23,318,865
3/29/2023	533	24,088,239
3/30/2023	553	24,878,515
3/31/2023	556	25,677,439

Notes

1. GWEC = Groundwater Extraction and Conveyance; gpm = gallons per minute
2. Commissioning of the extraction well pumps was initiated on February 6, 2023.
3. Flow rate measurements are collected by the manifold flow meter every 15 minutes.

Table 4-2
 Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
 Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST ¹ (ng/L)	EW-18	EW-19	EW-20	EW-20	EW-21	EW-22	EW-23	EW-24	EW-25	EW-26S	EW-26S	EW-27	EW-28	EW-29	EW-29	EW-30	EW-31	EW-32	EW-32	EW-33	EW-33	EW-34	EW-35	
	EW-18-012523	EW-19-012423	EW-20-012423	EW-20-012423-Z Field Filtered	EW-21-012723	EW-22-012623	EW-23-012423	EW-24-012423	EW-25-012523	EW-26S-012523	EW-26S-012523-Z Field Filtered	EW-27-012523	EW-28-012623	EW-29-012523	EW-29-012523-Z Field Filtered	EW-30-012623	EW-31-012623	EW-32-012423	EW-32-012423-Z Field Filtered	EW-33-012423	EW-33-012423-Z Field Filtered	EW-34-012423	EW-35-012423	
Sample Date: 25-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	27-Jan-23	26-Jan-23	24-Jan-23	24-Jan-23	25-Jan-23	25-Jan-23	25-Jan-23	25-Jan-23	26-Jan-23	25-Jan-23	25-Jan-23	26-Jan-23	26-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23		
Hfpo Dimer Acid	12,000	4,000	11,000	11,000	8,800 J	11,000	4,300	19,000	<150	29,000	24,000	38,000	11,000	31,000	11,000	5,100	10,000	<150	160	29,000	27,000	10,000	29,000	
PFMOAA	4,900	18,000	17,000	18,000	42,000 J	62,000	18,000	29,000	1,400	37,000	35,000	100,000	53,000	86,000	110,000	49,000	46,000	120	92	62,000	73,000	150,000	21,000	
PFO2HxA	10,000	6,000	15,000	15,000	19,000	33,000	5,900	25,000	240	33,000	31,000	66,000	30,000	57,000	40,000	17,000	18,000	200	170	34,000	31,000	33,000	24,000	
PFO3OA	2,300	450	2,600	2,700	2,700	8,400	420	6,700	<89	10,000 J	8,800	18,000	5,400	19,000	5,000	2,500	5,000	<89	<89	8,500	6,900	4,000	6,600	
PFO4DA	1,200	<40	530	630	17	1,100	77	2,800	<40	5,800	4,600	6,900	350	9,600	73	240	2,000	43	40	2,600	1,800	100	2,500	
PFO5DA	240	<100	<100	<100	7.5	<100	<100	440	<100	1100	750	1200	<100	6800	<100	<100	990	<100	<100	570	230	<100	560	
PMPA	9,200	2,200	11,000	12,000	4,100	9,000	2,000	14,000	130	15,000	14,000	22,000	8,300	23,000	14,000	4,600	9,200	150	200	29,000	29,000	14,000	44,000	
PEPA	3,400	280	3,900	3,800	730	2,300	280	4,800	<48	5,300	5,000	7,400	2,300	9,300	2,800	960	3,100	<48	79	14,000	15,000	3,400	22,000	
PS Acid	<40	<40	<40	<40	<2.0	<40	<40	84	<40	620	380	490	<40	5400	<40	<40	1000	<40	<40	<40	<40	<40	<40	<40
Hydro-PS Acid	190	<44	61	110	12	98	<44	350	<44	770	<44	750	<44	1500	<44	<44	770	<44	<44	160	75	<44	270	
R-PSDA	460 J	97 J	430 J	640 J	310 J	760 J	76 J	1,000 J	<28	1,700 J	1,300 J	2,800 J	650 J	2,200 J	580 J	380 J	1,500 J	38 J	34 J	1,400 J	760 J	550 J	1,700 J	
Hydrolyzed PSDA	51 J	73 J	220 J	330 J	440 J	5,800 J	45 J	2,900 J	<27	9,200 J	7,900 J	23,000 J	3,300 J	25,000 J	2,900 J	2,200 J	20,000 J	<27	<27	520 J	340 J	2,800 J	260 J	
R-PSDCA	<140	<140	<140	<140	<3.0	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	
NVHOS, Acid Form	<130	170	250	260	470	920	180	500	<130	740	750	1800	770	1300	1200	510	570	<130	<130	560	620	1100	320	
EVE Acid	<40	<40	<40	<40	<2.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	
Hydro-EVE Acid	65	<24	37	54	7	170	<24	250	<24	700	520	1,100	64	1,300	<24	35	1,100	<24	<24	130	81	<24	130	
R-EVE	290 J	98 J	310 J	470 J	360 J	390 J	77 J	550 J	<31	780 J	730 J	1,300 J	400 J	1,000 J	380 J	230 J	680 J	<31	<31	1,100 J	700 J	390 J	950 J	
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	<29	<29	<29	5	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	
PFECA B	<62	<62	<62	<62	<2.0	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	<62	
PFECA-G	<29	<29	<29	<29	<2.0	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	<29	
Total Table 3+ (17 compounds) ^{2,3}	43,000	31,000	61,000	64,000	78,000	130,000	31,000	100,000	1,800	140,000	120,000	260,000	110,000	250,000	180,000	80,000	98,000	510	740	180,000	180,000	220,000	150,000	
Total Table 3+ (20 compounds) ²	44,000	31,000	62,000	65,000	79,000	130,000	31,000	110,000	1,800	150,000	130,000	290,000	120,000	280,000	190,000	83,000	120,000	550	780	180,000	190,000	220,000	150,000	

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

ND -

Table 4-2
 Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
 Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ <i>(ng/L)</i>	EW-35	EW-36	EW-37	EW-37	EW-38	EW-39	EW-39	EW-40	EW-41	EW-41	EW-42	EW-43	EW-44	EW-45	EW-46	EW-47	EW-48	EW-49	EW-50	EW-51	EW-52	EW-52
	EW-35-012523-Z Field Filtered	EW-36-012423	EW-37-020623	EW-37-020623-Z Field Filtered	EW-38-012423	EW-39-012423	EW-39-012423-Z Field Filtered	EW-40-012423	EW-41-020623	EW-41-020623-Z Field Filtered	EW-42-012623	EW-43-012623	--	EW-45-012523	--	EW-47-012523	EW-48-012523	EW-49-012523	EW-50-012523	EW-51-012523	EW-52-012623	EW-52-012623-Z Field Filtered
Hfpo Dimer Acid	20,000	10,000	9,900	11,000 J	13,000	20,000	21,000	11,000	12,000	12,000	12,000	12,000	--	9,100	--	11,000	24,000	10,000	48,000	23,000	38,000	40,000
PFMOAA	16,000	180,000	38,000	42,000	180,000	17,000	20,000	140,000	110,000	120,000	180,000	190,000	--	120,000	--	140,000	10,000	130,000	28,000	120,000	150,000	160,000
PFO2HxA	19,000	55,000	15,000 J	18,000 J	63,000	17,000	18,000	45,000	29,000	31,000	53,000	55,000	--	39,000	--	50,000	15,000	39,000	28,000	54,000	76,000	76,000
PFO3OA	5,000	10,000	3,900 J	4,600 J	15,000	4,800	4,800	13,000	7,800	7,900	13,000	15,000	--	9,000	--	6,200	5,700	4,800	8,400	15,000	31,000	33,000
PFO4DA	1,600	800	260	390	2,200	1,600	1,300	1,700	1,100	1,100	1,800	2,400	--	770	--	91	1,000	40	1,100	4,400	10,000	12,000
PFO5DA	280	<100	<78	<78	<100	<100	<100	<100	<78	<78	<100	<100	--	<100	--	<100	<100	<100	<100	<100	150	<100
PMPA	31,000	28,000	5,200 J	6,500 J	27,000	37,000	37,000	22,000	15,000	16,000	22,000	19,000	--	18,000	--	11,000	11,000	7,000	23,000	9,300	14,000	16,000
PEPA	17,000	6,100	1,600 J	1,900 J	6,200	19,000	19,000	4,900	3,300	3,500	4,800	4,300	--	3,900	--	2,400	4,500	1,500	9,100	2,100	3,800	3,900
PS Acid	<40	<40	<20 UJ	<20	340	<40	<40	150	120	<20	430	510	--	<40	--	<40	<40	<40	<40	<40	<40	<40
Hydro-PS Acid	130	150	24 J	<6.1 UJ	670	68	<44	360	210	<6.1	540	930	--	230	--	<44	170	<44	150	440	1900	<44
R-PSDA	950 J	1,900 J	<71 UJ	660 J	2,900 J	1,100 J	970 J	2,300 J	1,400 J	1,500 J	2,300 J	3,000 J	--	1,800 J	--	740 J	1,100 J	800 J	2,300 J	1,300 J	1,900 J	1,900 J
Hydrolyzed PSDA	160 J	22,000 J	1,400 J	3,800 J	38,000 J	84 J	78 J	28,000 J	19,000 J	20,000 J	33,000 J	60,000 J	--	22,000 J	--	4,300 J	570 J	2,000 J	7,200 J	2,100 J	3,600 J	3,700 J
R-PSDCA	<140	<140	<17 UJ	<17	<140	<140	<140	<140	<17	<17	<140	<140	--	<140	--	<140	<140	<140	<140	<140	<140	<140
NVHOS, Acid Form	250	2400	510 J	550 J	2500	230	270	2100	1500	1600	2300	2200	--	1700	--	1400	250	1100	1400	1300	1800	1700
EVE Acid	<40	<40	<17 UJ	<17 UJ	<40	<40	<40	<40	<17	<17	<40	50	--	<40	--	<40	<40	<40	48	<40	<40	<40
Hydro-EVE Acid	72	300	71	77	920	68	51	560	280	240	700	1,300	--	540	--	56	390	30	840	1,500	3,900	3,600
R-EVE	610 J	560 J	<72 UJ	460 J	720 J	760 J	740 J	620 J	470 J	500 J	620 J	750 J	--	470 J	--	410 J	840 J	500 J	2,100 J	1,300 J	2,000 J	2,000 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	<29	<6.7 UJ	<6.7 UJ	<29	<29	<29	<29	<6.7	<6.7	<29	<29	--	<29	--	<29	<29	<29	<29	<29	<29	<29
PFECA B	<62	<62	<27 UJ	<27 UJ	<62	<62	<62	<62	<27	<27	<62	<62	--	<62	--	<62	<62	<62	<62	<62	<62	<62
PFECA-G	<29	<29	<48 UJ	<48	<29	<29	<29	<29	<48	<48	<29	<29	--	<29	--	<29	<29	<29	<29	<29	<29	<29
Total Table 3+ (17 compounds)^{2,3}	110,000	290,000	74,000	85,000	310,000	120,000	120,000	240,000	180,000	190,000	290,000	300,000	--	200,000	--	220,000	72,000	190,000	150,000	230,000	330,000	350,000
Total Table 3+ (20 compounds)²	110,000	320,000	76,000	90,000	350,000	120,000	120,000	270,000	200,000	220,000	330,000	370,000	--	230,000	--	230,000	75,000	200,000	160,000	240,000	340,000	350,000

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 4-2
Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST ¹ (ng/L)	EW-53 EW-53- 012623	EW-54 EW-54- 012623	EW-55 EW-55- 012623	EW-56 EW-56- 012623	EW-57 EW-57- 012623	EW-58 EW-58- 012623	EW-58- Field Filtered	EW-60 EW-60- 020623	EW-61 EW-61- 012623	EW-62 EW-62- 031423	EW-62- Field Filtered	EW-63 EW-63- 012623	EW-64 EW-64- 020623	EW-65 EW-65- 012623	EW-66 EW-66- 020623	EW-67 EW-67- 012623	EW-68 EW-68- 012623	EW-69 EW-69- 012623	EW-69- Field Filtered
26-Jan-23	26-Jan-23	26-Jan-23	26-Jan-23	26-Jan-23	26-Jan-23	26-Jan-23	26-Jan-23	6-Feb-23	26-Jan-23	14-Mar-23	14-Mar-23	26-Jan-23	6-Feb-23	26-Jan-23	6-Feb-23	26-Jan-23	26-Jan-23	26-Jan-23	
Hfpo Dimer Acid	53,000	41,000	42,000	57,000	11,000	17,000	17,000	14,000	18,000	16,000	15,000	<150	12,000	3,100	11,000	2,300	16,000	<150	<150
PFMOAA	150,000	150,000	170,000	260,000	31,000	30,000	30,000	46,000	53,000	61,000	60,000	<41	30,000	980	41,000	12,000	90,000	88	87
PFO2HxA	70,000	81,000	89,000	120,000	15,000	19,000	20,000	16,000	25,000	26,000	24,000	<55	9,900	2,100	12,000	4,900	36,000	<55	<55
PFO3OA	24,000	28,000	33,000	33,000	4,200	7,500	7,200	3,900	6,800	6,800	6,200	<89	2,400	320	2,100	820	5,700	<89	<89
PFO4DA	3,800	5,700	9,500	5,400	500	570	450	480	270	980	800	<40	440	120	190	130	430	<40	<40
PFO5DA	<100	<100	<100	<100	<100	<100	<100	<78	<100	<100	<100	<100	<78	<100	<78	<100	<100	<100	<100
PMPA	22,000	20,000	17,000	14,000	4,400	8,400	8,600	5,700	6,600	7,300	7,000	<34	3,800	3,900	3,300	970	6,300	<34	<34
PEPA	8,500	6,100	4,300	2,700	1,300	2,900	2,900	1,800	2,000	2,400	2,300	<48	950	1,400	840	290	1,700	<48	<48
PS Acid	71	<40	<40	<40	<40	<40	<40	<20	<40	<40	<40	<40	<20	<40	<20	<40	<40	<40	<40
Hydro-PS Acid	750	550	1500	800	63	71	<44	83	<44	130	<44	<44	85	<44	33	<44	62	<44	<44
R-PSDA	2,800 J	2,300 J	2,000 J	2,300 J	750 J	1,100 J	830 J	880 J	940 J	1,100 J	470 J	<28	<71	220 J	<71	120 J	820 J	<28 UJ	<28 UJ
Hydrolyzed PSDA	9,700 J	6,300 J	3,800 J	4,600 J	1,500 J	3,600 J	3,900 J	2,400 J	2,300 J	2,900 J	2,500 J	<27	1,000 J	<27	1,200 J	260 J	2,100 J	<27	<27
R-PSDCA	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<17	<140	<17	<140	<140	<140	<140
NVHOS, Acid Form	2500	2200	2100	3000	400	530	430	610	690	990	820	<130	420	<130	470	140	960	<130	<130
EVE Acid	170	<40	<40	<40	<40	<40	<40	<17	<40	<40	<40	<40	<17	<40	<17	<40	<40	<40	<40
Hydro-EVE Acid	2,900	2,800	3,400	2,400	290	430	230	350	210	520	290	<24	350	<24	230	64	300	<24	<24
R-EVE	2,800 J	2,400 J	2,100 J	2,900 J	670 J	960 J	1,000 J	810 J	930 J	1,100 J	990 J	<31	<72	110 J	<72	110 J	790 J	<31	<31
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	<29	<29	42	<29	<29	<29	<6.7	<29	<29	<29	<29	<6.7	<29	<6.7	<29	<29	<29	<29
PFECA B	<62	<62	<62	<62	<62	<62	<62	<27	<62	<62	<62	<62	<27	<62	<27	<62	<62	<62	<62
PFECA-G	<29	<29	<29	<29	<29	<29	<48	<29	<29	<29	<29	<29	<48	<29	<48	<29	<29	<29	<29
Total Table 3+ (17 compounds) ^{2,3}	340,000	340,000	370,000	500,000	68,000	86,000	87,000	89,000	110,000	120,000	120,000	ND	60,000	12,000	71,000	22,000	160,000	88	87
Total Table 3+ (20 compounds) ²	350,000	350,000	380,000	510,000	71,000	92,000	93,000	93,000	120,000	130,000	120,000	ND	61,000	12,000	72,000	22,000	160,000	88	87

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 4-2
Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

Notes

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

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Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

TR0795C

TR0795C

Table 4-2
Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST ¹ (ng/L)	EW-18	EW-19	EW-20	EW-20-	EW-21	EW-22	EW-23	EW-24	EW-25	EW-26S	EW-26S	EW-27	EW-28	EW-29	EW-29	EW-30	EW-31	EW-32	EW-32	EW-33	EW-33	EW-34	EW-35		
	EW-18-012523	EW-18-012423	EW-19-012423	EW-20-012423-Z	EW-21-012723	EW-22-012623	EW-23-012423	EW-24-012423	EW-25-012523	EW-26S-012523	EW-26S-012523-Z	EW-27-012523	EW-28-012623	EW-29-012523	EW-29-012523-Z	EW-30-012623	EW-31-012623	EW-32-012423	EW-32-012423-Z	EW-33-012423	EW-33-012423-Z	EW-34-012423	EW-35-012423		
	Sample Date: 25-Jan-23	24-Jan-23	24-Jan-23	24-Jan-23	27-Jan-23	26-Jan-23	24-Jan-23	24-Jan-23	25-Jan-23	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered	Field Filtered		
10:2 Fluorotelomer sulfonate	<67	<67	<67	<67	<2.0	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67	<67		
11Cl-PF3OUDs	<32	<32	<32	<32	<2.0	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32		
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<46	<46	<46	<46	<2.0	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46	<46		
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<24	<24	<24	<24	<2.0	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24		
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<85	<85	<85	<85	<2.0	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85	<85		
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<140	<140	<140	<140	<4.0	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140		
6:2 Fluorotelomer sulfonate	<250	<250	<250	<250	<5.0	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250		
9Cl-PF3ONS	<24	<24	<24	<24	<2.0	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24	<24		
DONA	<40	<40	<40	<40	<2.0	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40		
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<130	<130	<130	<130	<5.0	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130	<130		
N-ethylperfluoro-1-octanesulfonamide	<87	<87	<87	<87	<2.0	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87	<87		
N-methyl perfluoro-1-octanesulfonamide	<43	<43	<43	<43	<2.0	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43	<43		
N-Methyl Perfluoroctane Sulfonamidoacetic Acid	<120	<120	<120	<120	<5.0	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120	<120		
Perfluorobutane Sulfonic Acid	<20	<20	<20	<20	<2.0	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20		
Perfluorobutanoic Acid	<240	<240	<240	<240	97	<240	<240	<240	<240	<240	<240	<240	<240	<240	330	<240	520	<240	<240	<240	<240	650	560	<240	1000
Perfluorodecane Sulfonic Acid	<32	<32	<32	<32	<2.0	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32	<32		
Perfluorodecanoic Acid	<31	<31	<31	<31	<2.0	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31		
Perfluorododecane Sulfonic Acid (PFDoS)	<97	<97	<97	<97	<2.0	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97	<97		
Perfluorododecanoic Acid	<55	<55	<55	<55	<2.0	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55	<55		
Perfluoroheptane Sulfonic Acid (PFHpS)	<19	<19	<19	<19	<2.0	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19	<19		
Perfluoroheptanoic Acid	33	<25	<25	<25	5	47	<25	42	<25	83	69	130	<25	110	<25	77	<25	<25	<25	100	90	<25	78		
Perfluorohexadecanoic Acid (PFHxDA)	<89	<89	<89	<89	<2.0	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89	<89		
Perfluorohexane Sulfonic Acid	<57	<57	<57	<57	<2.0	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57	<57		
Perfluorohexanoic Acid	<58	<58	<58	<58	10	<58	<58	<58	<58	<58	<58	<58	<58	60	<58	73	<58	<58	<58	<58	<58	61	67	<58	

Table 4-2
Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

Notes

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or pre-

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above association

ND - Compound was not detected above its associated re

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

TR0795C

Table 4-2
Summary of Extraction Well PFAS Analytical Results from Baseline Sampling
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

Notes

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above association

ND - Compound was not detected above its associated re

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 5-1
Summary of 004 Treatment Plant Flow Data
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, North Carolina

Date	Average Discharge Flow Rate (gpm)	Daily Volume Treated and Discharged (gallons)	Cumulative Volume Treated and Discharged (gallons)
2/11/2023	N/A	47,917	47,917
2/12/2023	N/A	0	47,917
2/13/2023	N/A	0	47,917
2/14/2023	N/A	32,070	79,987
2/15/2023	N/A	106,592	186,579
2/16/2023	N/A	139,544	326,123
2/17/2023	N/A	150,269	476,392
2/18/2023	N/A	265,360	741,752
2/19/2023	N/A	205,543	947,295
2/20/2023	N/A	182,180	1,129,475
2/21/2023	N/A	184,076	1,313,551
2/22/2023	N/A	192,369	1,505,920
2/23/2023	362	521,657	2,027,577
2/24/2023	385	553,855	2,581,432
2/25/2023	368	529,864	3,111,296
2/26/2023	333	479,947	3,591,243
2/27/2023	355	511,315	4,102,558
2/28/2023	350	503,828	4,606,386
February Total	N/A	4,606,386	
3/1/2023	377	542,188	5,148,574
3/2/2023	392	563,774	5,712,348
3/3/2023	297	428,374	6,140,722
3/4/2023	375	540,552	6,681,274
3/5/2023	340	489,667	7,170,941
3/6/2023	327	470,410	7,641,351
3/7/2023	339	487,700	8,129,051
3/8/2023	342	492,998	8,622,049
3/9/2023	368	529,501	9,151,550
3/10/2023	368	529,727	9,681,277
3/11/2023	359	517,577	10,198,854
3/12/2023	359	495,367	10,694,221
3/13/2023	525	531,070	11,225,291
3/14/2023	334	442,896	11,668,187
3/15/2023	306	838,608	12,506,795
3/16/2023	578	832,373	13,339,168
3/17/2023	574	826,794	14,165,962
3/18/2023	563	811,159	14,977,121
3/19/2023	563	810,568	15,787,689
3/20/2023	555	799,759	16,587,448
3/21/2023	562	808,684	17,396,132
3/22/2023	561	807,534	18,203,666
3/23/2023	534	768,621	18,972,287
3/24/2023	543	782,426	19,754,713
3/25/2023	537	773,355	20,528,068
3/26/2023	544	783,791	21,311,859
3/27/2023	456	656,027	21,967,886
3/28/2023	547	787,879	22,755,765
3/29/2023	541	778,877	23,534,642
3/30/2023	536	771,893	24,306,535
3/31/2023	546	786,397	25,092,932
4/1/2023	561	808,068	25,901,000
March Total	N/A	21,294,614	
Reporting Period Total	N/A	25,901,000	

Notes

- Commissioning of the extraction well pumps was initiated on February 6, 2023. Sufficient volume was produced to commission the GWTP and initiate discharge to 004 on February 10, 2023.
- The 004 Treatment Plant Operational Data is collected and managed by Veolia.
- Average discharge flowrates are not available (N/A) from commissioning through February 22, 2023. Monthly and reporting period totals exclude N/A data.

Table 5-2
004 Treatment Plant PFAS Analytical Results
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ <i>(ng/L)</i>	004 Influent Outfall 004-INF-020723 Sample Date: 7-Feb-23	004 Effluent Outfall 004-EFF-020723 Sample Date: 7-Feb-23	004 Influent 004-INF-021023 Sample Date: 10-Feb-23	004 Effluent 004-EFF-021023 Sample Date: 10-Feb-23	004 Influent 004-INF-021423 Sample Date: 14-Feb-23	004 Effluent 004-EFF-021423 Sample Date: 14-Feb-23	004 Influent 004-INF-022123 Sample Date: 21-Feb-23	004 Effluent 004-EFF-022123 Sample Date: 21-Feb-23	004 Influent 004-INF-022823 Sample Date: 28-Feb-23	004 Effluent 004-EFFF-022823 Sample Date: 28-Feb-23
Hfpo Dimer Acid	8.9	<2.0	9,500	<2.0	10,000	<2.0	20,000	<2.0	20,000	<2.0
PFMOAA	<2.0	<2.0	160,000	<2.0	130,000	<2.0	140,000	<2.0	150,000 J	<2.0
PFO2HxA	--	--	--	--	--	--	54,000	<2.0	--	--
PFO3OA	--	--	--	--	--	--	15,000	<2.0	--	--
PFO4DA	--	--	--	--	--	--	3,400	<2.0	--	--
PFO5DA	--	--	--	--	--	--	<200	<2.0	--	--
PMPA	<10	<10	24,000	<10	20,000	<10	16,000	<10	19,000	<10
PEPA	--	--	--	--	--	--	4,000	<20	--	--
PS Acid	--	--	--	--	--	--	260	<2.0	--	--
Hydro-PS Acid	--	--	--	--	--	--	700	<2.0	--	--
R-PSDA	--	--	--	--	--	--	1,600 J	<2.0	--	--
Hydrolyzed PSDA	--	--	--	--	--	--	15,000 J	<2.0	--	--
R-PSDCA	--	--	--	--	--	--	<200	<2.0	--	--
NVHOS, Acid Form	--	--	--	--	--	--	1800	<2.0	--	--
EVE Acid	--	--	--	--	--	--	<200	<2.0	--	--
Hydro-EVE Acid	--	--	--	--	--	--	1,300	<2.0	--	--
R-EVE	--	--	--	--	--	--	860 J	<2.0	--	--
Perfluoro(2-ethoxyethane)sulfonic Acid	--	--	--	--	--	--	<200	<2.0	--	--
PFECA B	--	--	--	--	--	--	<200	<2.0	--	--
PFECA-G	--	--	--	--	--	--	<200	<2.0	--	--
Total Table 3+ (17 compounds)^{2,3}	9	ND	190,000	ND	160,000	ND	260,000	ND	190,000	ND
Total Table 3+ (20 compounds)²	9	ND	190,000	ND	160,000	ND	270,000	ND	190,000	ND

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- No data reported

Table 5-2
004 Treatment Plant PFAS Analytical Results
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ (ng/L)	004 Influent 004-INF-0323 Sample Date: 7-Mar-23	004 Effluent 004-EFF-0323 Sample Date: 7-Mar-23	004 Influent 004-INF-0323-3 Sample Date: 14-Mar-23	004 Effluent 004-EFF-0323-3 Sample Date: 14-Mar-23	004 Influent 004-INF-0323-4 Sample Date: 14-Mar-23	004 Effluent 004-EFF-0323-4 Sample Date: 21-Mar-23	004 Influent 004-INF-0323-2 Sample Date: 21-Mar-23	004 Effluent 004-EFF-0323-2 Sample Date: 28-Mar-23
Hfpo Dimer Acid	17,000	<2.0	18,000	<2.0	13,000	<2.0	14,000	<2.0
PFMOAA	130,000	<2.0	140,000	<2.0	110,000	<2.0	99,000	<2.0
PFO2HxA	--	--	--	--	--	--	39,000	<2.0
PFO3OA	--	--	--	--	--	--	10,000	<2.0
PFO4DA	--	--	--	--	--	--	2,200	<2.0
PFO5DA	--	--	--	--	--	--	<200	<2.0
PMPA	16,000	<10	18,000	<10	12,000	<10	13,000	<10
PEPA	--	--	--	--	--	--	3,000	<20
PS Acid	--	--	--	--	--	--	330	<2.0
Hydro-PS Acid	--	--	--	--	--	--	440	<2.0
R-PSDA	--	--	--	--	--	--	1,400 J	<2.0
Hydrolyzed PSDA	--	--	--	--	--	--	16,000 J	<2.0
R-PSDCA	--	--	--	--	--	--	<200	<2.0
NVHOS, Acid Form	--	--	--	--	--	--	1300	<2.0
EVE Acid	--	--	--	--	--	--	<200	<2.0
Hydro-EVE Acid	--	--	--	--	--	--	840	<2.0
R-EVE	--	--	--	--	--	--	810 J	<2.0
Perfluoro(2-ethoxyethane)sulfonic Acid	--	--	--	--	--	--	<200	<2.0
PFECA B	--	--	--	--	--	--	<200	<2.0
PFECA-G	--	--	--	--	--	--	<200	<2.0
Total Table 3+ (17 compounds) ^{2,3}	160,000	ND	180,000	ND	140,000	ND	180,000	ND
Total Table 3+ (20 compounds) ²	160,000	ND	180,000	ND	140,000	ND	200,000	ND

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

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ng/L - nanograms per liter

N/A - not applicable

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SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 5-2
004 Treatment Plant PFAS Analytical Results
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ <i>(ng/L)</i>	004 Influent Outfall 004-INF-020723 Sample Date: 7-Feb-23	004 Effluent Outfall 004-EFF-020723 Sample Date: 7-Feb-23	004 Influent 004-INF-021023 Sample Date: 10-Feb-23	004 Effluent 004-EFF-021023 Sample Date: 10-Feb-23	004 Influent 004-INF-021423 Sample Date: 14-Feb-23	004 Effluent 004-EFF-021423 Sample Date: 14-Feb-23	004 Influent 004-INF-022123 Sample Date: 21-Feb-23	004 Effluent 004-EFF-022123 Sample Date: 21-Feb-23	004 Influent 004-INF-022823 Sample Date: 28-Feb-23	004 Effluent 004-EFFF-022823 Sample Date: 28-Feb-23
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	<2.0	<2.0	--	--
11Cl-PF3OUDS	--	--	--	--	--	--	<2.0	<2.0	--	--
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	--	--	--	--	--	--	<2.0	<2.0	--	--
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	--	--	--	--	--	--	<2.0	<2.0	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	<2.0	<2.0	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	<2.0	<2.0	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	<2.0	<2.0	--	--
9Cl-PF3ONS	--	--	--	--	--	--	<2.0	<2.0	--	--
DONA	--	--	--	--	--	--	<2.0	<2.0	--	--
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	<2.0	<2.0	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	<2.0	<2.0	--	--
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorobutanoic Acid	--	--	--	--	--	--	180	<2.0	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorododecane Sulfonic Acid (PFDOS)	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoroheptane Sulfonic Acid (PFHpS)	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	160	<2.0	--	--
Perfluorohexadecanoic Acid (PFHxDA)	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	47	<2.0	--	--
Perfluoronananesulfonic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoronanoic Acid	--	--	--	--	--	--	2	<2.0	--	--
Perfluoroctadecanoic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoroctane Sulfonamide	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoropentane Sulfonic Acid (PFPeS)	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	930	<2.0	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	<2.0	<2.0	--	--
PFOA	--	--	--	--	--	--	12	<2.0	--	--
PFOS	--	--	--	--	--	--	<2.0	<2.0	--	--

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

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Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- No data reported

Table 5-2
004 Treatment Plant PFAS Analytical Results
Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ (ng/L)	004 Influent	004 Effluent	004 Influent	004 Effluent	004 Influent	004 Effluent	004 Influent	004 Effluent
	004-INF-0323	004-EFF-0323	004-INF-0323-3	004-INF-0323-3	004-EFF-0323-4	004-INF-0323-4	004-EFF-0323-2	004-INF-0323-2
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--
11Cl-PF3OUdS	--	--	--	--	--	--	--	--
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	--	--	--	--	--	--	--	--
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	--	--	--	--	--	--	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--
9Cl-PF3ONS	--	--	--	--	--	--	--	--
DONA	--	--	--	--	--	--	--	--
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--
N-Methyl Perfluoroctane Sulfonamidoacetic Acid	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--
Perfluorododecane Sulfonic Acid (PFDOS)	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--
Perfluoroheptane Sulfonic Acid (PFHpS)	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--
Perfluorohexadecanoic Acid (PFHxDA)	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--
Perfluoronananesulfonic Acid	--	--	--	--	--	--	--	--
Perfluoronanoic Acid	--	--	--	--	--	--	--	--
Perfluooctadecanoic Acid	--	--	--	--	--	--	--	--
Perfluooctane Sulfonamide	--	--	--	--	--	--	--	--
Perfluopentane Sulfonic Acid (PFPeS)	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--
PFOA	--	--	--	--	--	--	--	--
PFOS	--	--	--	--	--	--	--	--

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

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< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 6-1
Summary of Groundwater Level and Drawdown Information
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, North Carolina

Well ID	Aquifer	Groundwater Elevation from Water Level Gauging Events (feet, mean sea level)					Most Recent Calculated Drawdown (feet, positive value indicates drawdown)
		Baseline		Mid-Commissioning	Post-Startup		
		August 4, 2022	August 17, 2022	January 30, 2023	February 28, 2023	March 29, 2023	March 29 vs. January 30, 2023
Observation Wells ≤ 200 ft Upgradient of Remedy							
OW-34	Surficial Aquifer	62.98	62.81	62.03	64.53	66.36	-4.33
OW-35	Surficial Aquifer	66.33	66.1	65.67	65.71	65.45	0.22
OW-36	Surficial Aquifer	62.72	62.61	62.07	61.85	61.64	0.43
OW-02	Black Creek Aquifer	48.82	48.72	48.79	44.34	39.18	9.61
OW-03	Black Creek Aquifer	49.52	49.44	49.6	44.06	38.43	11.17
OW-07	Black Creek Aquifer	44.87	44.75	45.36	41.1	37.61	7.75
OW-08	Black Creek Aquifer	44.12	43.98	44.6	40.37	36.86	7.74
OW-11	Black Creek Aquifer	49.63	49.57	49.02	48.39	46.58	2.44
OW-12	Black Creek Aquifer	34.08	34.08	34.81	31.61	29.71	5.1
OW-13	Black Creek Aquifer	34.1	34.05	34.42	33.63	32.32	2.1
OW-15	Black Creek Aquifer	Not Gauged	Not Gauged	56.91	56.5	57.53	-0.62
OW-17	Black Creek Aquifer	44.87	44.82	43.53	39.81	34.88	8.65
OW-18	Black Creek Aquifer	47.17	47.37	48.61	48.79	47.95	0.66
OW-19	Black Creek Aquifer	46.36	46.23	46.68	41.42	37.73	8.95
OW-21	Black Creek Aquifer	45.13	45	45.51	41.7	37.87	7.64
OW-24	Black Creek Aquifer	43.17	43.15	43.73	38.94	36.23	7.5
OW-26	Black Creek Aquifer	55.22	55.16	54.84	53.79	45.67	9.17
OW-29	Black Creek Aquifer	59.58	59.54	59.14	58.57	51.34	7.8
OW-31	Black Creek Aquifer	60.44	60.41	60.07	59.43	47	13.07
OW-38	Black Creek Aquifer	Not Gauged	Not Gauged	61.93	61.94	61.64	0.29
OW-41	Black Creek Aquifer	49.13	49.12	48.33	47.66	46.46	1.87
OW-42	Black Creek Aquifer	47.89	47.86	47.42	46.81	45.9	1.52
OW-43	Black Creek Aquifer	34.49	34.42	34.62	33.64	32.04	2.58
PIW-13	Black Creek Aquifer	33.66	33.6	34.2	30.68	24.95	9.25
SMW-12	Black Creek Aquifer	33.03	33.03	33.52	31.19	29.17	4.35
<i>Median (Black Creek Aquifer wells)</i>		45.75	45.62	47.05	42.88	38.15	7.57
Observation Wells ≤ 200 ft Downgradient of Remedy							
OW-14	Black Creek Aquifer	33.62	33.47	34.67	34.09	33.11	1.56
OW-20	Black Creek Aquifer	46.34	46.24	46.53	41.54	39.35	7.18
OW-22	Black Creek Aquifer	43.95	43.89	44.5	40.94	37.53	6.97
OW-23	Black Creek Aquifer	43.27	43.18	43.86	39.75	36.73	7.13
OW-25	Black Creek Aquifer	41.95	41.9	42.52	39	36.5	6.02
OW-44	Black Creek Aquifer	36.51	36.31	36.28	36.94	36.34	-0.06
OW-45	Black Creek Aquifer	44.39	44.2	44.78	45.24	40.05	4.73
OW-46	Black Creek Aquifer	46.28	46.2	46.59	41.41	38.85	7.74
OW-47	Black Creek Aquifer	43.84	43.72	44.33	40.45	36.98	7.35
OW-48	Black Creek Aquifer	43.11	43.06	43.69	39.33	36.4	7.29
OW-49	Black Creek Aquifer	42.13	42.06	42.67	38.83	36.23	6.44
OW-50	Black Creek Aquifer	41.42	41.35	42.01	41.78	35.37	6.64
OW-55	Black Creek Aquifer	Not Gauged	Not Gauged	34.76	32.05	28.42	6.34
OW-57	Black Creek Aquifer	Not Gauged	Not Gauged	45.75	45.24	44.58	1.17
PIW-12	Black Creek Aquifer	33.74	33.69	34.39	31.9	26.64	7.75
PIW-14	Black Creek Aquifer	34.05	34	34.44	32.47	29.9	4.54
PIW-15	Black Creek Aquifer	32.74	32.65	33.54	32.88	32	1.54
PIW-4D	Black Creek Aquifer	43.59	43.45	43.9	46.26	39.89	4.01
<i>Median (Black Creek Aquifer wells)</i>		43.19	43.12	43.18	39.54	36.45	6.34
Observation Wells >200 ft Downgradient of Remedy							
OW-16	Surficial Aquifer	35.39	35.24	36.69	36.49	35.86	0.83
OW-27	Surficial Aquifer	41.16	41.12	41.7	41.36	36.09	5.61
OW-28	Surficial Aquifer	40.04	40.01	40.63	40.43	38.16	2.47
OW-33	Surficial Aquifer	40.42	40.39	41.07	39.89	37.45	3.62
LTW-03	Floodplain	38.05	37.93	39.27	38.48	36.95	2.32
PIW-7S	Floodplain	42.28	42.16	43.03	39.55	36.56	6.47
LTW-02	Black Creek Aquifer	42.97	42.8	43.5	45.36	40.01	3.49
LTW-05	Black Creek Aquifer	41.24	41.2	41.93	38.69	36.3	5.63
OW-30	Black Creek Aquifer	40.38	40.33	40.98	39.55	36.8	4.18
OW-40	Black Creek Aquifer	40.58	40.53	40.66	40.68	40.09	0.57
PIW-11	Black Creek Aquifer	43.28	43.24	43.89	43.62	43.14	0.75
PIW-1D	Black Creek Aquifer	32.59	32.47	33.95	33.15	32.25	1.7
PIW-3D	Black Creek Aquifer	35.39	35.26	36.61	36.39	35.97	0.64
PIW-7D	Black Creek Aquifer	43.18	43.1	43.78	39.98	36.96	6.82
PZ-22	Black Creek Aquifer	43.24	43.15	43.81	40.36	37.28	6.53
<i>Median (Black Creek Aquifer wells)</i>		40.60	40.57	41.17	40.17	36.53	1.70
Observation Wells >200 ft Upgradient of Remedy							
PW-02	Surficial Aquifer	87.271	87.001	85.321	85.091	84.851	0.47
PW-03	Surficial Aquifer	104.947	104.867	104.387	104.447	104.237	0.15
PW-04	Surficial Aquifer	68.401	68.331	67.491	68.361	68.551	-1.06
SMW-09	Surficial Aquifer	82.14	82.03	80.43	80.26	80.12	0.31
PIW-2D	Black Creek Aquifer	58.08	57.94	57.64	57.59	57.67	-0.03
SMW-03B	Black Creek Aquifer	89.92	89.71	87.73	87.47	87.19	0.54
<i>Median (Black Creek Aquifer wells)</i>		74.00	73.83	87.73	72.53	72.43	0.26

Notes

- The following wells will be installed and incorporated in this analysis after the barrier wall is complete: OW-4, OW-9, PIW-10DR, PIW-5S, and PIW-10R.
- The following wells have been used as pumping wells as part of the interim groundwater remedy. They will be incorporated in this analysis when those pumps are removed: BCA-01, BCA-02, NAF-11B, PW-14, PW-15R, and PW-11.

Table 6-2
 Willis Creek PFAS Analytical Results
 Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST ¹ (ng/L)	WC-1			WC-2			WC-3			WC-6
	CAP3Q22-WC-1-24-072122 Sample Date: 21-Jul-22	CAP4Q22-WC-1-24-110922 Sample Date: 9-Nov-22	CAP1Q23-WC-1-24-022523 Sample Date: 25-Feb-23	CAP3Q22-WC-2-24-072122 Sample Date: 21-Jul-22	CAP4Q22-WC-2-22-110922 Sample Date: 9-Nov-22	CAP1Q23-WC-2-24-022523 Sample Date: 25-Feb-23	CAP3Q22-WC-3-24-072122 Sample Date: 21-Jul-22	CAP4Q22-WC-3-24-110922 Sample Date: 9-Nov-22	CAP1Q23-WC-3-24-022523 Sample Date: 25-Feb-23	CAP1Q23-WC-6-021323 Sample Date: 13-Feb-23
Hfpo Dimer Acid	560	580	310	320	490	180	180	190	100	170
PFMOAA	1,300	1,900	480	250	1,000	300	45	72	35	300
PFO2HxA	650	960	280	250	640	160	140	190	74	160
PFO3OA	130	160	45	40	89	21	19	21	8.7	30
PFO4DA	25	29	10	12	17	4.5	5.3	4.8	2.1	6.1
PFO5DA	<3.9	<7.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PMPA	640	790	340	330	570	240	230	260	160	210
PEPA	150	200	74	70	150	52	45	70	32	47
PS Acid	<2.0	2.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	14	14	8	12	11	7.2	9.3	7.8	6.5	7.5
R-PSDA	42 J	36 J	30 J	26 J	31 J	18 J	<2.0	12 J	15 J	18 J
Hydrolyzed PSDA	230 J	230 J	190 J	44 J	130 J	28 J	<2.0	<2.0	<2.0	110 J
R-PSDCA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
NVHOS, Acid Form	21	30	14	8.3	19	5.7	4.6	3.2	2.5	7
EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-EVE Acid	9.9	13	5.1	4.5	12	<2.0	<2.0	<2.0	<2.0	3.1
R-EVE	24 J	16 J	14 J	9.4 J	19 J	9.6 J	5.6 J	6.1 J	7.5 J	8.5 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.7	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA-G	<2.4	<4.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Table 3+ (17 compounds)^{2,3}	3,500	4,700	1,600	1,300	3,000	970	680	820	420	940
Total Table 3+ (20 compounds)²	3,800	5,000	1,800	1,400	3,200	1,000	680	840	440	1,100

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 6-2
 Willis Creek PFAS Analytical Results
 Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST ¹ (ng/L)	WC-1			WC-2			WC-3			WC-6
	CAP3Q22-WC-1-24-072122 Sample Date: 21-Jul-22	CAP4Q22-WC-1-24-110922 Sample Date: 9-Nov-22	CAP1Q23-WC-1-24-022523 Sample Date: 25-Feb-23	CAP3Q22-WC-2-24-072122 Sample Date: 21-Jul-22	CAP4Q22-WC-2-22-110922 Sample Date: 9-Nov-22	CAP1Q23-WC-2-24-022523 Sample Date: 25-Feb-23	CAP3Q22-WC-3-24-072122 Sample Date: 21-Jul-22	CAP4Q22-WC-3-24-110922 Sample Date: 9-Nov-22	CAP1Q23-WC-3-24-022523 Sample Date: 25-Feb-23	CAP1Q23-WC-6-021323 Sample Date: 13-Feb-23
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
DONA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorobutane Sulfonic Acid	4.6	3.9	4.4	4.4	3.6	4.5	4.7	3.1	4.6	3.7
Perfluorobutanoic Acid	6.6	9.1	7	<5.0	10	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	2.4	2.9	<2.0	<2.0	2.4	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic Acid	3.5	4.1	2.8	3	3.9	2.6	2.6	2.3	2.1	2.1 J
Perfluoronananesulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoronanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroctadecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorooctane Sulfonamide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoropentanoic Acid	13	13	7.8	8.8	13	5	5.5	4.5	3.6	4.3
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOA	9.7	10	5.8	3.4	5.1	2.8	2.4	<2.0	<2.0	3.7
PFOS	2.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.3 J

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

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NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

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< - Analyte not detected above associated reporting limit.

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Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- - No data reported

Table 6-3
Downdgradient Observation Well PFAS Analytical Results
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ (ng/L)	OW-28 CAP1Q23-OW-28-022023	OW-30 CAP1Q23-OW-30-021523	OW-33 CAP1Q23-OW-33-021423	OW-40 CAP1Q23-OW-40-021523	OW-54 CAP1Q23-OW-54-021623	OW-55 CAP1Q23-OW-55-021623	OW-56 CAP1Q23-OW-56-022123	OW-57 CAP1Q23-OW-57-021523
	Sample Date: 20-Feb-23	Sample Date: 15-Feb-23	Sample Date: 14-Feb-23	Sample Date: 15-Feb-23	Sample Date: 16-Feb-23	Sample Date: 16-Feb-23	Sample Date: 21-Feb-23	Sample Date: 15-Feb-23
Hfpo Dimer Acid	4,800	9,500	5,300	5,200	4,500	1,800	4,200	11,000
PFMOAA	1,500	32,000	7,900	6,900	360	220	350	130,000
PFO2HxA	2,500	12,000	4,700	4,200	2,600	690	1,800	36,000
PFO3OA	510	2,100	810	1,100	410	58	200	8,600
PFO4DA	110	<59	<59	130	230	<59	<59	1,100
PFO5DA	<78	<78	<78	<78	<78	<78	<78	<78
PMPA	5,000	4,300	4,800	4,300	2,600	2,800	2,600	22,000
PEPA	1,900	1,300	2,000	1,600	1,000	740	990	5,100
PS Acid	<20	<20	<20	<20	<20	<20	<20	770
Hydro-PS Acid	75	<6.1	29	35	120	<6.1	120	220
R-PSDA	340 J	460 J	280 J	<71	<71	<71	310 J	970 J
Hydrolyzed PSDA	<38	760 J	<38	160 J	<38	<38	<38	16,000 J
R-PSDCA	<17	<17	<17	<17	<17	<17	<17	17
NVHOS, Acid Form	110	370	170	130	<15	<15	110	2000
EVE Acid	<17	<17	<17	<17	<17	<17	<17	<17
Hydro-EVE Acid	<14	24	<14	94	<14	<14	<14	200
R-EVE	190 J	410 J	130 J	170 J	<72	160 J	190 J	240 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7
PFECA B	<27	<27	<27	<27	<27	<27	<27	<27
PFECA-G	<48	<48	<48	<48	<48	<48	<48	<48
Total Table 3+ (17 compounds)^{2,3}	17,000	62,000	26,000	24,000	12,000	6,300	10,000	220,000
Total Table 3+ (20 compounds)²	17,000	63,000	26,000	24,000	12,000	6,500	11,000	230,000

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

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ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- No data reported

Table 6-3
Downdgradient Observation Well PFAS Analytical Results
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

METHOD 537 MODIFIED COMPOUNDS LIST¹ (ng/L)	OW-28 CAP1Q23-OW-28-022023	OW-30 CAP1Q23-OW-30-021523	OW-33 CAP1Q23-OW-33-021423	OW-40 CAP1Q23-OW-40-021523	OW-54 CAP1Q23-OW-54-021623	OW-55 CAP1Q23-OW-55-021623	OW-56 CAP1Q23-OW-56-022123	OW-57 CAP1Q23-OW-57-021523
	Sample Date: 20-Feb-23	Sample Date: 15-Feb-23	Sample Date: 14-Feb-23	Sample Date: 15-Feb-23	Sample Date: 16-Feb-23	Sample Date: 16-Feb-23	Sample Date: 21-Feb-23	Sample Date: 15-Feb-23
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
DONA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorobutane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0	2.3	<2.0	2.5	4.1
Perfluorobutanoic Acid	51	150	45	60	23	18	22	140
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	7.2	12	5.6	16	9.3	<2.0	3.5	71
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.3
Perfluorohexanoic Acid	9.9	16	7.8	11	5.3	2.6	6.7	63
Perfluoronananesulfonic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoronanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroctadecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroctane Sulfonamide	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoropentanoic Acid	68	530	93	120	40	27	44	320
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
PFOA	4.3	<2.0	<2.0	<2.0	2.3	17	<2.0	2.7
PFOS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

Notes

1 - The EPA Method 537 was modified to incorporate the Table3+ 20 compounds.

2 - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

3 - Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

Bold - Analyte detected above associated reporting limit.

B - Not detected substantially above the level reported in the laboratory or field blanks.

J - Analyte detected. Reported value may not be accurate or precise.

UJ - Analyte not detected. Reporting limit may not be accurate or precise.

NA - Constituent not analyzed

ng/L - nanograms per liter

N/A - not applicable

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

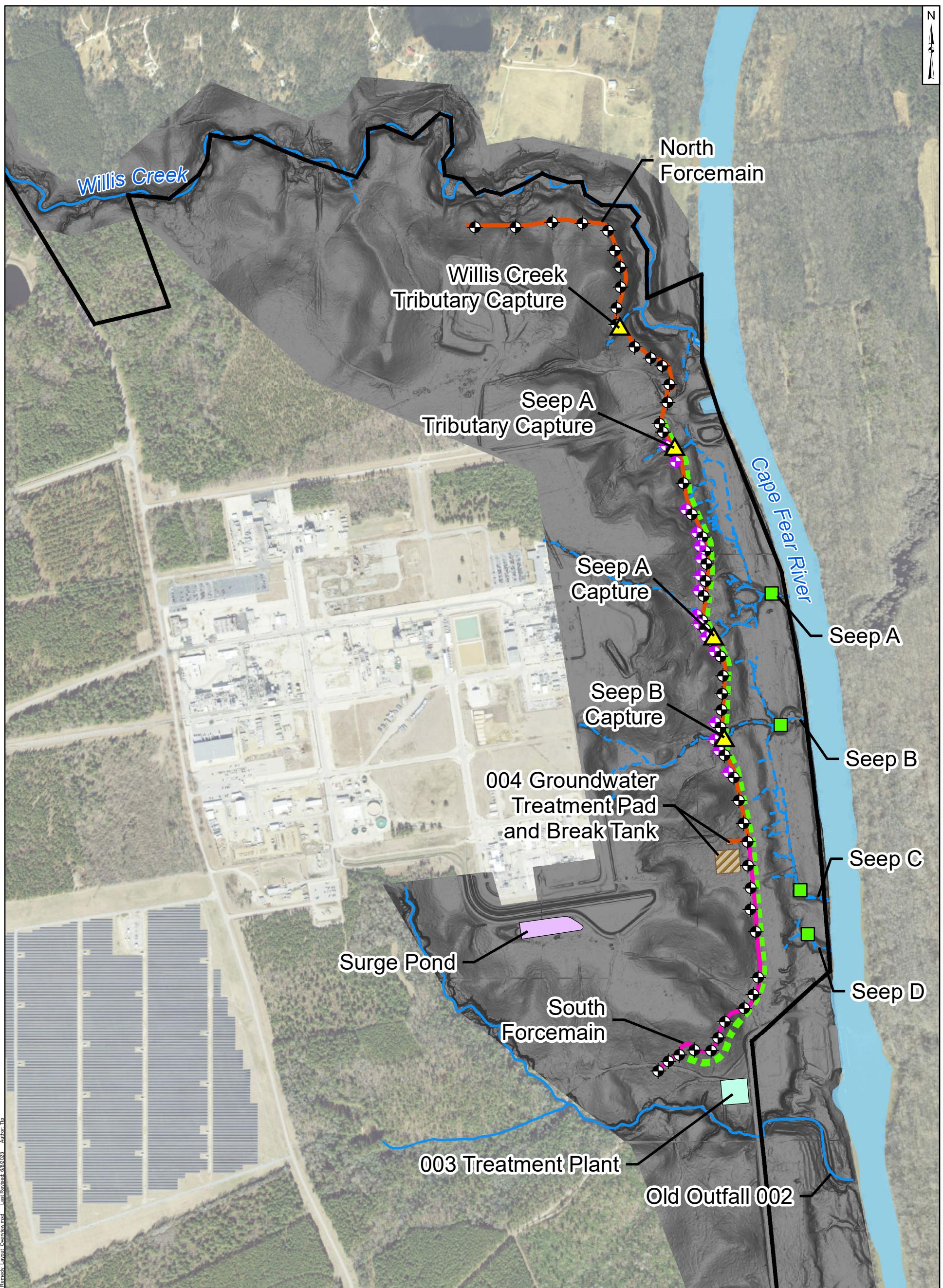
< - Analyte not detected above associated reporting limit.

ND - Compound was not detected above its associated reporting limit.

Sample Identification Label Key: "EW-[# id]-[MMDDYY]"

-- No data reported

FIGURES



Legend

- | | |
|---------------------------------------|-----------------------------|
| ● Surficial Aquifer Extraction Well | — South Forcemain |
| ● Black Creek Aquifer Extraction Well | ■ Barrier Wall |
| ▲ Ex-situ Capture Location | — Site Boundary |
| ■ Flow-Through Cell | - - - Seep |
| — North Forcemain | — Nearby Tributary to River |

Notes:

1. Surficial Aquifer extraction wells have been offset for visibility. Therefore, the placement of these wells on this map do not reflect their true geographic coordinates.
2. The outline of Cape Fear River is approximate and is based on open data from ArcGIS Online and North Carolina Department of Environmental Quality Online GIS (MajorHydro shapefile).
3. Basemap sources: Esri, Maxar, Earthstar Geographics, and the GIS User Community

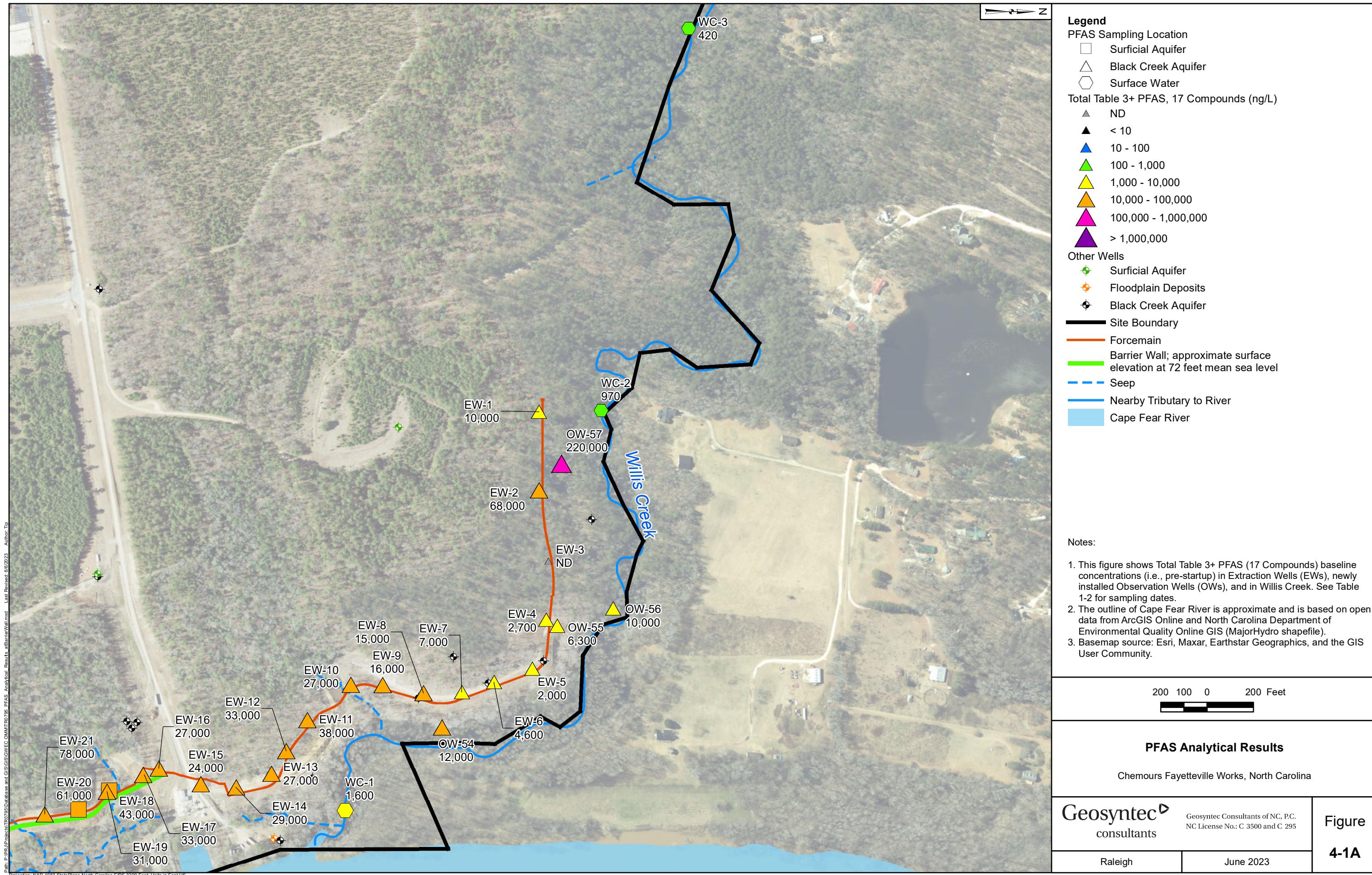
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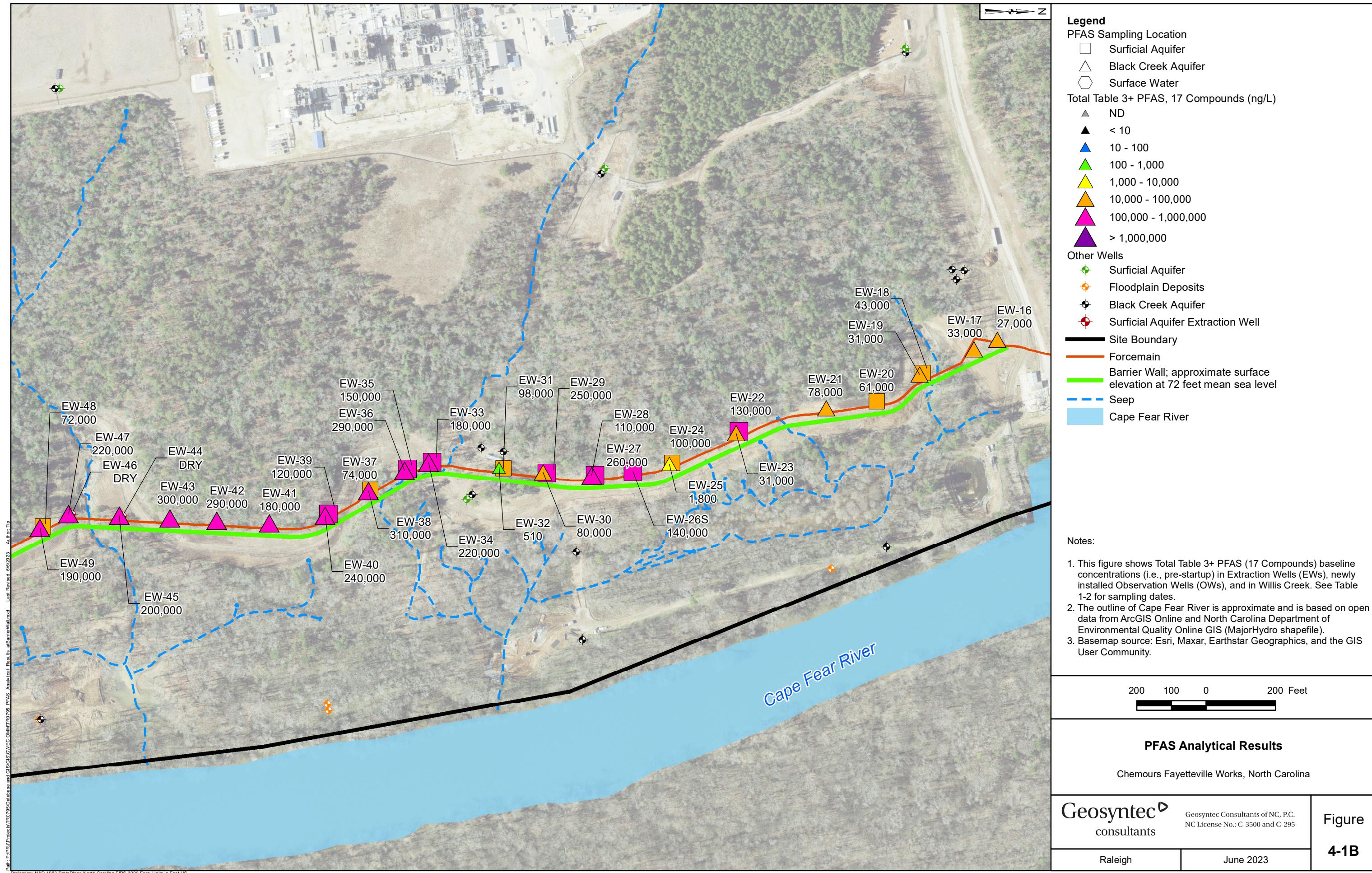
Remedy Layout Overview
Chemours Fayetteville Works, North Carolina

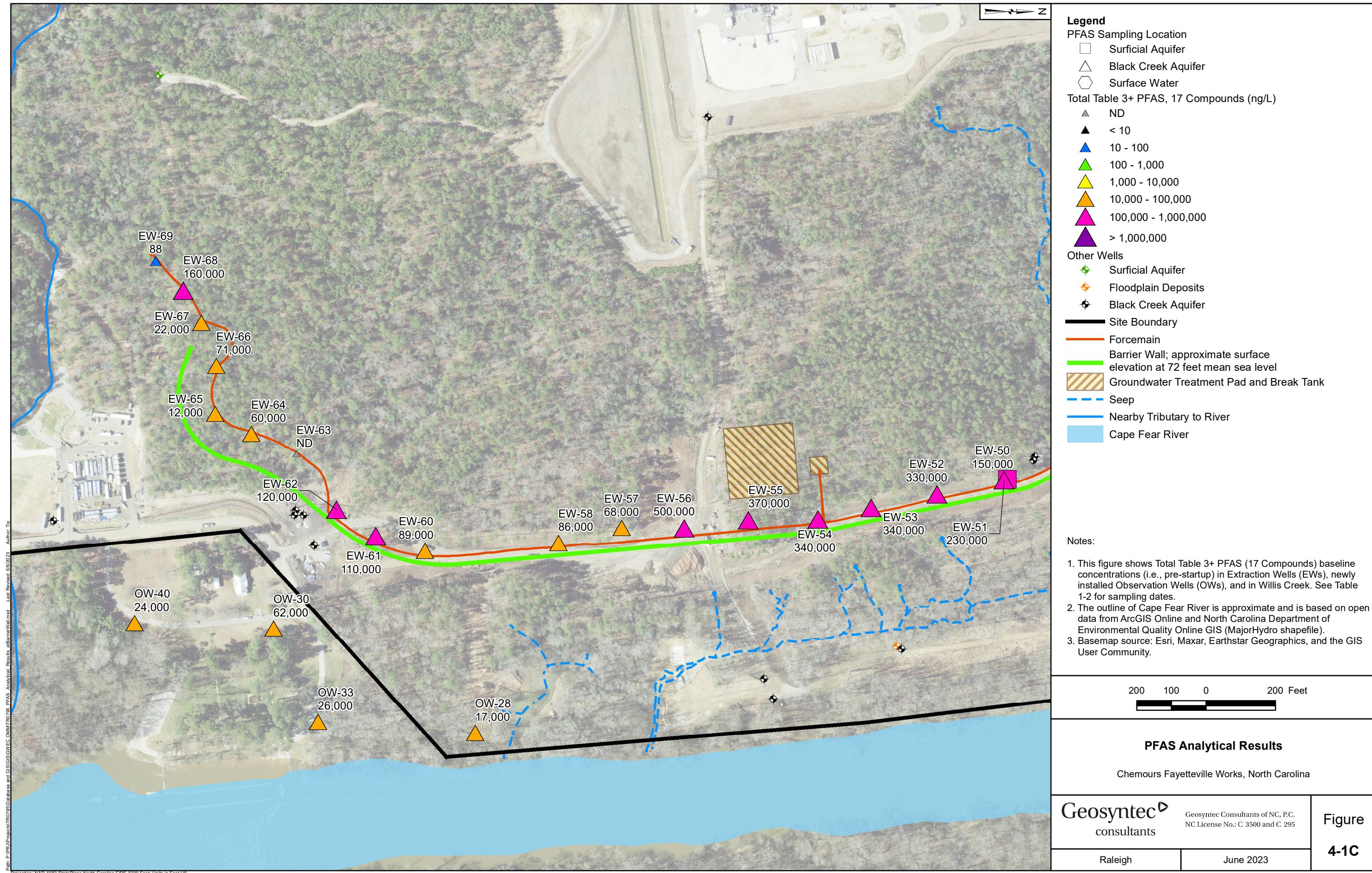
Geosyntec
consultants

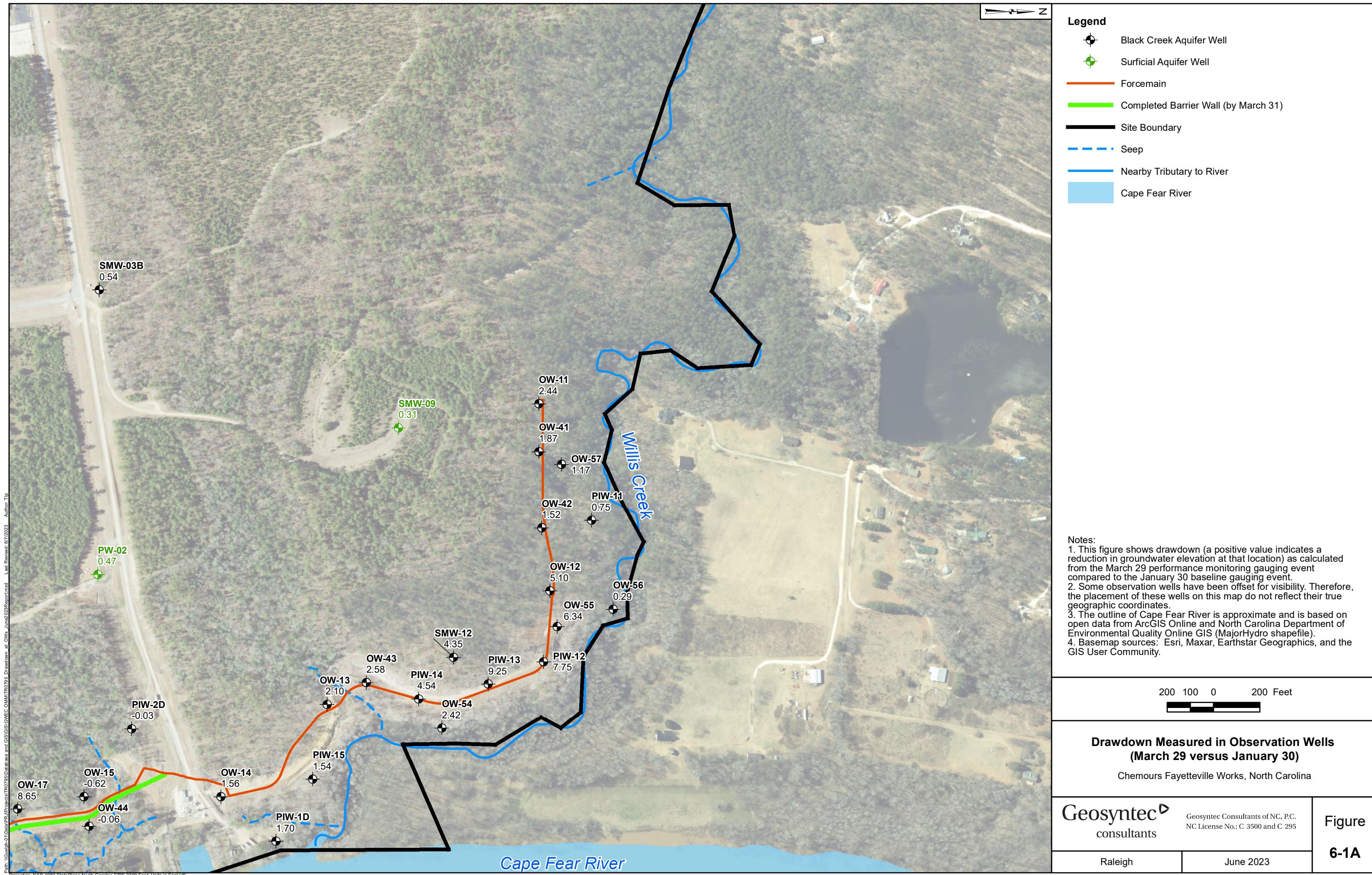
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NC License No.: C 3500 and C 295

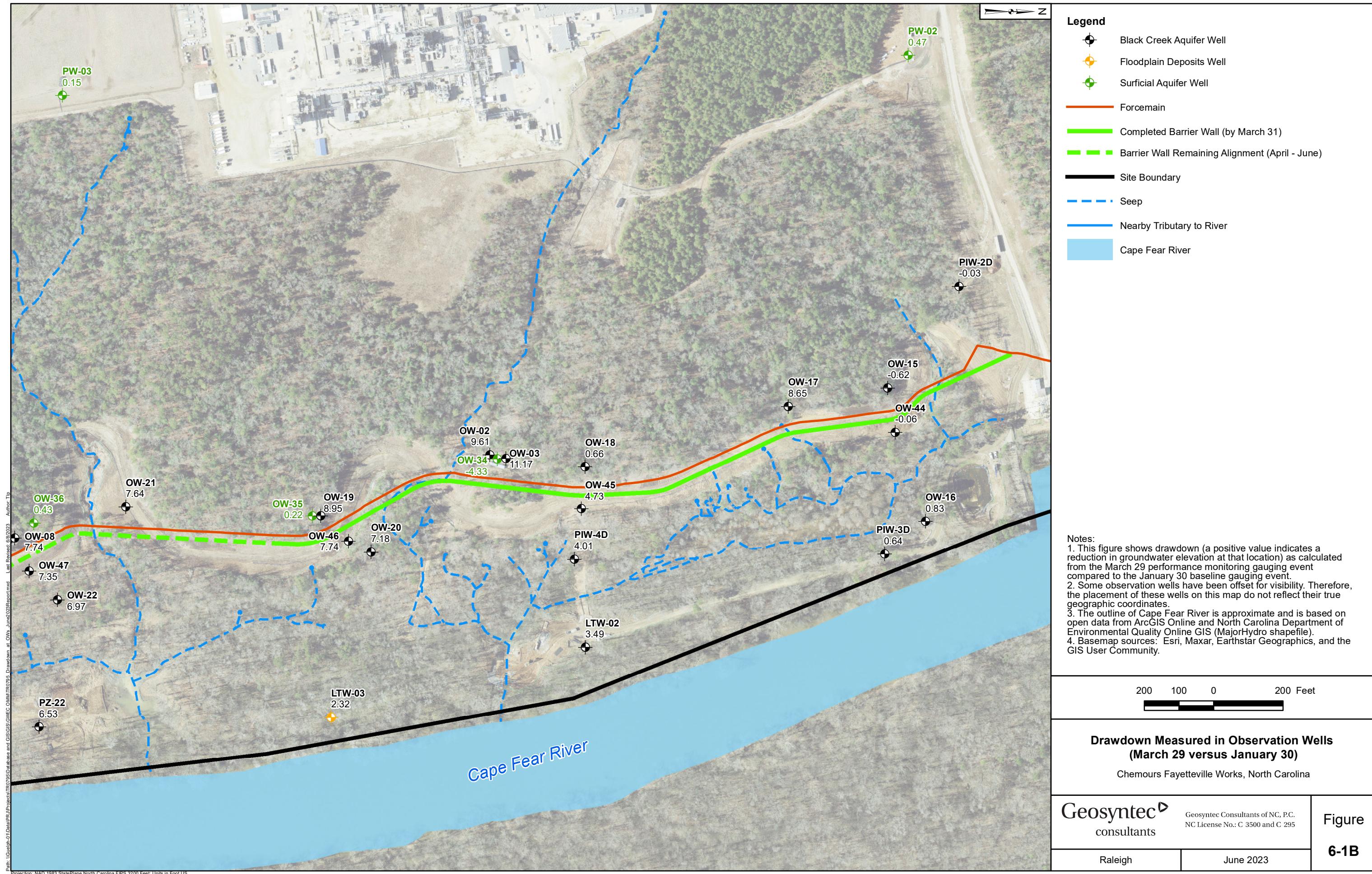
Figure
1-1

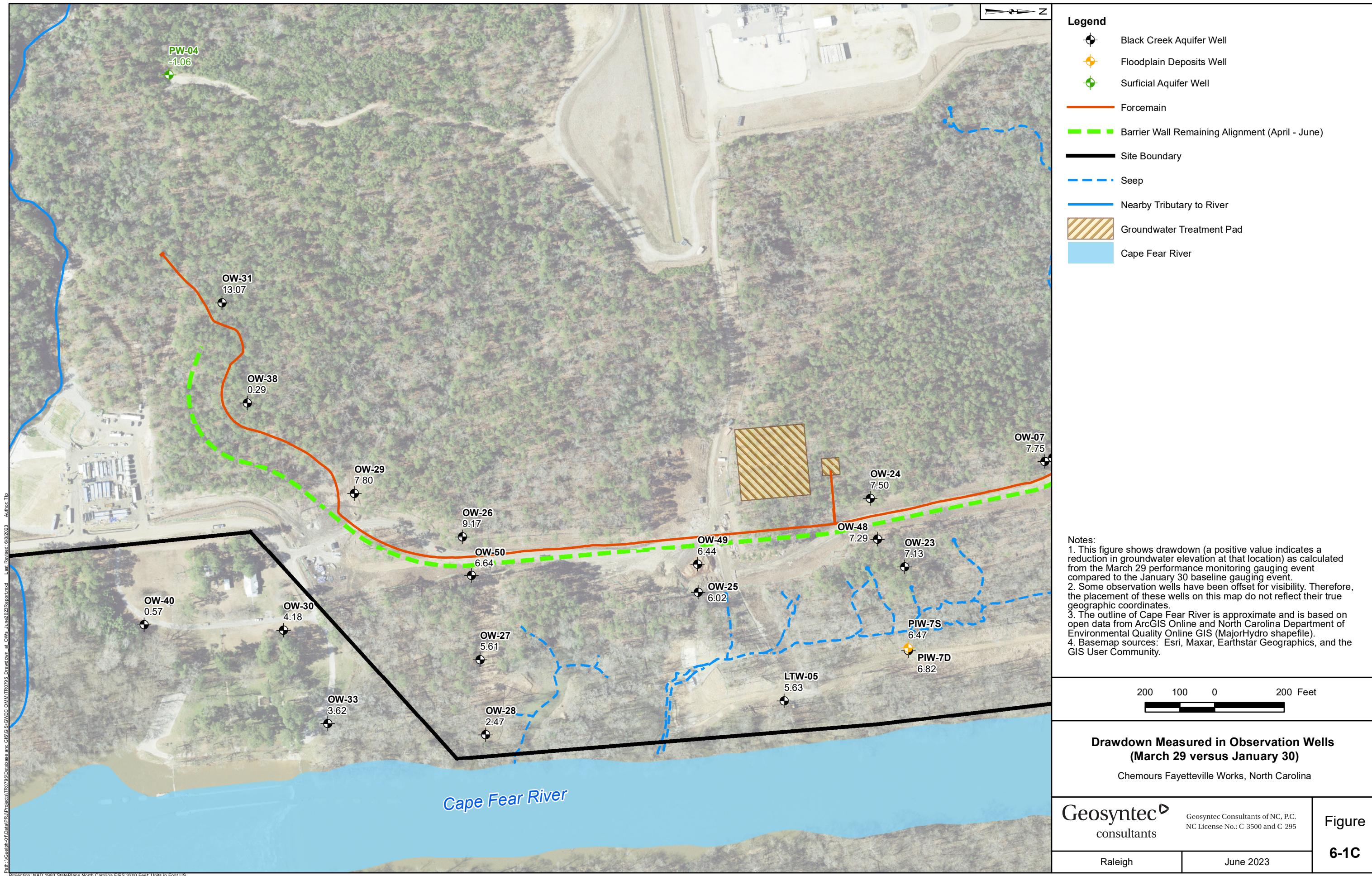












APPENDIX A

Laboratory Analytical Data Review Narratives

(Full lab reports to be uploaded to OneDrive and EQuIS)

ADQM Data Review

Site: Chemours Fayetteville

Project: Extraction Well Sampling, 004 NPDES Sampling 2/23, 004 NPDES Sampling 3/23, 004 Commissioning, CAP SW Sampling (3Q22, 4Q22, 1Q23), CAP SW Sampling 3Q22

Project Reviewer: Bridget Gavaghan

Sample Summary

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
CAP3Q22-WC-1-24-072122	320-90298-1	Surface Water	N	07/21/2022	04:00	FS
CAP3Q22-SEEP-C-EFF-24-072122	320-90298-2	Surface Water	N	07/21/2022	05:24	FS
CAP3Q22-SEEP-D-EFF-24-072122	320-90298-3	Surface Water	N	07/21/2022	05:30	FS
CAP3Q22-OUTFALL-002-24-072122	320-90298-4	Surface Water	N	07/21/2022	05:18	FS
CAP3Q22-OUTFALL-002-24-072122D	320-90298-5	Surface Water	N	07/21/2022	05:18	DUP
CAP3Q22-OLDOF-1-24-072122	320-90298-6	Surface Water	N	07/21/2022	12:06	FS
CAP3Q22-WC-2-24-072122	320-90298-7	Surface Water	N	07/21/2022	04:00	FS
CAP3Q22-WC-3-24-072122	320-90298-8	Surface Water	N	07/21/2022	04:00	FS
CAP4Q22-WC-1-24-110922	320-94319-1	Surface Water	N	11/09/2022	09:26	FS
CAP4Q22-FB-110922	320-94319-10	Blank Water	N	11/09/2022	17:15	FB
CAP4Q22-SEEP-C-EFF-23-110922	320-94319-2	Surface Water	N	11/09/2022	10:06	FS
CAP4Q22-SEEP-D-EFF-24-110922	320-94319-3	Surface Water	N	11/09/2022	11:26	FS
CAP4Q22-OUTFALL-002-24-110922	320-94319-4	Surface Water	N	11/09/2022	09:54	FS
CAP4Q22-OLDOF-1-24-110922	320-94319-5	Surface Water	N	11/09/2022	11:06	FS
CAP4Q22-WC-2-22-110922	320-94319-6	Surface Water	N	11/09/2022	06:00	FS
CAP4Q22-WC-3-24-110922	320-94319-7	Surface Water	N	11/09/2022	14:20	FS
CAP4Q22-EQBLK-PP-110922	320-94319-8	Blank Water	N	11/09/2022	17:00	FS
CAP4Q22-EQBLK-IS-110922	320-94319-9	Blank Water	N	11/09/2022	17:10	EB
CAP1Q23-CFR-RM-76-021323	320-96848-1	Surface Water	N	02/13/2023	13:00	FS
CAP1Q23-WC-6-021323	320-96848-2	Surface Water	N	02/13/2023	13:56	FS
CAP1Q23-GBC-5-021323	320-96848-3	Surface Water	N	02/13/2023	15:30	FS
CAP1Q23-OLDOF-1B-021323	320-96848-4	Surface Water	N	02/13/2023	16:10	FS
CAP1Q23-OUTFALL-002-021423	320-96848-5	Surface Water	N	02/14/2023	14:00	FS
CAP1Q23-OUTFALL-002-24-021523	320-96848-6	Surface Water	N	02/15/2023	12:50	FS
RIVER-WATER-INTAKE2-24-021423	320-96848-7	Surface Water	N	02/14/2023	12:01	FS
CAP1Q23-EQBLK-DR-021323	320-96848-8	Blank Water	N	02/13/2023	13:00	EB
CAP1Q23-BLADEN-1D-R-021423	320-96856-1	Groundwater	N	02/14/2023	14:10	FS
CAP1Q23-PW-06-021423	320-96856-2	Groundwater	N	02/14/2023	15:50	FS
CAP1Q23-PW-06-021423-D	320-96856-3	Groundwater	N	02/14/2023	15:50	DUP
CAP1Q23-OW-33-021423	320-96856-4	Groundwater	N	02/14/2023	15:58	FS
CAP1Q23-EQBLK-PP-021423	320-96856-5	Blank Water	N	02/14/2023	14:30	EB

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
CAP1Q23-OW-30-021523	320-96926-1	Groundwater	N	02/15/2023	11:35	FS
CAP1Q23-OW-40-021523	320-96926-2	Groundwater	N	02/15/2023	13:08	FS
CAP1Q23-OW-57-021523	320-96926-3	Groundwater	N	02/15/2023	16:10	FS
CAP1Q23-LTW-05-021523	320-96926-4	Groundwater	N	02/15/2023	11:25	FS
CAP1Q23-PIW-7D-021523	320-96926-5	Groundwater	N	02/15/2023	14:55	FS
CAP1Q23-PIW-7S-021523	320-96926-6	Groundwater	N	02/15/2023	15:55	FS
CAP1Q23-EQBLK-DV-021723	320-96926-7	Blank Water	N	02/17/2023	10:40	EB
CAP1Q23-OW-54-021623	320-96927-1	Groundwater	N	02/16/2023	13:45	FS
CAP1Q23-OW-55-021623	320-96927-2	Groundwater	N	02/16/2023	15:32	FS
CAP1Q23-LTW-01-021623	320-96927-3	Groundwater	N	02/16/2023	09:50	FS
CAP1Q23-LTW-02-021623	320-96927-4	Groundwater	N	02/16/2023	11:55	FS
CAP1Q23-PIW-1S-021623	320-96927-5	Groundwater	N	02/16/2023	14:30	FS
CAP1Q23-PIW-1D-021623	320-96927-6	Groundwater	N	02/16/2023	16:15	FS
CAP1Q23-PIW-3D-021623	320-96927-7	Groundwater	N	02/16/2023	13:10	FS
CAP1Q23-LTW-03-022123	320-97053-1	Groundwater	N	02/21/2023	13:25	FS
CAP1Q23-LTW-04-021723	320-97053-2	Groundwater	N	02/17/2023	10:50	FS
CAP1Q23-OW-28-022023	320-97053-3	Groundwater	N	02/20/2023	13:10	FS
CAP1Q23-OW-56-022123	320-97053-4	Groundwater	N	02/21/2023	16:05	FS
CAP1Q23-PZ-22-022023	320-97053-5	Groundwater	N	02/20/2023	15:35	FS
CAP1Q23-CFR-TARHEEL-022223	320-97412-1	Surface Water	N	02/22/2023	13:20	FS
CAP1Q23-CFR-BLADEN-022223	320-97412-2	Surface Water	N	02/22/2023	12:05	FS
CAP1Q23-CFR-KINGS-022423	320-97412-3	Surface Water	N	02/24/2023	11:35	FS
CAP1Q23-WC-1-24-022523	320-97412-4	Surface Water	N	02/25/2023	10:42	FS
CAP1Q23-WC-2-24-022523	320-97412-5	Surface Water	N	02/25/2023	11:09	FS
CAP1Q23-WC-3-24-022523	320-97412-6	Surface Water	N	02/25/2023	11:38	FS
Outfall 004-INF-020723	410-114753-1	Other liquid	N	02/07/2023	07:15	FS
Outfall 004-EFF-020723	410-114753-2	Other liquid	N	02/07/2023	07:23	FS
004-INF-021023	410-115277-1	Other liquid	N	02/10/2023	11:20	FS
004-EFF-021023	410-115277-2	Other liquid	N	02/10/2023	11:20	FS
004-INF-021423	410-115532-1	Other Liquid	N	02/14/2023	08:50	FS
004-EFF-021423	410-115532-2	Other Liquid	N	02/14/2023	09:00	FS
004-INF-022123	410-116358-1	Other Liquid	N	02/21/2023	09:30	FS
004-EFF-022123	410-116358-2	Other Liquid	N	02/21/2023	09:30	FS
004-INF-022823	410-117119-1	Other Liquid	N	02/28/2023	08:45	FS
004-EFFF-022823	410-117119-2	Other Liquid	N	02/28/2023	08:45	FS
004-INF-0323	410-117964-1	Other Liquid	N	03/07/2023	09:30	FS
004-EFF-0323	410-117964-2	Other Liquid	N	03/07/2023	09:30	FS
004-INF-0323-3	410-118883-1	Other Liquid	N	03/14/2023	07:20	FS

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
004-EFF-0323-3	410-118883-2	Other Liquid	N	03/14/2023	07:20	FS
004-INF-0323-4	410-119666-1	Other Liquid	N	03/21/2023	09:00	FS
004-EFF-0323-4	410-119666-2	Other Liquid	N	03/21/2023	08:00	FS
004-INF-0323-2	410-120551-1	Other Liquid	N	03/28/2023	07:10	FS
004-EFF-0323-2	410-120551-2	Other Liquid	N	03/28/2023	07:10	FS
EW-32-012423	320-96301-1	Groundwater	N	01/24/2023	16:20	FS
EW-32-012423-Z	320-96301-2	Groundwater	Y	01/24/2023	16:20	FS
EW-33-012423	320-96301-3	Groundwater	N	01/24/2023	16:22	FS
EW-33-012423-Z	320-96301-4	Groundwater	Y	01/24/2023	16:22	FS
EW-34-012423	320-96301-5	Groundwater	N	01/24/2023	16:15	FS
EW-35-012423	320-96301-6	Groundwater	N	01/24/2023	15:40	FS
EW-36-012423	320-96301-7	Groundwater	N	01/24/2023	15:35	FS
EW-38-012423	320-96301-8	Groundwater	N	01/24/2023	15:13	FS
EW-39-012423	320-96301-9	Groundwater	N	01/24/2023	15:45	FS
EW-26S-012523	320-96305-1	Groundwater	N	01/25/2023	09:47	FS
EW-26S-012523-Z	320-96305-2	Groundwater	Y	01/25/2023	09:47	FS
EW-27-012523	320-96305-3	Groundwater	N	01/25/2023	09:35	FS
EW-29-012523	320-96305-4	Groundwater	N	01/25/2023	08:54	FS
EW-29-012523-Z	320-96305-5	Groundwater	Y	01/25/2023	08:54	FS
EW-35-012523-Z	320-96305-6	Groundwater	Y	01/25/2023	15:40	FS
EW-45-012523	320-96305-7	Groundwater	N	01/25/2023	11:22	FS
EW-47-012523	320-96305-8	Groundwater	N	01/25/2023	11:55	FS
EW-48-012523	320-96305-9	Groundwater	N	01/25/2023	12:02	FS
EW-39-012423-Z	320-96310-1	Groundwater	Y	01/24/2023	15:45	FS
EW-40-012423	320-96310-2	Groundwater	N	01/24/2023	15:35	FS
EW-19-012523	320-96310-3	Groundwater	N	01/25/2023	11:13	FS
EW-20-012523	320-96310-4	Groundwater	N	01/25/2023	11:00	FS
EW-20-012523-Z	320-96310-5	Groundwater	Y	01/25/2023	11:00	FS
EW-23-012523	320-96310-6	Groundwater	N	01/25/2023	09:45	FS
EW-24-012523	320-96310-7	Groundwater	N	01/25/2023	09:30	FS
EW-25-012523	320-96310-8	Groundwater	N	01/25/2023	09:20	FS
EW-49-012523	320-96314-1	Groundwater	N	01/25/2023	12:10	FS
EW-50-012523	320-96314-2	Groundwater	N	01/25/2023	12:15	FS
EW-51-012523	320-96314-3	Groundwater	N	01/25/2023	12:10	FS
EW-18-012523	320-96314-4	Groundwater	N	01/25/2023	11:25	FS
EW-EQ-012523	320-96314-5	Blank Water	N	01/25/2023	14:28	EB
EW-FB-012523	320-96314-6	Blank Water	N	01/24/2023	14:30	FB
EW-EQ-012523-Z	320-96314-7	Blank Water	Y	01/24/2023	14:28	EB
EW-FB-012523-Z	320-96314-8	Blank Water	Y	01/24/2023	14:30	FB
EW-4-012623	320-96454-1	Groundwater	N	01/26/2023	15:45	FS

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
EW-15-012623	320-96454-2	Groundwater	N	01/26/2023	14:06	FS
EW-16-012623	320-96454-3	Groundwater	N	01/26/2023	14:20	FS
EW-16-012623-Z	320-96454-4	Groundwater	Y	01/26/2023	14:20	FS
EW-17-012623	320-96454-5	Groundwater	N	01/26/2023	15:30	FS
EW-17-012623-Z	320-96454-6	Groundwater	Y	01/26/2023	15:30	FS
EW-22-012623	320-96454-7	Groundwater	N	01/26/2023	15:15	FS
EW-28-012623	320-96454-8	Groundwater	N	01/26/2023	16:20	FS
EW-30-012623	320-96454-9	Groundwater	N	01/26/2023	16:35	FS
EW-67-012623	320-96455-1	Groundwater	N	01/26/2023	11:10	FS
EW-EB-GEO-012623-Z	320-96455-10	Blank Water	Y	01/26/2023	17:30	EB
EW-68-012623	320-96455-2	Groundwater	N	01/26/2023	10:50	FS
EW-69-012623	320-96455-3	Groundwater	N	01/26/2023	10:05	FS
EW-69-012623-Z	320-96455-4	Groundwater	Y	01/26/2023	10:05	FS
EW-FB-012623	320-96455-5	Blank Water	N	01/26/2023	14:00	FB
EW-FB-012623-Z	320-96455-6	Blank Water	Y	01/26/2023	14:00	FB
EW-EB-012623	320-96455-7	Blank Water	N	01/26/2023	17:00	EB
EW-EB-012623-Z	320-96455-8	Blank Water	Y	01/26/2023	17:00	EB
EW-EB-GEO-012623	320-96455-9	Blank Water	N	01/26/2023	17:30	EB
EW-57-012623	320-96458-1	Groundwater	N	01/26/2023	09:25	FS
EW-58-012623	320-96458-2	Groundwater	N	01/26/2023	09:40	FS
EW-58-012623-Z	320-96458-3	Groundwater	Y	01/26/2023	09:40	FS
EW-60-012623	320-96458-4	Groundwater	N	01/26/2023	09:10	FS
EW-61-012623	320-96458-5	Groundwater	N	01/26/2023	10:25	FS
EW-63-012623	320-96458-6	Groundwater	N	01/26/2023	09:25	FS
EW-65-012623	320-96458-7	Groundwater	N	01/26/2023	09:10	FS
EW-31-012623	320-96460-1	Groundwater	N	01/26/2023	14:38	FS
EW-42-012623	320-96460-2	Groundwater	N	01/26/2023	13:40	FS
EW-43-012623	320-96460-3	Groundwater	N	01/26/2023	13:35	FS
EW-52-012623	320-96460-4	Groundwater	N	01/26/2023	13:15	FS
EW-52-012623-Z	320-96460-5	Groundwater	Y	01/26/2023	13:15	FS
EW-53-012623	320-96460-6	Groundwater	N	01/26/2023	13:35	FS
EW-54-012623	320-96460-7	Groundwater	N	01/26/2023	13:40	FS
EW-55-012623	320-96460-8	Groundwater	N	01/26/2023	09:00	FS
EW-56-012623	320-96460-9	Groundwater	N	01/26/2023	09:10	FS
EW-5-012723	320-96462-1	Groundwater	N	01/27/2023	13:15	FS
EW-6-012723	320-96462-2	Groundwater	N	01/27/2023	13:10	FS
EW-7-012723	320-96462-3	Groundwater	N	01/27/2023	13:35	FS
EW-8-012723	320-96462-4	Groundwater	N	01/27/2023	13:40	FS
EW-8-012723-Z	320-96462-5	Groundwater	Y	01/27/2023	13:40	FS
EW-9-012723	320-96462-6	Groundwater	N	01/27/2023	13:28	FS

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
EW-9-012723-Z	320-96462-7	Groundwater	Y	01/27/2023	13:28	FS
EW-8-012723-D	320-96462-8	Groundwater	N	01/27/2023	13:40	DUP
EW-8-012723-D-Z	320-96462-9	Groundwater	Y	01/27/2023	13:40	DUP
EW-21-012723	320-96489-1	Groundwater	N	01/27/2023	12:55	FS
EW-FB-012723	320-96489-2	Blank Water	N	01/27/2023	15:10	FB
EW-FB-012723-Z	320-96489-3	Blank Water	Y	01/27/2023	15:10	FB
EW-EB-012723	320-96489-4	Blank Water	N	01/27/2023	15:00	EB
EW-EB-012723-Z	320-96489-5	Blank Water	Y	01/27/2023	15:00	EB
EW-EB-Bailer-012723	320-96489-6	Blank Water	N	01/27/2023	15:20	EB
EW-1-020623	320-96584-1	Groundwater	N	02/06/2023	09:25	FS
EW-37-020623-Z	320-96584-10	Groundwater	Y	02/06/2023	13:40	FS
EW-41-020623	320-96584-11	Groundwater	N	02/06/2023	12:15	FS
EW-41-020623-Z	320-96584-12	Groundwater	Y	02/06/2023	12:20	FS
EW-60-020623	320-96584-13	Groundwater	N	02/06/2023	13:00	FS
EW-60-020623-DUP	320-96584-14	Groundwater	N	02/06/2023	13:00	DUP
EW-64-020623	320-96584-15	Groundwater	N	02/06/2023	14:20	FS
EW-66-020623	320-96584-16	Groundwater	N	02/06/2023	15:45	FS
FB-020623	320-96584-17	Blank Water	N	02/06/2023	16:10	FB
EW-2-020623	320-96584-2	Groundwater	N	02/06/2023	10:00	FS
EW-3-020623	320-96584-3	Groundwater	N	02/06/2023	10:05	FS
EW-10-020623	320-96584-4	Groundwater	N	02/06/2023	10:30	FS
EW-11-020623	320-96584-5	Groundwater	N	02/06/2023	10:45	FS
EW-12-020623	320-96584-6	Groundwater	N	02/06/2023	11:00	FS
EW-13-020623	320-96584-7	Groundwater	N	02/06/2023	11:15	FS
EW-14-020623	320-96584-8	Groundwater	N	02/06/2023	11:20	FS
EW-37-020623	320-96584-9	Groundwater	N	02/06/2023	13:40	FS
EW-62-031423	320-97704-1	Groundwater	N	03/14/2023	15:20	FS
EW-62-031423-Z	320-97704-2	Groundwater	Y	03/14/2023	15:25	FS

* FS=Field Sample
 DUP=Field Duplicate
 FB=Field Blank
 EB=Equipment Blank
 TB=Trip Blank

Analytical Protocol

Lab Name	Lab Method	Parameter Category	Sampling Program
LANCASTER LABORATORIES	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	004 NPDES Sampling 2/23
LANCASTER LABORATORIES	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	004 NPDES Sampling 3/23
LANCASTER LABORATORIES	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	004 Commissioning
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 3Q22
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 4Q22
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 1Q23
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP MW Sampling 1Q23
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 4Q22
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 1Q23
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP MW Sampling 1Q23
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 3Q22
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	Extraction Well Sampling
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	Extraction Well Sampling
LANCASTER LABORATORIES	EPA 537 Rev. 1.1 modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	004 NPDES Sampling 2/23

ADQM Data Review Checklist

Item	Description	Yes	No*	DVM Narrative Report	Laboratory Report	Exception Report (ER) #
A	Did samples meet laboratory acceptability requirements upon receipt (i.e., intact, within temperature, properly preserved, and no headspace where applicable)?	X				
B	Were samples received by the laboratory in agreement with the associated chain of custody?		X		X	
C	Was the chain of custody properly completed by the laboratory and/or field team?	X				
D	Were samples prepped/analyzed by the laboratory within method holding times?		X	X	X	
E	Were data review criteria met for method blanks, LCSs/LCSDs, MSs/MSDs, PDSs, SDs, replicates, surrogates, sample results within calibration range, total/dissolved samples, field duplicates, field/equipment/trip blanks?		X	X	X	
F	Were all data usable and not R qualified?	X				
ER#	Description					
Other QA/QC Items to Note:						

* See DVM Narrative Report, Laboratory Report, and/or ER # for further details as indicated.

The electronic data submitted for this project were reviewed via the Data Verification Module (DVM) process. Overall, the data are acceptable for use without qualification, except as noted on the attached DVM Narrative Report.

The lab reports due to a large page count are stored on a network shared drive and are available to be posted on external shared drives, or on a flash drive.

Data Verification Module (DVM)

The DVM is an internal review process used by the ADQM group to assist with the determination of data usability. The electronic data deliverables received from the laboratory are loaded into the Locus EIM™ database and processed through a series of data quality checks, which are a combination of software, Locus EIM™ database Data Verification Module (DVM), and manual reviewer evaluations. The data are evaluated against the following data usability checks:

- Field and laboratory blank contamination
- US EPA hold time criteria
- Missing Quality Control (QC) samples
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries and the relative percent differences (RPDs) between these spikes
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries and the RPD between these spikes
- Surrogate spike recoveries for organic analyses
- Difference/RPD between field duplicate sample pairs
- RPD between laboratory replicates for inorganic analyses
- Difference/percent difference between total and dissolved sample pairs

There are two qualifier fields in EIM:

Laboratory Qualifier is the qualifier assigned by the laboratory and may not reflect the usability of the data. This qualifier may have many different meanings and can vary between labs and over time within the same lab. Please refer to the laboratory report for a description of the laboratory qualifiers. As they are laboratory descriptors they are not to be used when evaluating the data.

Validation Qualifier is the 3rd party formal validation qualifier if this was performed. Otherwise this field contains the qualifier resulting from the ADQM DVM review process. This qualifier assesses the usability of the data and may not equal the laboratory qualifier. The DVM applies the following data evaluation qualifiers to analysis results, as warranted:

Qualifier	Definition
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
J	Analyte present. Reported value may not be accurate or precise.
UJ	Not detected. Reporting limit may not be accurate or precise.

The **Validation Status Code** field is set to “DVM” if the ADQM DVM process has been performed. If the DVM has not been run, the field will be blank.

If the DVM has been run (**Validation Status Code** equals “DVM”), use the **Validation Qualifier**.

If the data have been validated by a third party, the field “**Validated By**” will be set to the validator (e.g., ESI for Environmental Standards, Inc

DVM Narrative Report

Site: Fayetteville

Sampling Program:

CAP SW Sampling 3Q22

Validation Options:

LABSTATS

Validation Reason Code:

Contamination detected in equipment blank(s). Sample result does not differ significantly from the analyte concentration detected in the associated equipment blank(s).

Field Sample ID	Sampled Lab Sample ID	Analyte	Date		Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
			Result	Units							
CAP3Q22-SEEP-D-EFF-24-072122	07/21/2022 320-90298-3	PFO2HxA	0.0060	ug/L	PQL	0.0020	B	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-OUTFALL-002-24-072122	07/21/2022 320-90298-4	PFMOAA	0.024	ug/L	PQL	0.0020	B	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
EW-50-012523	01/25/2023 320-96314-2	Perfluorododecanoic Acid	0.084	UG/L	PQL	0.055	B	537 Modified		3535	
EW-49-012523	01/25/2023 320-96314-1	Perfluorododecanoic Acid	0.084	UG/L	PQL	0.055	B	537 Modified		3535	
CAP3Q22-OUTFALL-002-24-072122D	07/21/2022 320-90298-5	PFMOAA	0.023	ug/L	PQL	0.0020	B	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit but above 10%. The actual detection limits may be higher than reported.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-FB-012623	01/26/2023	320-96455-5	R-PSDA	0.0020	UG/L	PQL	0.0020	UJ	537 Modified		3535	
EW-FB-012623-Z	01/26/2023	320-96455-6	R-PSDA	0.0020	UG/L	PQL	0.0020	UJ	537 Modified		3535	
EW-69-012623	01/26/2023	320-96455-3	R-PSDA	0.028	UG/L	PQL	0.028	UJ	537 Modified		3535	
EW-69-012623-Z	01/26/2023	320-96455-4	R-PSDA	0.028	UG/L	PQL	0.028	UJ	537 Modified		3535	
EW-EB-012623	01/26/2023	320-96455-7	R-PSDA	0.0020	UG/L	PQL	0.0020	UJ	537 Modified		3535	
EW-EB-012623-Z	01/26/2023	320-96455-8	R-PSDA	0.0020	UG/L	PQL	0.0020	UJ	537 Modified		3535	
EW-EB-GEO-012623	01/26/2023	320-96455-9	R-PSDA	0.0020	UG/L	PQL	0.0020	UJ	537 Modified		3535	

Site: Fayetteville

Sampling Program: CAP SW Sampling 3Q22

Validation Options: LABSTATS

Validation Reason Code: Associated MS and/or MSD analysis had relative percent recovery (RPR) values less than the lower control limit. The actual detection limits may be higher than reported.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP3Q22-OUTFALL-002-24-072122	07/21/2022	320-90298-4	PEPA	0.020	UG/L	PQL	0.020	UJ	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
EW-37-020623	02/06/2023	320-96584-9	Perfluorooctadecanoic Acid	0.094	ug/L	PQL	0.094	UJ	537 Modified			3535

Site: Fayetteville

Sampling Program:

Extraction Well Sampling

Validation Options:

LABSTATS

Validation Reason Code:

The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-57-012623	01/26/2023	320-96458-1	Perfluorobutanoic Acid	0.24	UG/L	PQL		0.24	UJ	537 Modified		3535
CAP1Q23-CFR-BLADEN-022223	02/22/2023	320-97412-2	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP1Q23-CFR-KINGS-022423	02/24/2023	320-97412-3	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP1Q23-CFR-TARHEEL-022223	02/22/2023	320-97412-1	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code: Surrogates had relative percent recovery (RPR) values greater than the upper control limit. The reported result may be biased high.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-21-012723	01/27/2023	320-96489-1	Hfpo Dimer Acid	8.8	UG/L	PQL		0.14	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code: Associated MS and/or MSD analysis had relative percent recovery (RPR) values higher than the upper control limit. The reported result may be biased high.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-26S-012523	01/25/2023	320-96305-1	PFO3OA	10	ug/L	PQL		0.089	J	537 Modified		3535
CAP3Q22-OUTFALL-002- 24-072122	07/21/2022	320-90298-4	R-PSDA	0.035	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OUTFALL-002- 24-072122	07/21/2022	320-90298-4	Hydrolyzed PSDA	0.15	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OUTFALL-002- 24-072122	07/21/2022	320-90298-4	R-EVE	0.0063	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code: The result exceeds the calibration range of the instrument and should be considered estimated.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-21-012723	01/27/2023	320-96489-1	PFMOAA	42	ug/L	PQL		0.038	J	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP MW Sampling 1Q23

Validation Options: LABSTATS

Validation Reason Code: High relative percent difference (RPD) observed between field duplicate and parent sample. The reported result may be imprecise.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP1Q23-PW-06-021423	02/14/2023	320-96856-2	PFO3OA	0.13	ug/L	PQL		0.039	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PW-06-021423-D	02/14/2023	320-96856-3	PFO3OA	0.17	ug/L	PQL		0.039	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PW-06-021423-D	02/14/2023	320-96856-3	PFMOAA	0.19	ug/L	PQL		0.080	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code: Only one surrogate has relative percent recovery (RPR) values outside control limits and the parameter is a PFC (Detects).

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-47-012523	01/25/2023	320-96305-8	10:2 Fluorotelomer sulfonate	0.15	ug/L	PQL		0.067	J	537 Modified		3535
EW-47-012523	01/25/2023	320-96305-8	1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	0.082	ug/L	PQL		0.046	J	537 Modified		3535
004-INF-022823	02/28/2023	410-117119-1	PFMOAA	150	ug/L	PQL		2.0	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP1Q23-GBC-5-021323	02/13/2023	320-96848-3	R-PSDA	0.054	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-GBC-5-021323	02/13/2023	320-96848-3	R-EVE	0.021	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-01-021623	02/16/2023	320-96927-3	R-PSDA	0.96	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-01-021623	02/16/2023	320-96927-3	Hydrolyzed PSDA	0.56	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-01-021623	02/16/2023	320-96927-3	R-EVE	0.55	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-02-021623	02/16/2023	320-96927-4	Hydrolyzed PSDA	0.27	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-03-022123	02/21/2023	320-97053-1	R-PSDA	1.0	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-03-022123	02/21/2023	320-97053-1	Hydrolyzed PSDA	7.1	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-03-022123	02/21/2023	320-97053-1	R-EVE	0.52	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-04-021723	02/17/2023	320-97053-2	R-PSDA	2.0	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-04-021723	02/17/2023	320-97053-2	Hydrolyzed PSDA	4.2	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-04-021723	02/17/2023	320-97053-2	R-EVE	2.0	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-05-021523	02/15/2023	320-96926-4	R-PSDA	0.49	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-05-021523	02/15/2023	320-96926-4	Hydrolyzed PSDA	0.88	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-LTW-05-021523	02/15/2023	320-96926-4	R-EVE	0.61	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OUTFALL-002-021423	02/14/2023	320-96848-5	Hydrolyzed PSDA	0.024	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OUTFALL-002-24-021523	02/15/2023	320-96848-6	Hydrolyzed PSDA	0.018	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-28-022023	02/20/2023	320-97053-3	R-PSDA	0.34	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-28-022023	02/20/2023	320-97053-3	R-EVE	0.19	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-30-021523	02/15/2023	320-96926-1	R-PSDA	0.46	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-30-021523	02/15/2023	320-96926-1	Hydrolyzed PSDA	0.76	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-30-021523	02/15/2023	320-96926-1	R-EVE	0.41	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-33-021423	02/14/2023	320-96856-4	R-PSDA	0.28	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP1Q23-OW-33-021423	02/14/2023	320-96856-4	R-EVE	0.13	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-40-021523	02/15/2023	320-96926-2	Hydrolyzed PSDA	0.16	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-40-021523	02/15/2023	320-96926-2	R-EVE	0.17	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-55-021623	02/16/2023	320-96927-2	R-EVE	0.16	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-56-022123	02/21/2023	320-97053-4	R-PSDA	0.31	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-56-022123	02/21/2023	320-97053-4	R-EVE	0.19	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-57-021523	02/15/2023	320-96926-3	R-PSDA	0.97	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-57-021523	02/15/2023	320-96926-3	Hydrolyzed PSDA	16	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-OW-57-021523	02/15/2023	320-96926-3	R-EVE	0.24	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-1D-021623	02/16/2023	320-96927-6	R-PSDA	0.33	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-1D-021623	02/16/2023	320-96927-6	R-EVE	0.19	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-1S-021623	02/16/2023	320-96927-5	R-EVE	0.18	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-3D-021623	02/16/2023	320-96927-7	R-PSDA	0.52	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-3D-021623	02/16/2023	320-96927-7	R-EVE	0.22	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-7D-021523	02/15/2023	320-96926-5	R-PSDA	0.71	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-7D-021523	02/15/2023	320-96926-5	Hydrolyzed PSDA	1.2	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-7D-021523	02/15/2023	320-96926-5	R-EVE	0.87	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-7S-021523	02/15/2023	320-96926-6	R-PSDA	1.2	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PIW-7S-021523	02/15/2023	320-96926-6	R-EVE	1.4	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PZ-22-022023	02/20/2023	320-97053-5	R-PSDA	0.54	UG/L	PQL		0.071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PZ-22-022023	02/20/2023	320-97053-5	Hydrolyzed PSDA	0.89	UG/L	PQL		0.038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-PZ-22-022023	02/20/2023	320-97053-5	R-EVE	0.45	UG/L	PQL		0.072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-WC-1-24-022523	02/25/2023	320-97412-4	R-PSDA	0.030	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP1Q23-WC-1-24-022523	02/25/2023	320-97412-4	Hydrolyzed PSDA	0.19	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-1-24-022523	02/25/2023	320-97412-4	R-EVE	0.014	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-2-24-022523	02/25/2023	320-97412-5	R-PSDA	0.018	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-2-24-022523	02/25/2023	320-97412-5	Hydrolyzed PSDA	0.028	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-2-24-022523	02/25/2023	320-97412-5	R-EVE	0.0096	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-3-24-022523	02/25/2023	320-97412-6	R-PSDA	0.015	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-3-24-022523	02/25/2023	320-97412-6	R-EVE	0.0075	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-6-021323	02/13/2023	320-96848-2	R-PSDA	0.018	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-6-021323	02/13/2023	320-96848-2	Hydrolyzed PSDA	0.11	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP1Q23-WC-6-021323	02/13/2023	320-96848-2	R-EVE	0.0085	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
EW-21-012723	01/27/2023	320-96489-1	R-PSDA	0.31	UG/L	PQL	0.026	J	537 Modified		3535	
EW-21-012723	01/27/2023	320-96489-1	Hydrolyzed PSDA	0.44	UG/L	PQL	0.025	J	537 Modified		3535	
EW-21-012723	01/27/2023	320-96489-1	R-EVE	0.36	UG/L	PQL	0.0020	J	537 Modified		3535	
EW-31-012623	01/26/2023	320-96460-1	R-PSDA	1.5	UG/L	PQL	0.028	J	537 Modified		3535	
EW-31-012623	01/26/2023	320-96460-1	Hydrolyzed PSDA	20	UG/L	PQL	0.027	J	537 Modified		3535	
EW-31-012623	01/26/2023	320-96460-1	R-EVE	0.68	UG/L	PQL	0.031	J	537 Modified		3535	
CAP3Q22-WC-1-24-072122	07/21/2022	320-90298-1	R-PSDA	0.042	UG/L	PQL	0.0035	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-WC-1-24-072122	07/21/2022	320-90298-1	Hydrolyzed PSDA	0.23	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-WC-1-24-072122	07/21/2022	320-90298-1	R-EVE	0.024	UG/L	PQL	0.0036	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-WC-2-24-072122	07/21/2022	320-90298-7	R-PSDA	0.026	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-WC-2-24-072122	07/21/2022	320-90298-7	Hydrolyzed PSDA	0.044	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-WC-2-24-072122	07/21/2022	320-90298-7	R-EVE	0.0094	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP3Q22-WC-3-24-072122	07/21/2022	320-90298-8	R-EVE	0.0056	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q22-OLDOF-1-24-110922	11/09/2022	320-94319-5	R-PSDA	0.0088	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-OLDOF-1-24-110922	11/09/2022	320-94319-5	Hydrolyzed PSDA	0.014	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-OLDOF-1-24-110922	11/09/2022	320-94319-5	R-EVE	0.0036	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-OUTFALL-002-24-110922	11/09/2022	320-94319-4	Hydrolyzed PSDA	0.013	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-SEEP-C-EFF-23-110922	11/09/2022	320-94319-2	Hydrolyzed PSDA	0.0028	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-1-24-110922	11/09/2022	320-94319-1	R-PSDA	0.036	UG/L	PQL	0.0071	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-1-24-110922	11/09/2022	320-94319-1	Hydrolyzed PSDA	0.23	UG/L	PQL	0.0038	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-1-24-110922	11/09/2022	320-94319-1	R-EVE	0.016	UG/L	PQL	0.0072	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-2-22-110922	11/09/2022	320-94319-6	R-PSDA	0.031	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-2-22-110922	11/09/2022	320-94319-6	Hydrolyzed PSDA	0.13	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-2-22-110922	11/09/2022	320-94319-6	R-EVE	0.019	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-3-24-110922	11/09/2022	320-94319-7	R-PSDA	0.012	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
CAP4Q22-WC-3-24-110922	11/09/2022	320-94319-7	R-EVE	0.0061	UG/L	PQL	0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep	
EW-15-012623	01/26/2023	320-96454-2	R-EVE	0.25	UG/L	PQL	0.031	J	537 Modified		3535	
EW-16-012623	01/26/2023	320-96454-3	R-EVE	0.12	UG/L	PQL	0.031	J	537 Modified		3535	
EW-16-012623-Z	01/26/2023	320-96454-4	Hydrolyzed PSDA	0.027	UG/L	PQL	0.027	J	537 Modified		3535	
EW-16-012623-Z	01/26/2023	320-96454-4	R-EVE	0.12	UG/L	PQL	0.031	J	537 Modified		3535	
EW-17-012623	01/26/2023	320-96454-5	Hydrolyzed PSDA	0.042	UG/L	PQL	0.027	J	537 Modified		3535	
EW-17-012623	01/26/2023	320-96454-5	R-EVE	0.14	UG/L	PQL	0.031	J	537 Modified		3535	
EW-17-012623-Z	01/26/2023	320-96454-6	R-EVE	0.11	UG/L	PQL	0.031	J	537 Modified		3535	
EW-18-012523	01/25/2023	320-96314-4	R-PSDA	0.46	UG/L	PQL	0.028	J	537 Modified		3535	
EW-18-012523	01/25/2023	320-96314-4	Hydrolyzed PSDA	0.051	UG/L	PQL	0.027	J	537 Modified		3535	
EW-18-012523	01/25/2023	320-96314-4	R-EVE	0.29	UG/L	PQL	0.031	J	537 Modified		3535	

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-19-012523	01/25/2023	320-96310-3	R-PSDA	0.097	UG/L	PQL		0.028	J	537 Modified		3535
EW-19-012523	01/25/2023	320-96310-3	Hydrolyzed PSDA	0.073	UG/L	PQL		0.027	J	537 Modified		3535
EW-19-012523	01/25/2023	320-96310-3	R-EVE	0.098	UG/L	PQL		0.031	J	537 Modified		3535
EW-20-012523	01/25/2023	320-96310-4	R-PSDA	0.43	UG/L	PQL		0.028	J	537 Modified		3535
EW-20-012523	01/25/2023	320-96310-4	Hydrolyzed PSDA	0.22	UG/L	PQL		0.027	J	537 Modified		3535
EW-20-012523	01/25/2023	320-96310-4	R-EVE	0.31	UG/L	PQL		0.031	J	537 Modified		3535
EW-20-012523-Z	01/25/2023	320-96310-5	R-PSDA	0.64	UG/L	PQL		0.028	J	537 Modified		3535
EW-20-012523-Z	01/25/2023	320-96310-5	Hydrolyzed PSDA	0.33	UG/L	PQL		0.027	J	537 Modified		3535
EW-20-012523-Z	01/25/2023	320-96310-5	R-EVE	0.47	UG/L	PQL		0.031	J	537 Modified		3535
EW-22-012623	01/26/2023	320-96454-7	Hydrolyzed PSDA	5.8	UG/L	PQL		0.027	J	537 Modified		3535
EW-22-012623	01/26/2023	320-96454-7	R-EVE	0.39	UG/L	PQL		0.031	J	537 Modified		3535
EW-23-012523	01/25/2023	320-96310-6	R-PSDA	0.076	UG/L	PQL		0.028	J	537 Modified		3535
EW-23-012523	01/25/2023	320-96310-6	Hydrolyzed PSDA	0.045	UG/L	PQL		0.027	J	537 Modified		3535
EW-23-012523	01/25/2023	320-96310-6	R-EVE	0.077	UG/L	PQL		0.031	J	537 Modified		3535
EW-24-012523	01/25/2023	320-96310-7	R-PSDA	1	UG/L	PQL		0.028	J	537 Modified		3535
EW-24-012523	01/25/2023	320-96310-7	Hydrolyzed PSDA	2.9	UG/L	PQL		0.027	J	537 Modified		3535
EW-24-012523	01/25/2023	320-96310-7	R-EVE	0.55	UG/L	PQL		0.031	J	537 Modified		3535
EW-26S-012523	01/25/2023	320-96305-1	R-PSDA	1.7	UG/L	PQL		0.028	J	537 Modified		3535
EW-26S-012523	01/25/2023	320-96305-1	Hydrolyzed PSDA	9.2	UG/L	PQL		0.027	J	537 Modified		3535
EW-26S-012523	01/25/2023	320-96305-1	R-EVE	0.78	UG/L	PQL		0.031	J	537 Modified		3535
EW-26S-012523-Z	01/25/2023	320-96305-2	R-PSDA	1.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-26S-012523-Z	01/25/2023	320-96305-2	Hydrolyzed PSDA	7.9	UG/L	PQL		0.027	J	537 Modified		3535
EW-26S-012523-Z	01/25/2023	320-96305-2	R-EVE	0.73	UG/L	PQL		0.031	J	537 Modified		3535

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-27-012523	01/25/2023	320-96305-3	R-PSDA	2.8	UG/L	PQL		0.028	J	537 Modified		3535
EW-27-012523	01/25/2023	320-96305-3	Hydrolyzed PSDA	23	UG/L	PQL		0.027	J	537 Modified		3535
EW-27-012523	01/25/2023	320-96305-3	R-EVE	1.3	UG/L	PQL		0.031	J	537 Modified		3535
EW-28-012623	01/26/2023	320-96454-8	Hydrolyzed PSDA	3.3	UG/L	PQL		0.027	J	537 Modified		3535
EW-28-012623	01/26/2023	320-96454-8	R-EVE	0.4	UG/L	PQL		0.031	J	537 Modified		3535
EW-29-012523	01/25/2023	320-96305-4	R-PSDA	2.2	UG/L	PQL		0.028	J	537 Modified		3535
EW-29-012523	01/25/2023	320-96305-4	Hydrolyzed PSDA	25	UG/L	PQL		0.027	J	537 Modified		3535
EW-29-012523	01/25/2023	320-96305-4	R-EVE	1	UG/L	PQL		0.031	J	537 Modified		3535
EW-29-012523-Z	01/25/2023	320-96305-5	R-PSDA	0.58	UG/L	PQL		0.028	J	537 Modified		3535
EW-29-012523-Z	01/25/2023	320-96305-5	Hydrolyzed PSDA	2.9	UG/L	PQL		0.027	J	537 Modified		3535
EW-29-012523-Z	01/25/2023	320-96305-5	R-EVE	0.38	UG/L	PQL		0.031	J	537 Modified		3535
EW-30-012623	01/26/2023	320-96454-9	Hydrolyzed PSDA	2.2	UG/L	PQL		0.027	J	537 Modified		3535
EW-30-012623	01/26/2023	320-96454-9	R-EVE	0.23	UG/L	PQL		0.031	J	537 Modified		3535
EW-32-012423	01/24/2023	320-96301-1	R-PSDA	0.038	UG/L	PQL		0.028	J	537 Modified		3535
EW-32-012423-Z	01/24/2023	320-96301-2	R-PSDA	0.034	UG/L	PQL		0.028	J	537 Modified		3535
EW-33-012423	01/24/2023	320-96301-3	R-PSDA	1.4	UG/L	PQL		0.028	J	537 Modified		3535
EW-33-012423	01/24/2023	320-96301-3	Hydrolyzed PSDA	0.52	UG/L	PQL		0.027	J	537 Modified		3535
EW-33-012423	01/24/2023	320-96301-3	R-EVE	1.1	UG/L	PQL		0.031	J	537 Modified		3535
EW-33-012423-Z	01/24/2023	320-96301-4	R-PSDA	0.76	UG/L	PQL		0.028	J	537 Modified		3535
EW-33-012423-Z	01/24/2023	320-96301-4	Hydrolyzed PSDA	0.34	UG/L	PQL		0.027	J	537 Modified		3535
EW-33-012423-Z	01/24/2023	320-96301-4	R-EVE	0.7	UG/L	PQL		0.031	J	537 Modified		3535
EW-34-012423	01/24/2023	320-96301-5	R-PSDA	0.55	UG/L	PQL		0.028	J	537 Modified		3535
EW-34-012423	01/24/2023	320-96301-5	Hydrolyzed PSDA	2.8	UG/L	PQL		0.027	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-34-012423	01/24/2023	320-96301-5	R-EVE	0.39	UG/L	PQL		0.031	J	537 Modified		3535
EW-35-012423	01/24/2023	320-96301-6	R-PSDA	1.7	UG/L	PQL		0.028	J	537 Modified		3535
EW-35-012423	01/24/2023	320-96301-6	Hydrolyzed PSDA	0.26	UG/L	PQL		0.027	J	537 Modified		3535
EW-35-012423	01/24/2023	320-96301-6	R-EVE	0.95	UG/L	PQL		0.031	J	537 Modified		3535
EW-35-012523-Z	01/25/2023	320-96305-6	R-PSDA	0.95	UG/L	PQL		0.028	J	537 Modified		3535
EW-35-012523-Z	01/25/2023	320-96305-6	Hydrolyzed PSDA	0.16	UG/L	PQL		0.027	J	537 Modified		3535
EW-35-012523-Z	01/25/2023	320-96305-6	R-EVE	0.61	UG/L	PQL		0.031	J	537 Modified		3535
EW-36-012423	01/24/2023	320-96301-7	R-PSDA	1.9	UG/L	PQL		0.028	J	537 Modified		3535
EW-36-012423	01/24/2023	320-96301-7	Hydrolyzed PSDA	22	UG/L	PQL		0.027	J	537 Modified		3535
EW-36-012423	01/24/2023	320-96301-7	R-EVE	0.56	UG/L	PQL		0.031	J	537 Modified		3535
EW-38-012423	01/24/2023	320-96301-8	R-PSDA	2.9	UG/L	PQL		0.028	J	537 Modified		3535
EW-38-012423	01/24/2023	320-96301-8	Hydrolyzed PSDA	38	UG/L	PQL		0.027	J	537 Modified		3535
EW-38-012423	01/24/2023	320-96301-8	R-EVE	0.72	UG/L	PQL		0.031	J	537 Modified		3535
EW-39-012423	01/24/2023	320-96301-9	R-PSDA	1.1	UG/L	PQL		0.028	J	537 Modified		3535
EW-39-012423	01/24/2023	320-96301-9	Hydrolyzed PSDA	0.084	UG/L	PQL		0.027	J	537 Modified		3535
EW-39-012423	01/24/2023	320-96301-9	R-EVE	0.76	UG/L	PQL		0.031	J	537 Modified		3535
EW-39-012423-Z	01/24/2023	320-96310-1	R-PSDA	0.97	UG/L	PQL		0.028	J	537 Modified		3535
EW-39-012423-Z	01/24/2023	320-96310-1	Hydrolyzed PSDA	0.078	UG/L	PQL		0.027	J	537 Modified		3535
EW-39-012423-Z	01/24/2023	320-96310-1	R-EVE	0.74	UG/L	PQL		0.031	J	537 Modified		3535
EW-4-012623	01/26/2023	320-96454-1	R-EVE	0.096	UG/L	PQL		0.031	J	537 Modified		3535
EW-40-012423	01/24/2023	320-96310-2	R-PSDA	2.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-40-012423	01/24/2023	320-96310-2	Hydrolyzed PSDA	28	UG/L	PQL		0.027	J	537 Modified		3535
EW-40-012423	01/24/2023	320-96310-2	R-EVE	0.62	UG/L	PQL		0.031	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-45-012523	01/25/2023	320-96305-7	R-PSDA	1.8	UG/L	PQL		0.028	J	537 Modified		3535
EW-45-012523	01/25/2023	320-96305-7	Hydrolyzed PSDA	22	UG/L	PQL		0.027	J	537 Modified		3535
EW-45-012523	01/25/2023	320-96305-7	R-EVE	0.47	UG/L	PQL		0.031	J	537 Modified		3535
EW-47-012523	01/25/2023	320-96305-8	R-PSDA	0.74	UG/L	PQL		0.028	J	537 Modified		3535
EW-47-012523	01/25/2023	320-96305-8	Hydrolyzed PSDA	4.3	UG/L	PQL		0.027	J	537 Modified		3535
EW-47-012523	01/25/2023	320-96305-8	R-EVE	0.41	UG/L	PQL		0.031	J	537 Modified		3535
EW-48-012523	01/25/2023	320-96305-9	R-PSDA	1.1	UG/L	PQL		0.028	J	537 Modified		3535
EW-48-012523	01/25/2023	320-96305-9	Hydrolyzed PSDA	0.57	UG/L	PQL		0.027	J	537 Modified		3535
EW-48-012523	01/25/2023	320-96305-9	R-EVE	0.84	UG/L	PQL		0.031	J	537 Modified		3535
EW-49-012523	01/25/2023	320-96314-1	R-PSDA	0.8	UG/L	PQL		0.028	J	537 Modified		3535
EW-49-012523	01/25/2023	320-96314-1	Hydrolyzed PSDA	2	UG/L	PQL		0.027	J	537 Modified		3535
EW-49-012523	01/25/2023	320-96314-1	R-EVE	0.5	UG/L	PQL		0.031	J	537 Modified		3535
EW-58-012623	01/26/2023	320-96458-2	R-PSDA	1.1	UG/L	PQL		0.028	J	537 Modified		3535
EW-58-012623	01/26/2023	320-96458-2	Hydrolyzed PSDA	3.6	UG/L	PQL		0.027	J	537 Modified		3535
EW-58-012623	01/26/2023	320-96458-2	R-EVE	0.96	UG/L	PQL		0.031	J	537 Modified		3535
EW-58-012623-Z	01/26/2023	320-96458-3	R-PSDA	0.83	UG/L	PQL		0.028	J	537 Modified		3535
EW-58-012623-Z	01/26/2023	320-96458-3	Hydrolyzed PSDA	3.9	UG/L	PQL		0.027	J	537 Modified		3535
EW-58-012623-Z	01/26/2023	320-96458-3	R-EVE	1	UG/L	PQL		0.031	J	537 Modified		3535
EW-6-012723	01/27/2023	320-96462-2	R-PSDA	0.082	UG/L	PQL		0.028	J	537 Modified		3535
EW-6-012723	01/27/2023	320-96462-2	R-EVE	0.073	UG/L	PQL		0.031	J	537 Modified		3535
EW-60-012623	01/26/2023	320-96458-4	R-PSDA	0.95	UG/L	PQL		0.028	J	537 Modified		3535
EW-60-012623	01/26/2023	320-96458-4	Hydrolyzed PSDA	2.3	UG/L	PQL		0.027	J	537 Modified		3535
EW-60-012623	01/26/2023	320-96458-4	R-EVE	0.98	UG/L	PQL		0.031	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-61-012623	01/26/2023	320-96458-5	R-PSDA	0.94	UG/L	PQL		0.028	J	537 Modified		3535
EW-61-012623	01/26/2023	320-96458-5	Hydrolyzed PSDA	2.3	UG/L	PQL		0.027	J	537 Modified		3535
EW-61-012623	01/26/2023	320-96458-5	R-EVE	0.93	UG/L	PQL		0.031	J	537 Modified		3535
EW-62-031423	03/14/2023	320-97704-1	R-PSDA	1.1	UG/L	PQL		0.028	J	537 Modified		3535
EW-62-031423	03/14/2023	320-97704-1	Hydrolyzed PSDA	2.9	UG/L	PQL		0.027	J	537 Modified		3535
EW-62-031423	03/14/2023	320-97704-1	R-EVE	1.1	UG/L	PQL		0.031	J	537 Modified		3535
EW-62-031423-Z	03/14/2023	320-97704-2	R-PSDA	0.47	UG/L	PQL		0.028	J	537 Modified		3535
EW-62-031423-Z	03/14/2023	320-97704-2	Hydrolyzed PSDA	2.5	UG/L	PQL		0.027	J	537 Modified		3535
EW-62-031423-Z	03/14/2023	320-97704-2	R-EVE	0.99	UG/L	PQL		0.031	J	537 Modified		3535
EW-65-012623	01/26/2023	320-96458-7	R-PSDA	0.22	UG/L	PQL		0.028	J	537 Modified		3535
EW-65-012623	01/26/2023	320-96458-7	R-EVE	0.11	UG/L	PQL		0.031	J	537 Modified		3535
EW-7-012723	01/27/2023	320-96462-3	R-PSDA	0.12	UG/L	PQL		0.028	J	537 Modified		3535
EW-7-012723	01/27/2023	320-96462-3	R-EVE	0.12	UG/L	PQL		0.031	J	537 Modified		3535
EW-8-012723	01/27/2023	320-96462-4	R-PSDA	0.23	UG/L	PQL		0.028	J	537 Modified		3535
EW-8-012723	01/27/2023	320-96462-4	R-EVE	0.19	UG/L	PQL		0.031	J	537 Modified		3535
EW-8-012723-D	01/27/2023	320-96462-8	R-PSDA	0.21	UG/L	PQL		0.028	J	537 Modified		3535
EW-8-012723-D	01/27/2023	320-96462-8	R-EVE	0.17	UG/L	PQL		0.031	J	537 Modified		3535
EW-8-012723-D-Z	01/27/2023	320-96462-9	R-PSDA	0.21	UG/L	PQL		0.028	J	537 Modified		3535
EW-8-012723-D-Z	01/27/2023	320-96462-9	R-EVE	0.19	UG/L	PQL		0.031	J	537 Modified		3535
EW-8-012723-Z	01/27/2023	320-96462-5	R-PSDA	0.22	UG/L	PQL		0.028	J	537 Modified		3535
EW-8-012723-Z	01/27/2023	320-96462-5	R-EVE	0.17	UG/L	PQL		0.031	J	537 Modified		3535
EW-9-012723	01/27/2023	320-96462-6	R-PSDA	0.22	UG/L	PQL		0.028	J	537 Modified		3535
EW-9-012723	01/27/2023	320-96462-6	R-EVE	0.15	UG/L	PQL		0.031	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-9-012723-Z	01/27/2023	320-96462-7	R-PSDA	0.17	UG/L	PQL		0.028	J	537 Modified		3535
EW-9-012723-Z	01/27/2023	320-96462-7	R-EVE	0.12	UG/L	PQL		0.031	J	537 Modified		3535
EW-42-012623	01/26/2023	320-96460-2	R-PSDA	2.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-42-012623	01/26/2023	320-96460-2	Hydrolyzed PSDA	33	UG/L	PQL		0.027	J	537 Modified		3535
EW-42-012623	01/26/2023	320-96460-2	R-EVE	0.62	UG/L	PQL		0.031	J	537 Modified		3535
EW-43-012623	01/26/2023	320-96460-3	R-PSDA	3	UG/L	PQL		0.028	J	537 Modified		3535
EW-43-012623	01/26/2023	320-96460-3	Hydrolyzed PSDA	60	UG/L	PQL		0.27	J	537 Modified		3535
EW-43-012623	01/26/2023	320-96460-3	R-EVE	0.75	UG/L	PQL		0.031	J	537 Modified		3535
EW-5-012723	01/27/2023	320-96462-1	R-PSDA	0.054	UG/L	PQL		0.028	J	537 Modified		3535
EW-5-012723	01/27/2023	320-96462-1	R-EVE	0.042	UG/L	PQL		0.031	J	537 Modified		3535
EW-52-012623	01/26/2023	320-96460-4	R-PSDA	1.9	UG/L	PQL		0.028	J	537 Modified		3535
EW-52-012623	01/26/2023	320-96460-4	Hydrolyzed PSDA	3.6	UG/L	PQL		0.027	J	537 Modified		3535
EW-52-012623	01/26/2023	320-96460-4	R-EVE	2	UG/L	PQL		0.031	J	537 Modified		3535
EW-52-012623-Z	01/26/2023	320-96460-5	R-PSDA	1.9	UG/L	PQL		0.028	J	537 Modified		3535
EW-52-012623-Z	01/26/2023	320-96460-5	Hydrolyzed PSDA	3.7	UG/L	PQL		0.027	J	537 Modified		3535
EW-52-012623-Z	01/26/2023	320-96460-5	R-EVE	2	UG/L	PQL		0.031	J	537 Modified		3535
EW-53-012623	01/26/2023	320-96460-6	R-PSDA	2.8	UG/L	PQL		0.028	J	537 Modified		3535
EW-53-012623	01/26/2023	320-96460-6	Hydrolyzed PSDA	9.7	UG/L	PQL		0.027	J	537 Modified		3535
EW-53-012623	01/26/2023	320-96460-6	R-EVE	2.8	UG/L	PQL		0.031	J	537 Modified		3535
EW-54-012623	01/26/2023	320-96460-7	R-PSDA	2.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-54-012623	01/26/2023	320-96460-7	Hydrolyzed PSDA	6.3	UG/L	PQL		0.027	J	537 Modified		3535
EW-54-012623	01/26/2023	320-96460-7	R-EVE	2.4	UG/L	PQL		0.031	J	537 Modified		3535
EW-55-012623	01/26/2023	320-96460-8	R-PSDA	2	UG/L	PQL		0.028	J	537 Modified		3535

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-55-012623	01/26/2023	320-96460-8	Hydrolyzed PSDA	3.8	UG/L	PQL		0.027	J	537 Modified		3535
EW-55-012623	01/26/2023	320-96460-8	R-EVE	2.1	UG/L	PQL		0.031	J	537 Modified		3535
EW-56-012623	01/26/2023	320-96460-9	R-PSDA	2.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-56-012623	01/26/2023	320-96460-9	Hydrolyzed PSDA	4.6	UG/L	PQL		0.027	J	537 Modified		3535
EW-56-012623	01/26/2023	320-96460-9	R-EVE	2.9	UG/L	PQL		0.031	J	537 Modified		3535
EW-57-012623	01/26/2023	320-96458-1	R-PSDA	0.75	UG/L	PQL		0.028	J	537 Modified		3535
EW-57-012623	01/26/2023	320-96458-1	Hydrolyzed PSDA	1.5	UG/L	PQL		0.027	J	537 Modified		3535
EW-57-012623	01/26/2023	320-96458-1	R-EVE	0.67	UG/L	PQL		0.031	J	537 Modified		3535
004-INF-022123	02/21/2023	410-116358-1	R-PSDA	1.6	UG/L	PQL		0.20	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
004-INF-022123	02/21/2023	410-116358-1	Hydrolyzed PSDA	15	UG/L	PQL		0.20	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
004-INF-022123	02/21/2023	410-116358-1	R-EVE	0.86	UG/L	PQL		0.20	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
004-INF-0323-2	03/28/2023	410-120551-1	R-PSDA	1.4	UG/L	PQL		0.20	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
004-INF-0323-2	03/28/2023	410-120551-1	Hydrolyzed PSDA	16	UG/L	PQL		0.20	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
004-INF-0323-2	03/28/2023	410-120551-1	R-EVE	0.81	UG/L	PQL		0.20	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-BLADEN-1D-R-021423	02/14/2023	320-96856-1	R-PSDA	0.0095	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP1Q23-BLADEN-1D-R-021423	02/14/2023	320-96856-1	R-EVE	0.0044	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-SEEP-C-EFF-24-072122	07/21/2022	320-90298-2	Hydrolyzed PSDA	0.0054	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-SEEP-C-EFF-24-072122	07/21/2022	320-90298-2	R-EVE	0.0047	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
EW-50-012523	01/25/2023	320-96314-2	R-PSDA	2.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-50-012523	01/25/2023	320-96314-2	Hydrolyzed PSDA	7.2	UG/L	PQL		0.027	J	537 Modified		3535
EW-50-012523	01/25/2023	320-96314-2	R-EVE	2.1	UG/L	PQL		0.031	J	537 Modified		3535
EW-51-012523	01/25/2023	320-96314-3	R-PSDA	1.3	UG/L	PQL		0.028	J	537 Modified		3535
EW-51-012523	01/25/2023	320-96314-3	Hydrolyzed PSDA	2.1	UG/L	PQL		0.027	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code:

Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-51-012523	01/25/2023	320-96314-3	R-EVE	1.3	UG/L	PQL		0.031	J	537 Modified		3535
EW-67-012623	01/26/2023	320-96455-1	Hydrolyzed PSDA	0.26	UG/L	PQL		0.027	J	537 Modified		3535
EW-67-012623	01/26/2023	320-96455-1	R-EVE	0.11	UG/L	PQL		0.031	J	537 Modified		3535
EW-68-012623	01/26/2023	320-96455-2	Hydrolyzed PSDA	2.1	UG/L	PQL		0.027	J	537 Modified		3535
EW-68-012623	01/26/2023	320-96455-2	R-EVE	0.79	UG/L	PQL		0.031	J	537 Modified		3535
CAP3Q22-OUTFALL-002-24-072122D	07/21/2022	320-90298-5	R-PSDA	0.052	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OUTFALL-002-24-072122D	07/21/2022	320-90298-5	Hydrolyzed PSDA	0.15	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OUTFALL-002-24-072122D	07/21/2022	320-90298-5	R-EVE	0.0072	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OLDOF-1-24-072122	07/21/2022	320-90298-6	R-PSDA	0.0070	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OLDOF-1-24-072122	07/21/2022	320-90298-6	Hydrolyzed PSDA	0.017	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CAP3Q22-OLDOF-1-24-072122	07/21/2022	320-90298-6	R-EVE	0.0054	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville

Sampling Program: CAP SW Sampling 1Q23

Validation Options: LABSTATS

Validation Reason Code:

The ion ratio for the compound differed from the expected ion ratio by more than 50%. The reported positive result has been qualified "J" and should be considered estimated.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result		Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
				Units								
CAP1Q23-GBC-5-021323	02/13/2023	320-96848-3	PFOS	0.0022	UG/L	PQL		0.0020	J	537 Modified		3535
CAP1Q23-LTW-01-021623	02/16/2023	320-96927-3	PFOS	0.0099	UG/L	PQL		0.0020	J	537 Modified		3535
CAP1Q23-PIW-7S-021523	02/15/2023	320-96926-6	PFOS	0.0064	UG/L	PQL		0.0020	J	537 Modified		3535
CAP1Q23-WC-6-021323	02/13/2023	320-96848-2	PFOS	0.0023	UG/L	PQL		0.0020	J	537 Modified		3535
CAP1Q23-WC-6-021323	02/13/2023	320-96848-2	Perfluorohexanoic Acid 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535
EW-49-012523	01/25/2023	320-96314-1		0.056	ug/L	PQL		0.046	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Extraction Well Sampling

Validation Options: LABSTATS

Validation Reason Code: Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-15-012623	01/26/2023	320-96454-2	R-PSDA	0.39	UG/L	PQL		0.028	J	537 Modified		3535
EW-16-012623	01/26/2023	320-96454-3	R-PSDA	0.21	UG/L	PQL		0.028	J	537 Modified		3535
EW-16-012623-Z	01/26/2023	320-96454-4	R-PSDA	0.18	UG/L	PQL		0.028	J	537 Modified		3535
EW-17-012623	01/26/2023	320-96454-5	R-PSDA	0.26	UG/L	PQL		0.028	J	537 Modified		3535
EW-17-012623-Z	01/26/2023	320-96454-6	R-PSDA	0.035	UG/L	PQL		0.028	J	537 Modified		3535
EW-22-012623	01/26/2023	320-96454-7	R-PSDA	0.76	UG/L	PQL		0.028	J	537 Modified		3535
EW-28-012623	01/26/2023	320-96454-8	R-PSDA	0.65	UG/L	PQL		0.028	J	537 Modified		3535
EW-30-012623	01/26/2023	320-96454-9	R-PSDA	0.38	UG/L	PQL		0.028	J	537 Modified		3535
EW-4-012623	01/26/2023	320-96454-1	R-PSDA	0.081	UG/L	PQL		0.028	J	537 Modified		3535
EW-67-012623	01/26/2023	320-96455-1	R-PSDA	0.12	UG/L	PQL		0.028	J	537 Modified		3535
EW-68-012623	01/26/2023	320-96455-2	R-PSDA	0.82	UG/L	PQL		0.028	J	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP MW Sampling 1Q23

Validation Options: LABSTATS

Validation Reason Code:

Associated MS and/or MSD analysis had relative percent recovery (RPR) values less than the lower control limit but above the rejection limit. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP1Q23-PW-06-021423	02/14/2023	320-96856-2	Perfluorobutanoic Acid	0.010	UG/L	PQL		0.0050	J	537 Modified		3535
EW-37-020623-Z	02/06/2023	320-96584-10	Hfpo Dimer Acid	11	UG/L	PQL		0.15	J	537 Modified		3535
CAP3Q22-OUTFALL-002-24-072122	07/21/2022	320-90298-4	NVHOS, Acid Form	0.0083	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville

Sampling Program:

Extraction Well Sampling

Validation Options:

LABSTATS

Validation Reason Code:

The preparation hold time for this sample was exceeded. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
EW-61-012623	01/26/2023	320-96458-5	Perfluorobutanoic Acid	0.25	UG/L	PQL		0.24	J	537 Modified		3535
EW-52-012623	01/26/2023	320-96460-4	Perfluorobutanoic Acid	0.69	UG/L	PQL		0.24	J	537 Modified		3535
EW-52-012623-Z	01/26/2023	320-96460-5	Perfluorobutanoic Acid	0.56	UG/L	PQL		0.24	J	537 Modified		3535
EW-53-012623	01/26/2023	320-96460-6	Perfluorobutanoic Acid	0.69	UG/L	PQL		0.24	J	537 Modified		3535
EW-54-012623	01/26/2023	320-96460-7	Perfluorobutanoic Acid	0.58	UG/L	PQL		0.24	J	537 Modified		3535
EW-55-012623	01/26/2023	320-96460-8	Perfluorobutanoic Acid	0.75	UG/L	PQL		0.24	J	537 Modified		3535
EW-56-012623	01/26/2023	320-96460-9	Perfluorobutanoic Acid	0.79	UG/L	PQL		0.24	J	537 Modified		3535

APPENDIX B

July 2022 Passive Flux Meter Deployment Memorandum

Memorandum

Date: June 29, 2023

To: Chemours Company FC, LLC

From: Geosyntec Consultants of NC, P.C.

Subject: Groundwater and Mass Flux along the Groundwater Remedy
Alignment Chemours Fayetteville Works Site

INTRODUCTION

Geosyntec Consultants of NC, P.C. (Geosyntec) has prepared this memorandum for The Chemours Company FC, LLC (Chemours) to assess the relative differences in groundwater flux and per- and poly-fluorinated alkyl substances (PFAS) mass flux along the northern and southern/ central portions of the groundwater remedy alignment at the Fayetteville Works Site (the Site). The groundwater remedy includes a barrier wall that extends approximately 6,050 feet in length along the southern and central portions of the remedy and a groundwater extraction well network and conveyance system that extend along the entire remedy alignment (over 8,000 feet including the length of the barrier wall).

Groundwater and PFAS mass flux in the Black Creek Aquifer along the groundwater remedy alignment was assessed using passive flux meter (PFM) data from monitoring wells downgradient and near the groundwater remedy alignment. The PFM data, along with cross-sectional areas of the Black Creek Aquifer obtained using the high-resolution cross section presented in the Pre-Design Investigation Report (PDI Report; Geosyntec, 2021), were used to calculate PFAS mass flux for discrete sections along the groundwater remedy alignment.

A total of three deployments of PFMs were conducted prior to the implementation of groundwater remedy components. This memorandum summarizes the third deployment of the PFMs in July 2022, which has not been previously documented. This third deployment was generally similar to the previous October 2020 and November 2021 deployments, which were summarized previously in a memorandum attached to the 90% Design submittal (Geosyntec, 2022). As before, PFMs were utilized in July 2022 to continue to evaluate baseline groundwater flux through the Black Creek Aquifer.

It is noted that in the approval of the 90% Design in October 2022, which occurred after the July 2022 deployment, Chemours has agreed to not use PFMs to estimate mass flux and will only use

them for estimating Darcy flux in future deployments. Therefore, PFAS flux values are provided herein for comprehensive and consistency purposes but are not anticipated to be relied upon when comparing data from future PFM deployments. Consistent with prior events, the results from the July 2022 deployment indicate that Table 3+ PFAS mass flux¹ in the northern portion of the remedy alignment is significantly smaller than the mass flux in the southern and central portions.

The Darcy velocity values for the three PFM deployments provide a set of baseline values for expected groundwater flux prior to the groundwater remedy installation. Post-remedy PFM deployments will be used to evaluate potential reductions in groundwater flux in the Black Creek Aquifer.

METHODS

The monitoring wells where PFMs were deployed during all baseline events are listed in Table 1 and shown in Figure 1. The wells targeted in the July 2022 deployment differed slightly from previous baseline events. Wells which are downgradient of the barrier wall alignment in the southern and central portion, and downgradient of the extraction wells in the northern portion were selected for the July 2022 assessment.

Fourteen days following deployment the PFMs were removed for analysis. The deployment and sampling details of the July 2022 event are summarized in Table 2. Composite samples of resin intervals were sent to TestAmerica for PFAS analysis by the Table 3+ Laboratory Standard Operating Procedure (SOP), and composite samples of granular activated carbon (GAC) intervals were sent to Enviroflux for Darcy velocity analysis and subsequent PFAS flux calculation using the Darcy velocity and resin concentration data. Further details on the construction and analysis of the PFMs are provided in the PDI Report (Geosyntec, 2021).

PFAS flux was reported by Enviroflux for each Table 3+ compound in units of micrograms per square meter per day ($\mu\text{g}/\text{m}^2/\text{day}$). The flux values were summed to determine the Total Table 3+ flux for 17 compounds. R-PSDA, Hydrolyzed PSDA, and R-EVE were excluded due to matrix interferences for these three compounds discussed in the *Matrix Interference During Analysis of Table 3+ Compounds* memorandum (Geosyntec, 2020).

The location of each well where a PFM was deployed was projected onto the high-resolution cross section originally presented in the PDI Report (Geosyntec, 2021) and shown in Figure 2 for the July 2022 deployment. PFMs deployed in Floodplain Deposits wells were included in the

¹ Table 3+ PFAS are often attributed to operations at the Chemours Fayetteville Works Site. Table 3+ PFAS results reported in text are for Table 3+ (17 compounds). As reported in the Matrix Interference During Analysis of Table 3+ Compounds memorandum (Geosyntec, 2020) quantitation of three compounds (R-PSDA, Hydrolyzed PSDA, and R-EVE) is inaccurate due to interferences by the sample matrix in both groundwater and surface water.

projection, since the Black Creek Aquifer and Floodplain Deposits are understood to be interconnected. The midpoint between PFM locations was measured and the cross-sectional area for segments of the Black Creek Aquifer represented by each PFM location was measured based on the distance between these midpoints and accounting for the vertical exaggeration of the cross section. Since all three PFM deployments included different well lists, the cross-sectional area assigned to each PFM location varies between deployments. The segments of the Black Creek Aquifer assigned to each PFM location are shown in Figure 2. Where multiple wells project on top of each other, groundwater and PFAS flux values are averaged in that segment. PIW-11 is not shown on these figures since the Black Creek Aquifer is interpreted to pinch out between PIW-12 and PIW-11, with no Black Creek Aquifer observed in the PIW-11 borehole log.

The total Table 3+ (17 compounds) mass flux, in units of milligrams per second (mg/s) was calculated as the product of the total Table 3+ (17 compounds) flux reported by Enviroflux and the measured cross-sectional area of the Black Creek Aquifer for each PFM location, including unit conversions. For PIW-11, where the Black Creek Aquifer is not observed but PFAS flux is observed, the relevant cross-sectional area was estimated based on the height of the Black Creek Aquifer at adjacent well PIW-12 and the length of the remedy alignment at PIW-11. To evaluate the total Table 3+ (17 compounds) mass flux for the northern portion of the groundwater remedy alignment versus the southern/central portions, the facility water intake access road was used as a dividing line between the two areas, and mass flux values for PFM locations on either side of the road were summed to determine the relative total Table 3+ mass flux for the northern portion and the southern/central portion.

RESULTS AND DISCUSSION

For the PFMs deployed in July 2022, dry weight Table 3+ PFAS concentrations are reported in Table 3, and Darcy velocity values and flux values for each Table 3+ compound are shown in Table 4, as reported by Enviroflux. Laboratory reports and Data Verification Module (DVM) narrative reports for the associated data are provided in Attachment 1 of this memo.

A graph showing the Darcy velocity and the Table 3+ PFAS flux values for each monitoring well where a PFM was deployed in July 2022 is shown in Figure 3. In this figure, results at each location are aligned to show the horizontal location of the monitoring wells relative to the other PFM locations. During the July 2022 deployment, the Darcy velocity ranged from 2.8 to 8.8 centimeters per day (cm/day) except for PIW-1D and OW-30, which had a Darcy velocity of 21.0 and 17.2 respectively. Darcy velocity results for the Floodplain wells (PIW6S, PIW-7S, and LTW-04) were similar to the results for the Black Creek Aquifer wells, suggesting that the Darcy velocity is similar among the Floodplain Deposits and Black Creek Aquifers. Average Darcy velocity has varied across deployments from 4.1 cm/day, 7.3 cm/day, and 7.6 cm/day in October 2020, November 2021, and July 2022 respectively.

During the July 2022 deployment, PFAS flux was highest at wells PIW-1D, PW-10R, PIW-7D, and OW-30. PFAS flux at wells PIW-4D, PIW-11, OW-4, and OW-40 were the lowest, with no measurable PFAS flux at PIW-4D. Table 5 presents the calculated total table 3+ (17 compounds) mass flux for each PFM location for the July 2022 deployment. Table 5 also presents the total table 3+ (17 compounds) mass flux summed for the northern portion of the remedy alignment, for wells located between Willis Creek and the facility water intake access road, and for the southern/ central portions of the remedy alignment, for wells located between the facility water intake access road and the old Outfall Channel. The July 2022 calculations indicate PFAS mass flux values of 0.13 mg/s in the northern portion of the remedy and 1.37 mg/s in the southern/ central portions of the remedy. These totals suggest that, across the groundwater remedy alignment, the northern portion of the remedy accounts for approximately 9% of the total mass flux in the Black Creek Aquifer, while the southern and central portions account for approximately 91% of the total mass flux. The calculated total mass flux in the central/southern portion during the July 2022 deployment is generally lower by 0.8 mg/s compared to the October 2020 and November 2021 deployments. The calculated total mass flux in the northern portion is generally consistent across deployments, although the number of targeted wells in the northern portion has decreased.

The calculations described above are useful to estimate the relative mass flux along the groundwater remedy alignment. The nature of the available data and calculations mean they are subject to certain limitations that introduce some uncertainty in the estimate. For example, these calculations assume that the thickness of the Black Creek Aquifer interpreted along the cross-section extends to all wells where a PFM was deployed. Downgradient of the cross-section closer to the Cape Fear River, the Black Creek Aquifer is understood to get thinner while the Floodplain Deposits become more dominant. The floodplain deposit wells show similar PFM derived groundwater flux values to Black Creek Aquifer wells, so this assumption is likely valid, but may introduce some uncertainty.

SUMMARY

The results described above provide a baseline range for expected groundwater flux prior to the groundwater remedy installation. Post-remedy PFM deployments will be used to evaluate any potential reductions in groundwater flux in the Black Creek Aquifer. Additionally, the results suggest that PFAS mass flux in the northern portion of the remedy alignment is significantly smaller than the mass flux in the southern and central portions. This has been consistently demonstrated over the course of three PFM deployments.

These findings support other data related to the northern portion of the remedy alignment described in the 90% Design Submittal, including PFAS analytical data and geological and hydrogeological findings, which indicate that the independent use of groundwater extraction is sufficient to reduce

PFAS loading to the Cape Fear River from groundwater along the northern portion of the remedy alignment.

REFERENCES

- Geosyntec, 2022. Barrier Wall and Groundwater Extraction System 90% Design Report. Chemours Fayetteville Works. March 25, 2022.
- Geosyntec, 2021. Pre-Design Investigation Summary (Version 2). Chemours Fayetteville Works. June 29, 2021.
- Geosyntec, 2020. Matrix Interference During Analysis of Table 3+ Compounds. Chemours Fayetteville Works. June 30, 2020.

Encl.

Tables	Table 1: Passive Flux Meter Deployment Locations Table 2: Passive Flux Meter Deployment Details – July 2022 Deployment Table 3: Passive Flux Meter Resin PFAS Results – July 2022 Deployment Table 4: Darcy Velocity PFAS Flux – July 2022 Deployment Table 5: PFAS Mass Flux Along Remedy – July 2022 Deployment
Figures	Figure 1: PFM Monitoring Well Locations and Remedy Alignment – July 2022 Deployment Figure 2: High Resolution Cross-Section with PFM Well Locations and Remedy Alignment Segments – July 2022 Deployment Figure 3: July 2022 Passive Flux Meter Results – Darcy Velocities and PFAS Flux

Attachments Attachment 1 - Laboratory Analytical Data Review Narrative

* * * *

Tables

Table 1
Passive Flux Meter Deployment Locations
Quarterly Report #1 (Jan-Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

Location ID	Water Bearing Unit	October 2020 Deployment	November 2021 Deployment	July 2022 Deployment
LTW-04	Floodplain Deposits	--	✓	✓
OW-4	Black Creek Aquifer	--	✓	✓
PIW-11	Black Creek Aquifer	✓	✓	✓
PIW-12	Black Creek Aquifer	✓	✓	--
PIW-13	Black Creek Aquifer	✓	✓	--
PIW-14	Black Creek Aquifer	✓	✓	--
PIW-15	Black Creek Aquifer	✓	✓	✓
PIW-1D	Black Creek Aquifer	✓	✓	✓
PIW-2D	Black Creek Aquifer	✓	--	--
PIW-3D	Black Creek Aquifer	✓	✓	✓
PIW-4D	Black Creek Aquifer	✓	✓	✓
PIW-6S	Floodplain Deposits	✓	✓	✓
PIW-7D	Black Creek Aquifer	✓	✓	✓
PIW-7S	Floodplain Deposits	✓	✓	✓
PIW-8D	Black Creek Aquifer	✓	✓	✓
PIW-9D	Black Creek Aquifer	✓	--	--
PIW-10DR	Black Creek Aquifer	✓	--	--
PW-10R	Black Creek Aquifer	✓	✓	✓
PW-11	Black Creek Aquifer	✓	--	--
OW-28	Black Creek Aquifer	--	--	✓
OW-30	Black Creek Aquifer	--	--	✓
OW-40	Black Creek Aquifer	--	--	✓

Notes:

- 1) The well list was updated for the July 2022 deployment to exclude wells that were inaccessible due to interim pumping of the Black Creek Aquifer, and to prioritize wells downgradient of the groundwater remedy alignment.

Table 2
Passive Flux Meter Deployment Details - July 2022 Deployment
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

Well ID	Geologic Completion Zone	Screen Interval ¹ (ft bgs)	Date Placed	Time Placed	DTW _{initial} (ft TOC)	DTW _{final} (ft TOC)	Date Removed and Sampled	Time Removed	Days Elapsed	Transducer Present
PIW-11	Black Creek Aquifer	47-57	6/29/2022	08:50	23.9	20.4	7/13/2022	08:50	14	No
PIW-15	Black Creek Aquifer	34-44	6/29/2022	09:55	35.2	35.2	7/13/2022	10:19	14	No
PIW-1D	Black Creek Aquifer	25-30	6/29/2022	10:55	19.7	19.7	7/13/2022	11:10	14	Yes
PIW-3D	Black Creek Aquifer	19-24	6/29/2022	11:45	17.9	18.0	7/13/2022	12:02	14	Yes
PIW-4D	Black Creek Aquifer	32.2-37.3	6/29/2022	13:10	9.24	9.23	7/13/2022	12:43	14	Yes
PIW-7D	Black Creek Aquifer	29-34	6/29/2022	14:10	5.79	5.82	7/13/2022	13:28	14	No
PIW-7S	Surficial Aquifer	7-17	6/29/2022	14:35	6.39	5.73	7/13/2022	13:58	14	No
LTW-04 ²	Black Creek Aquifer	12-27	6/29/2022	15:20	8.80	5.82	7/13/2022	14:40	14	Yes
PIW-8D	Black Creek Aquifer	35-40	6/29/2022	16:45	7.46	7.50	7/13/2022	15:18	14	Yes
PIW-6S	Surficial Aquifer	18-28	6/30/2022	08:00	15.1	14.5	7/14/2022	07:47	14	Yes
PW-10R	Black Creek Aquifer	57-67	6/30/2022	09:00	28.1	28.1	7/14/2022	08:45	14	No
OW-28	Black Creek Aquifer	20-30	6/30/2022	09:50	8.51	8.39	7/14/2022	09:45	14	No
OW-4	Black Creek Aquifer	47-57	6/30/2022	10:40	21.3	21.3	7/14/2022	10:20	14	No
OW-30	Black Creek Aquifer	49-59	6/30/2022	11:30	30.6	30.7	7/14/2022	11:15	14	No
OW-40	Black Creek Aquifer	49-59	6/30/2022	12:00	32.4	32.4	7/14/2022	11:45	14	No

Notes:

- 1) For wells with 10-foot screen intervals, two PFM's were placed.
- 2) At LTW-04, which has a 15-foot screen, three PFM's were placed.

PFM: Passive Flux Meter

ft bgs: feet below ground surface

ft TOC: feet below top of casing

DTW: depth to water

DTW: depth to water

DTW_{initial}: measured DTW prior to PFM placement

DTW_{final}: measured DTW after to PFM placement

Table 3
Passive Flux Meter Resin PFAS Results - July 2022 Deployment
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

Analyte	Location ID:	LTW-04	OW-28	OW-30	OW-4	OW-40	PIW-11	PIW-1D	PIW-15	PIW-3D	PIW-4D
	Field Sample ID:	LTW-04-20220713-R	OW-28-20220714-R	OW-30-20220714-R	OW-4-20220714-R	OW-40-20220714-R	PIW-11-20220713-R	PIW-1D-20220713-R	PIW-15-20220713-R	PIW-3D-20220713-R	PIW-4D-20220713-R
	Sample Date:	07/13/2022	07/14/2022	07/14/2022	07/14/2022	07/14/2022	07/13/2022	07/13/2022	07/13/2022	07/13/2022	07/13/2022
	QA/QC:										
	Sample Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	Units:	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)
Table 3+ SOP											
Hfpo Dimer Acid		720,000	660,000	2,600,000	180,000	190,000	16,000	2,200,000	410,000	600,000	<1,000
PFMOAA		1,500,000	140,000	9,500,000	440,000	250,000	31,000	2,600,000	380,000	330,000	<1,000
PFO2HxA		780,000 J	280,000 J	4,700,000 J	180,000 J	97,000 J	6,200 J	1,900,000 J	240,000 J	450,000 J	<1,000 UJ
PFO3OA		180,000	74,000 J	610,000	68,000	35,000	1,100	410,000	42,000	94,000	<1,000
PFO4DA		20,000	13,000	<78,000	14,000	2,100	<1,300	87,000	<7,100	40,000	<1,300
PFO5DA		<15,000	<7,500	<71,000	<7,600	<1,400	<1,200	<63,000	<6,500	<7,400	<1,200
PMPA		420,000 J	420,000 J	2,100,000 J	49,000 J	88,000 J	4,000 J	1,600,000 J	250,000 J	350,000 J	<1,000 UJ
PEPA		190,000 J	220,000 J	620,000 J	18,000 J	34,000 J	1,600 J	570,000 J	79,000 J	150,000 J	<1,000 UJ
PS Acid		<5,600	<2,900	<27,000	<2,900	<1,000	<1,000	<24,000	<2,500	<2,800	<1,000
Hydro-PS Acid		<5,300	6,800	<25,000	<2,700	<1,000	<1,000	<22,000	<2,300	6,200	<1,000
R-PSDA		14,000 J	<6,800 UJ	<64,000 UJ	<6,900 UJ	<1,300 UJ	<1,100 UJ	<57,000 UJ	<5,900 UJ	<6,700 UJ	<1,100 UJ
Hydrolyzed PSDA		38,000 J	<11,000 UJ	<110,000 UJ	12,000 J	<2,100 UJ	<2,000 UJ	<94,000 UJ	<9,800 UJ	<11,000 UJ	<2,000 UJ
R-PSDCA		<5,600	<2,900	<27,000	<2,900	<1,000	<1,000	<24,000	<2,500	<2,800	<1,000
NVHOS, Acid Form		49,000 J	4,200 J	160,000 J	6,200 J	1,400 J	<1,000 UJ	39,000 J	4,700 J	5,500 J	<1,000 UJ
EVE Acid		<5,300	<2,700	<25,000	<2,700	<1,000	<1,000	<22,000	<2,300	<2,600	<1,000
Hydro-EVE Acid		16,000	<3,000	<29,000	8,400	1,800	<1,000	<25,000	<2,600	<3,000	<1,000
R-EVE		27,000 J	<9,100 UJ	120,000 J	<9,300 UJ	<2,000 UJ	<2,000 UJ	<76,000 UJ	<7,900 UJ	<9,000 UJ	<2,000 UJ
Perfluoro(2-ethoxyethane)sulfonic Acid		<6,000 UJ	<3,000 UJ	<29,000 UJ	<3,100 UJ	<1,000 UJ	<1,000 UJ	<25,000 UJ	<2,600 UJ	<3,000 UJ	<1,000 UJ
PFECA B		<8,800	<4,500	<42,000	<4,500	<1,000	<1,000	<37,000	<3,900	<4,400	<1,000
PFECA-G		<13,000	<6,600	<63,000	<6,700	<1,200	<1,000	<55,000	<5,700	<6,500	<1,100
Total Table 3+ (17 compounds)^{1,2}		3,900,000	1,800,000	20,000,000	960,000	700,000	60,000	9,400,000	1,400,000	2,000,000	ND
Total Table 3+ (20 compounds)¹		4,000,000	1,800,000	20,000,000	980,000	700,000	60,000	9,400,000	1,400,000	2,000,000	ND
Other Parameters (%)											
Percent Moisture		71.5	73.1	72.7	72.5	72.7	66.8	68.4	70.4	71.9	65.9
Percent Solids		28.5	26.9	27.3	27.5	27.3	33.2	31.6	29.6	28.1	34.1

Notes:

1) Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

2) Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

3) Results in **Bold** indicate that analyte was detected above associated reporting limit.

4) J indicates analyte detected. Reported value may not be accurate or precise.

5) ND indicates that no Table 3+ compounds were detected above their associated reporting limits.

6) < indicates analyte not detected above associated reporting limit.

7) UJ indicates analyte not detected. Reporting limit may not be accurate or precise.

8) -- indicates that no data was reported.

ng/L: nanograms per liter

QA/QC: quality assurance/ quality control

SOP: standard operating procedure

Table 3
Passive Flux Meter Resin PFAS Results - July 2022 Deployment
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

Analyte	Location ID	PIW-6S	PIW-7D	PIW-7S		PIW-8D	PW-10R	EB	FBLK	FBLK
	Field Sample ID	PIW-6S-20220714-R	PIW-7D-20220713-R	PIW-7S-20220713-R	DUP-20220713-R	PIW-8D-20220713-R	PW-10R-20220714-R	EB-20220713	FB-20220713	Resin Blank
	Sample Date	07/14/2022	07/13/2022	07/13/2022	07/13/2022	07/13/2022	07/14/2022	07/13/2022	07/13/2022	07/13/2022
	QA/QC				Field Duplicate			Equipment Blank	Field Blank	Field Blank
	Sample Matrix	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	LIQUID	LIQUID	SOLID
	Units	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/kg)	(ng/L)	(ng/L)	(ng/kg)
Table 3+ SOP										
Hfpo Dimer Acid		140,000	1,300,000	1,300,000	1,400,000	730,000	420,000	<2.0	<2.0	<1,000
PFMOAA		1,600,000	9,700,000	740,000	710,000	1,800,000	4,800,000	<2.0	<2.0	<1,000
PFO2HxA		420,000 J	3,300,000 J	690,000 J	800,000 J	830,000 J	1,600,000 J	<2.0	<2.0	<1,000 UJ
PFO3OA		68,000	680,000	350,000	390,000	340,000	99,000	<2.0	<2.0	<1,000
PFO4DA		<16,000	140,000	47,000	52,000	62,000	<82,000	<2.0	<2.0	<1,000
PFO5DA		<14,000	<69,000	<15,000	<15,000	<13,000	<75,000	<2.0	<2.0	<1,000
PMPA		140,000 J	280,000 J	430,000 J	460,000 J	190,000 J	170,000 J	<10	<10	<1,000 UJ
PEPA		33,000 J	71,000 J	220,000 J	260,000 J	74,000 J	<32,000 UJ	<20	<20	<1,000 UJ
PS Acid		<5,500	<26,000	<5,500	<5,500	<5,100	<28,000	<2.0	<2.0	<1,000
Hydro-PS Acid		<5,200	<25,000	24,000	24,000	6,300	<27,000	<2.0	<2.0	<1,000
R-PSDA		<13,000 UJ	<62,000 UJ	18,000 J	30,000 J	<12,000 UJ	<68,000 UJ	<2.0	<2.0	<1,000 UJ
Hydrolyzed PSDA		<22,000 UJ	<100,000 UJ	<22,000 UJ	<22,000 UJ	<20,000 UJ	<110,000 UJ	<2.0	<2.0	<2,000 UJ
R-PSDCA		<5,500	<26,000	<5,500	<5,500	<5,100	<28,000	<2.0	<2.0	<1,000
NVHOS, Acid Form		14,000 J	120,000 J	53,000 J	59,000 J	33,000 J	60,000 J	<2.0	<2.0	<1,000 UJ
EVE Acid		<5,200	<25,000	<5,200	<5,200	<4,800	<27,000	<2.0	<2.0	<1,000
Hydro-EVE Acid		<5,800	41,000	41,000	41,000	30,000	<30,000	<2.0	<2.0	<1,000
R-EVE		<18,000 UJ	<84,000 UJ	34,000 J	56,000 J	<16,000 UJ	<91,000 UJ	<2.0	<2.0	<2,000 UJ
Perfluoro(2-ethoxyethane)sulfonic Acid		<5,800 UJ	<28,000 UJ	<5,900 UJ	<5,900 UJ	<5,400 UJ	<30,000 UJ	<2.0	<2.0	<1,000 UJ
PFECA B		<8,600	<41,000	<8,600	<8,700	<8,000	<44,000	<2.0	<2.0	<1,000
PFECA-G		<13,000	<61,000	<13,000	<13,000	<12,000	<66,000	<2.0	<2.0	<1,000
Total Table 3+ (17 compounds)^{1,2}		2,400,000	16,000,000	3,900,000	4,200,000	4,100,000	7,100,000	ND	ND	ND
Total Table 3+ (20 compounds)¹		2,400,000	16,000,000	3,900,000	4,300,000	4,100,000	7,100,000	ND	ND	ND
Other Parameters (%)										
Percent Moisture		71.8	71	72.2	72	70.5	72.4	--	--	58.2
Percent Solids		28.2	29	27.8	28	29.5	27.6	--	--	41.8

Notes:

1) Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

2) Total Table 3+ (17 Compounds) does not include R-PSDA, Hydrolyzed PSDA and R-EVE.

3) Results in **Bold** indicate that analyte was detected above associated reporting limit.

4) J indicates analyte detected. Reported value may not be accurate or precise.

5) ND indicates that no Table 3+ compounds were detected above their associated reporting limits.

6) < indicates analyte not detected above associated reporting limit.

7) UJ indicates analyte not detected. Reporting limit may not be accurate or precise.

8) -- indicates that no data was reported.

ng/L: nanograms per liter

QA/QC: quality assurance/ quality control

SOP: standard operating procedure

Table 4
Darcy Velocity and PFAS Flux - July 2022
Deployment Quarterly Report #1 (Jan - Mar 2023)
Chemours Fayetteville Works
Fayetteville, NC

Sample ID	Location ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	Hfpo Dimer Acid (µg/m ² /day)	PFMOAA (µg/m ² /day)	PFO2HxA (µg/m ² /day)	PFO3OA (µg/m ² /day)	PFO4DA (µg/m ² /day)	PFO5DA (µg/m ² /day)	PMPA (µg/m ² /day)	PEPA (µg/m ² /day)	PS Acid (µg/m ² /day)	Hydro-PS Acid (µg/m ² /day)	R-PSDA (µg/m ² /day)	Hydrolyzed PSDA (µg/m ² /day)	R-PSDCA (µg/m ² /day)	NVHOS (µg/m ² /day)	EVE Acid (µg/m ² /day)	Hydro-EVE Acid (µg/m ² /day)	R-EVE (µg/m ² /day)	PES (µg/m ² /day)	PFECA B (µg/m ² /day)	PFECA-G (µg/m ² /day)
PIW-11-20220713-G	PIW-11	51	6.2	35	68	14	2	ND	ND	9	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PIW-15-20220713-G	PIW-15	39	5.1	900	830	530	92	ND	ND	550	170	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	
PIW-1D-20220713-G	PIW-1D	28	21.0	4,800	5,700	4,200	900	190	ND	3,500	1,200	ND	ND	ND	ND	85	ND	ND	ND	ND	ND	ND	
PIW-3D-20220713-G	PIW-3D	23	4.3	1,300	720	990	210	88	ND	770	330	ND	14	ND	ND	12	ND	ND	ND	ND	ND	ND	
PIW-4D-20220713-G	PIW-4D	35	8.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
PIW-7D-20220713-G	PIW-7D	32	5.8	2,900	21,000	7,300	1,500	310	ND	620	160	ND	ND	ND	ND	260	ND	90	ND	ND	ND	ND	
PIW-7S-20220713-G	PIW-7S	12	6.6	2,900	1,600	1,500	770	100	ND	940	480	ND	53	40	ND	ND	120	ND	90	75	ND	ND	
PIW-7S-DUP-20220713-G	PIW-7S	12	5.8	3,100	1,600	1,800	860	110	ND	1,000	570	ND	53	66	ND	ND	130	ND	91	120	ND	ND	
LTW-04-20220713-G	LTW-04	20	3.2	1,600	3,300	1,700	400	44	ND	920	420	ND	ND	31	83	ND	110	ND	35	59	ND	ND	
PIW-8D-20220713-G	PIW-8D	40	2.8	1,600	4,000	1,800	750	140	ND	420	160	ND	14	ND	ND	73	ND	66	ND	ND	ND	ND	
PIW-6S-20220714-G	PIW-6S	23	5.3	310	3,500	920	150	ND	ND	310	72	ND	ND	ND	ND	31	ND	ND	ND	ND	ND	ND	
PW-10R-20220714-G	PW-10R	62	7.9	920	11,000	3,500	220	ND	ND	370	ND	ND	ND	ND	ND	130	ND	ND	ND	ND	ND	ND	
OW-28-20220714-G	OW-28	25	6.9	1,400	310	610	160	28	ND	920	480	ND	15	ND	ND	9	ND	ND	ND	ND	ND	ND	
OW-4-20220714-G	OW-4	52	6.1	390	960	390	150	31	ND	110	39	ND	ND	26	ND	14	ND	18	ND	ND	ND	ND	
OW-30-20220714-G	OW-30	54	17.2	5,700	21,000	10,000	1,300	ND	ND	4,600	1,400	ND	ND	ND	ND	350	ND	ND	260	ND	ND	ND	
OW-40-20220714-G	OW-40	54	6.3	420	550	210	77	5	ND	190	74	ND	ND	ND	ND	3	ND	4	ND	ND	ND	ND	

Notes:

1) Darcy velocity and PFAS flux data reported by EnviroFlux

2) All values rounded to 2 significant digits.

3) ND indicates that the analyte was not detected above the associated reporting limit

ft: feet

PFAS: per- and polyfluoroalkyl substances

PFM: passive flux meter

cm/day: centimeters per day

µg/m²/day: micrograms per square meter per day

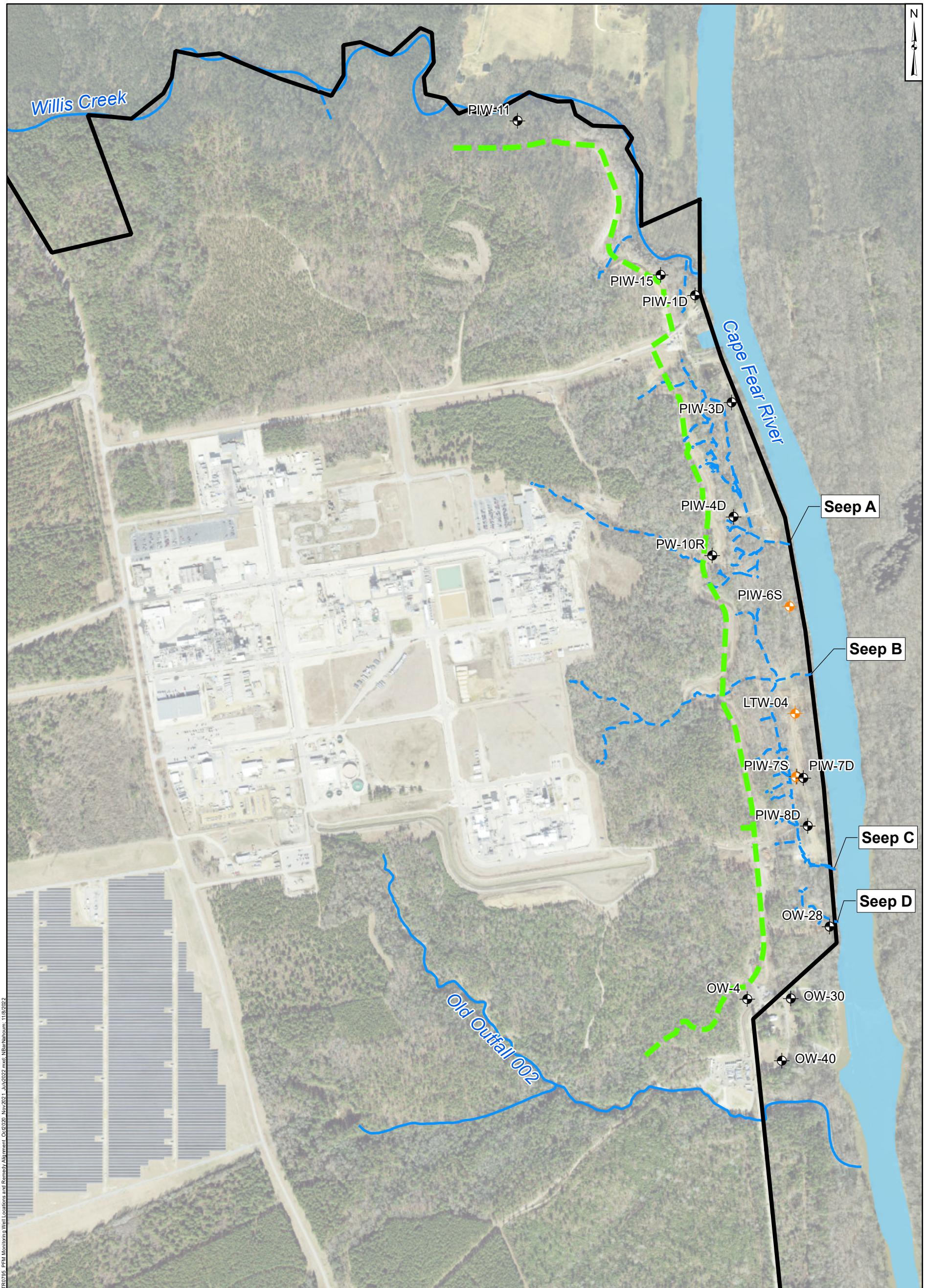
Table 5
PFAS Mass Flux Along Remedy - July 2022 Deployment
Quarterly Report #1 (Jan - Mar 2023)
 Chemours Fayetteville Works
 Fayetteville, NC

Groundwater Remedy Alignment Portion	PFM Sample ID	Location ID	Darcy Velocity (cm/day) ¹	Total Table 3+ (17 Compounds) Flux ($\mu\text{g}/\text{m}^2/\text{day}$) ^{1,2}	Cross Sectional Area of Black Creek Aquifer Segment (ft ²) ³	Estimated Total Table 3+ (17 Compounds) Mass Flux (mg/sec) ²
Northern Portion	PIW-11-20220713-G	PIW-11 ⁴	6.2	131	7,148	1.0E-03
	PIW-15-20220713-G	PIW-15	5.1	3,078	19,437	0.064
	PIW-1D-20220713-G	PIW-1D	21.0	20,605	2,980	0.066
	Total - Northern Portion	--	--	23,813	29,565	0.13
Southern/ Central Portion	PIW-3D-20220713-G	PIW-3D	4.3	4,436	21,921	0.10
	PIW-4D-20220713-G	PIW-4D	8.8	0	14,407	0.0
	PW-10R-20220714-G	PW-10R	7.9	15,680	9,998	0.17
	PIW-6S-20220714-G	PIW-6S	5.3	5,293	33,968	0.19
	LTW-04-20220713-G	LTW-04	3.2	8,507	25,274	0.23
	PIW-7S-20220713-G / PIW-7D-20220713-G	PIW-7S / PIW-7D ⁵	6.2	21,453	8,694	0.20
	PIW-8D-20220713-G	PIW-8D	2.8	9,016	16,208	0.16
	OW-28-20220714-G	OW-28	6.9	3,985	7,886	0.034
	OW-4-20220714-G / OW-30-20220714-G	OW-30 / OW-4 ⁶	11.7	23,307	9,998	0.25
	OW-40-20220714-G	OW-40	6.3	1,531	16,518	0.027
Total - Southern / Central Portion		--	--	93,208	164,872	1.4

Notes:

- 1) Darcy velocity and Table 3+ flux for the July 2022 event is reported by Enviroflux and is presented in Table 4.
 - 2) Total Table 3+ (17 compounds) does not include R-PSDA, Hydrolyzed PSDA, and R-EVE.
 - 3) Cross-Sectional Areas of the Black Creek Aquifer for each PFM location are shown in Figure 2.
 - 4) The Black Creek Aquifer is interpreted to pinch out to the south of PIW-11, however PFAS flux is observed at this location. The relevant cross-sectional area was estimated based on the height of the Black Creek Aquifer at adjacent well PIW-12 and the length of the remedy alignment at PIW-11.
 - 5) PIW-7S and PIW-7D both project to the same position on the high-resolution cross section (Figure 2) therefore the reported flux for these two locations was averaged to calculate the mass flux.
 - 6) OW-4 and OW-30 both project to the same position on the high-resolution cross section (Figure 2) therefore the reported flux for these two locations was averaged to calculate the mass flux.
- cm/day: centimeters per day
 ft²: square feet
 mg/s: milligrams per second
 PFAS: per- and poly-fluorinated alkyl substances
 PFM: passive flux meter
 $\mu\text{g}/\text{m}^2/\text{day}$: micrograms per square meter per day

Figures



Path: \usgs\0-DigitalPrj\Project\TR0795\PFM Monitoring Well Locations and Remedy Alignment\Oc2020_Nov2021_July2022.mod\NBarNanum;11/8/2022

Legend

- | | | | | | |
|--|---------------------|---|------------------|--------------------------------------|------------------|
| ● | Floodplain Deposits | — | Nearby Tributary | — | Remedy Alignment |
| ● | Black Creek Aquifer | - - - | Observed Seep | | |
| — Site Boundary | | | | | |

1,000 500 0 1,000 Feet

PFM Monitoring Well Locations and Remedy Alignment - July 2022 Deployment

Chemours Fayetteville Works, North Carolina

Geosyntec
consultants

Geosyntec Consultants of NC, P.C.
NC License No.: C 3500 and C 295

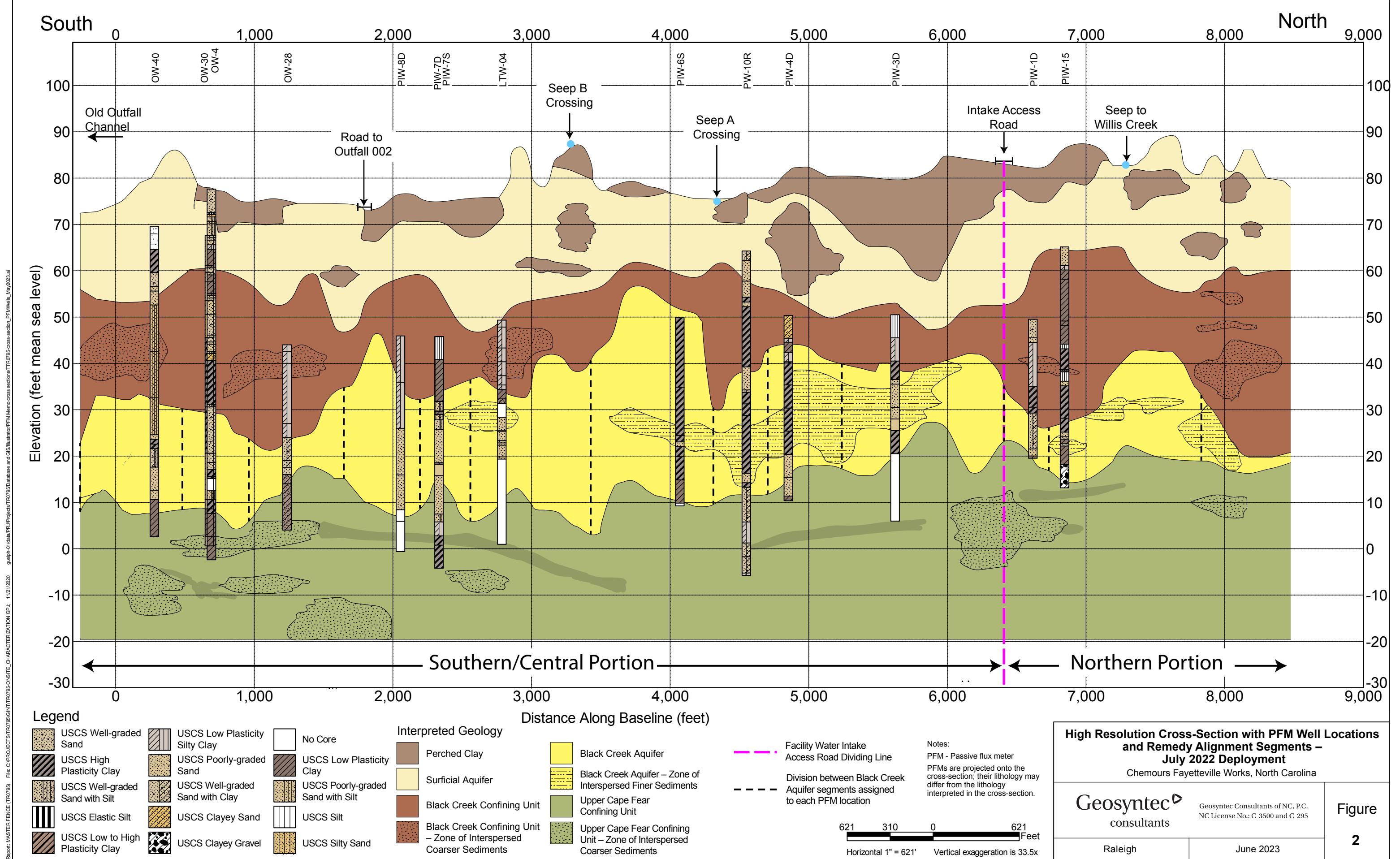
Figure

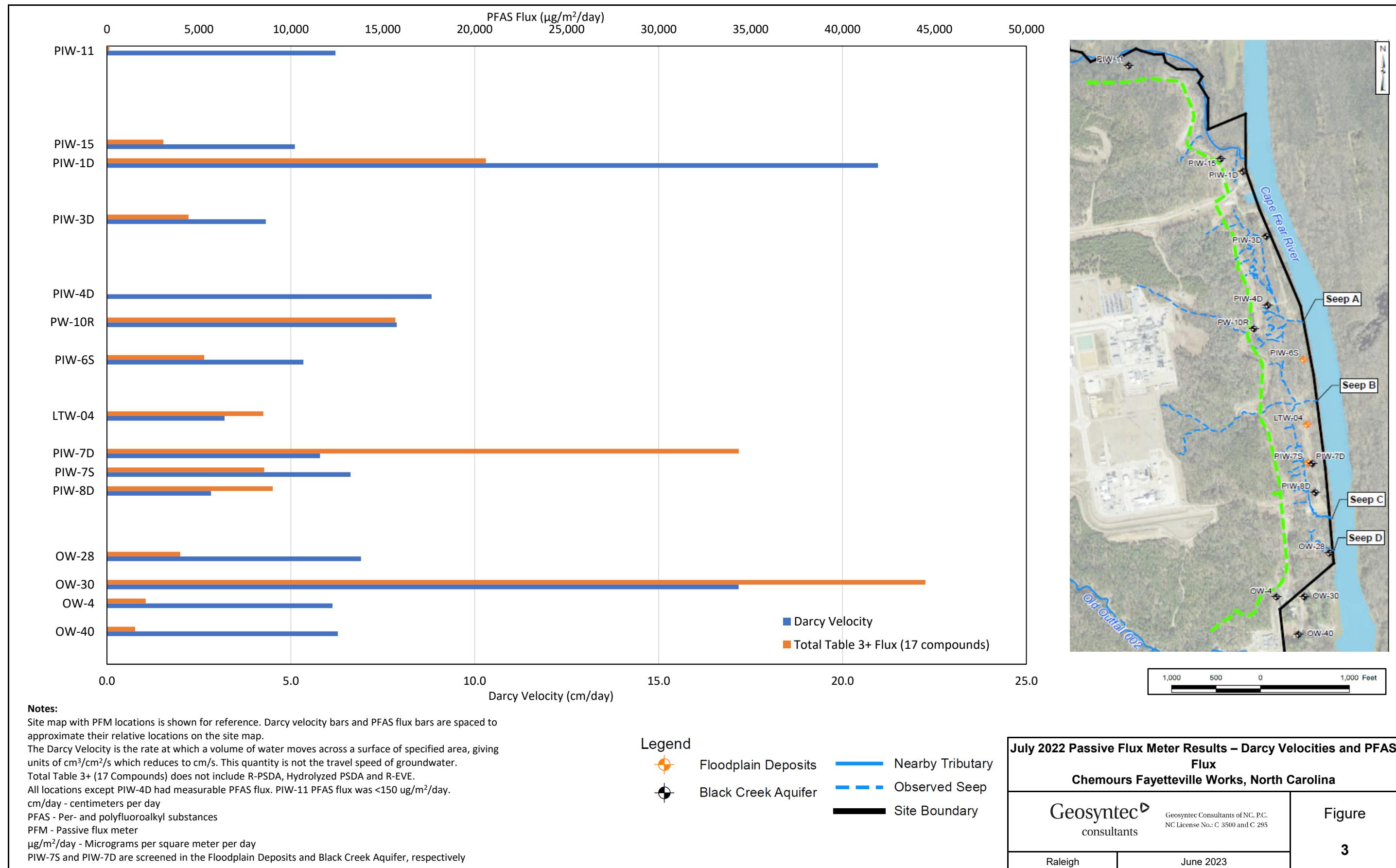
1

Notes:
PFM - passive flux meter

1. Due to the scale of the map, pairs of wells that are in close proximity have been offset for visibility. Therefore, the placement of these wells on this map do not reflect their true geographic coordinates.
2. Remedy alignment is preliminary and is subject to change in future submittals.
3. The outline of Cape Fear River is approximate and is based on open data from ArcGIS Online and North Carolina Department of Environmental Quality Online GIS (MajorHydro shapefile).
4. PIW and PW-well locations were surveyed by a licensed North Carolina Surveyor.
5. Basemap source: NC OneMap (2019). North Carolina Department of Information Technology, Government Data Analytics Center, Center for Geographic Information and Analysis. Available at <https://www.ncnemap.gov>.

Projection: NAD 1983 StatePlane North Carolina FIPS_3220 Feet; Units in Feet US





**Attachment 1 - Laboratory
Analytical Data Review Narrative**

ADQM Data Review

Site: Chemours Fayetteville

Project: Passive Flux Meters Sampling (select lots)

Project Reviewer: Michael Aucoin

Sample Summary

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time
DUP-20220713-R	320-90045-10	Resin	N	07/13/2022	12:00
LTW-04-20220713-R	320-90045-11	Resin	N	07/13/2022	15:00
PIW-8D-20220713-R	320-90045-12	Resin	N	07/13/2022	15:30
Resin Blank	320-90045-13	Blank Soil	N	07/13/2022	17:00
PIW-11-20220713-R	320-90045-3	Resin	N	07/13/2022	09:30
PIW-1S-20220713-R	320-90045-4	Resin	N	07/13/2022	10:30
PIW-1D-20220713-R	320-90045-5	Resin	N	07/13/2022	11:20
PIW-3D-20220713-R	320-90045-6	Resin	N	07/13/2022	12:15
PIW-4D-20220713-R	320-90045-7	Resin	N	07/13/2022	12:50
PIW-7D-20220713-R	320-90045-8	Resin	N	07/13/2022	13:30
PIW-7S-20220713-R	320-90045-9	Resin	N	07/13/2022	14:15
PIW-6S-20220714-R	320-90073-1	Resin	N	07/14/2022	08:15
PW-10R-20220714-R	320-90073-2	Resin	N	07/14/2022	09:00
OW-28-20220714-R	320-90073-3	Resin	N	07/14/2022	10:00
OW-4-20220714-R	320-90073-4	Resin	N	07/14/2022	11:00
OW-30-20220714-R	320-90073-5	Resin	N	07/14/2022	11:30
OW-40-20220714-R	320-90073-6	Resin	N	07/14/2022	12:30
FB-20220713	320-90045-1	Blank Water	N	07/13/2022	09:15
EB-20220713	320-90045-2	Blank Water	N	07/13/2022	09:30

* FS=Field Sample

DUP=Field Duplicate

FB=Field Blank

EB=Equipment Blank

TB=Trip Blank

Analytical Protocol

Lab Name	Lab Method	Parameter Category	Sampling Program
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	Passive Flux Meters Sampling
Eurofins Environ Testing Northern Cali	D2216	Percent Moisture	Passive Flux Meters Sampling
Eurofins Environ Testing Northern Cali	D2216	Percent Solids	Passive Flux Meters Sampling
Eurofins Environ Testing Northern Cali	D2216-90	Percent Moisture	Passive Flux Meters Sampling
Eurofins Environ Testing Northern Cali	D2216-90	Percent Solids	Passive Flux Meters Sampling

ADQM Data Review Checklist

Item	Description	Yes	No*	Not Applicable (NA)*	DVM Narrative Report	Laboratory Report	Exception Report (ER) #
A	Did samples meet laboratory acceptability requirements upon receipt (i.e., intact, within temperature, properly preserved, and no headspace where applicable)?	X					
B	Were samples received by the laboratory in agreement with the associated chain of custody?		X			X	
C	Was the chain of custody properly completed by the laboratory and/or field team?	X					
D	Were samples prepped/analyzed by the laboratory within method holding times?	X					
E	Were QA/QC criteria met by the laboratory (method blanks, LCSs/LCSDs, MSs/MSDs, PDSs, SDs, duplicates/replicates, surrogates, total/dissolved differences/RPDs, sample results within calibration range)?		X		X	X	
F	Were detections in field/equipment/trip blanks at levels not requiring sample data qualification?	X					
G	Were all data usable and not R qualified?	X					
ER#	Description						
Other QA/QC Items to Note:							

* See DVM Narrative Report, Laboratory Report, and/or ER # for further details as indicated.

The electronic data submitted for this project were reviewed via the Data Verification Module (DVM) process. Overall, the data are acceptable for use without qualification, except as noted on the attached DVM Narrative Report.

The lab reports due to a large page count are stored on a network shared drive and are available to be posted on external shared drives, or on a flash drive.

Data Verification Module (DVM)

The DVM is an internal review process used by the ADQM group to assist with the determination of data usability. The electronic data deliverables received from the laboratory are loaded into the Locus EIM™ database and processed through a series of data quality checks, which are a combination of software, Locus EIM™ database Data Verification Module (DVM), and manual reviewer evaluations. The data are evaluated against the following data usability checks:

- Field and laboratory blank contamination
- US EPA hold time criteria
- Missing Quality Control (QC) samples
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries and the relative percent differences (RPDs) between these spikes
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries and the RPD between these spikes
- Surrogate spike recoveries for organic analyses
- Difference/RPD between field duplicate sample pairs
- RPD between laboratory replicates for inorganic analyses
- Difference/percent difference between total and dissolved sample pairs

There are two qualifier fields in EIM:

Laboratory Qualifier is the qualifier assigned by the laboratory and may not reflect the usability of the data. This qualifier may have many different meanings and can vary between labs and over time within the same lab. Please refer to the laboratory report for a description of the laboratory qualifiers. As they are laboratory descriptors they are not to be used when evaluating the data.

Validation Qualifier is the 3rd party formal validation qualifier if this was performed. Otherwise this field contains the qualifier resulting from the ADQM DVM review process. This qualifier assesses the usability of the data and may not equal the laboratory qualifier. The DVM applies the following data evaluation qualifiers to analysis results, as warranted:

Qualifier	Definition
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
J	Analyte present. Reported value may not be accurate or precise.
UJ	Not detected. Reporting limit may not be accurate or precise.

The **Validation Status Code** field is set to “DVM” if the ADQM DVM process has been performed. If the DVM has not been run, the field will be blank.

If the DVM has been run (**Validation Status Code** equals “DVM”), use the **Validation Qualifier**.

If the data have been validated by a third party, the field “**Validated By**” will be set to the validator (e.g., ESI for Environmental Standards, Inc.).

DVM Narrative Report

Site: Fayetteville

Sampling Program:

Passive Flux Meters Sampling

Validation Options:

LABSTATS

Validation Reason Code:

Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit but above 10%. The actual detection limits may be higher than reported.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
LTW-04-20220713-R	07/13/2022	320-90045-11	Perfluoro(2-ethoxyethane)sulfonic acid	6.0	UG/KG	PQL		6.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	Hydrolyzed PSDA	22	UG/KG	PQL		22	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	Perfluoro(2-ethoxyethane)sulfonic acid	5.9	UG/KG	PQL		5.9	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	Perfluoro(2-ethoxyethane)sulfonic acid	1.0	UG/KG	PQL		1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	R-PSDA	1.1	UG/KG	PQL		1.1	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	Hydrolyzed PSDA	2.0	UG/KG	PQL		2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	R-EVE	2.0	UG/KG	PQL		2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	R-PSDA	57	UG/KG	PQL		57	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	Hydrolyzed PSDA	94	UG/KG	PQL		94	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	R-EVE	76	UG/KG	PQL		76	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	NVHOS, Acid Form	1.0	UG/KG	PQL		1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	Perfluoro(2-ethoxyethane)sulfonic acid	25	UG/KG	PQL		25	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	Perfluoro(2-ethoxyethane)sulfonic acid	2.6	UG/KG	PQL		2.6	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	R-PSDA	5.9	UG/KG	PQL		5.9	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	Hydrolyzed PSDA	9.8	UG/KG	PQL		9.8	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	R-EVE	7.9	UG/KG	PQL		7.9	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-4D-20220713-R	07/13/2022	320-90045-7	Perfluoro(2-ethoxyethane)sulfonic acid	1.0	UG/KG	PQL		1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-4D-20220713-R	07/13/2022	320-90045-7	PMPA	1.0	UG/KG	PQL		1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-4D-20220713-R	07/13/2022	320-90045-7	R-PSDA	1.1	UG/KG	PQL		1.1	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-4D-20220713-R	07/13/2022	320-90045-7	Hydrolyzed PSDA	2.0	UG/KG	PQL		2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-4D-20220713-R	07/13/2022	320-90045-7	R-EVE	2.0	UG/KG	PQL		2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-4D-20220713-R	07/13/2022	320-90045-7	PEPA	1.0	UG/KG	PQL		1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D

Validation Reason Code:

Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit but above 10%. The actual detection limits may be higher than reported.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
PIW-4D-20220713-R	07/13/2022	320-90045-7	PFO2HxA	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-4D-20220713-R	07/13/2022	320-90045-7	NVHOS, Acid Form	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-7D-20220713-R	07/13/2022	320-90045-8	Perfluoro(2-ethoxyethane)sulfonic	28	UG/KG	PQL	28	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-3D-20220713-R	07/13/2022	320-90045-6	R-PSDA	6.7	UG/KG	PQL	6.7	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-3D-20220713-R	07/13/2022	320-90045-6	Hydrolyzed PSDA	11	UG/KG	PQL	11	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-3D-20220713-R	07/13/2022	320-90045-6	R-EVE	9.0	UG/KG	PQL	9.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-7D-20220713-R	07/13/2022	320-90045-8	R-PSDA	62	UG/KG	PQL	62	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-7D-20220713-R	07/13/2022	320-90045-8	Hydrolyzed PSDA	100	UG/KG	PQL	100	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-7D-20220713-R	07/13/2022	320-90045-8	R-EVE	84	UG/KG	PQL	84	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-3D-20220713-R	07/13/2022	320-90045-6	Perfluoro(2-ethoxyethane)sulfonic	3.0	UG/KG	PQL	3.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-7S-20220713-R	07/13/2022	320-90045-9	Perfluoro(2-ethoxyethane)sulfonic	5.9	UG/KG	PQL	5.9	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-7S-20220713-R	07/13/2022	320-90045-9	Hydrolyzed PSDA	22	UG/KG	PQL	22	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	Perfluoro(2-ethoxyethane)sulfonic	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	PMPA	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	R-PSDA	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	Hydrolyzed PSDA	2.0	UG/KG	PQL	2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	R-EVE	2.0	UG/KG	PQL	2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	PEPA	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	PFO2HxA	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
Resin Blank	07/13/2022	320-90045-13	NVHOS, Acid Form	1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
OW-28-20220714-R	07/14/2022	320-90073-3	Perfluoro(2-ethoxyethane)sulfonic	3.0	UG/KG	PQL	3.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-8D-20220713-R	07/13/2022	320-90045-12	R-PSDA	12	UG/KG	PQL	12	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	
PIW-8D-20220713-R	07/13/2022	320-90045-12	Hydrolyzed PSDA	20	UG/KG	PQL	20	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D	

Validation Reason Code:

Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit but above 10%. The actual detection limits may be higher than reported.

Field Sample ID	Date Sampled Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
PIW-8D-20220713-R	07/13/2022 320-90045-12	R-EVE		16	UG/KG	PQL	16	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-28-20220714-R	07/14/2022 320-90073-3	R-PSDA		6.8	UG/KG	PQL	6.8	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-28-20220714-R	07/14/2022 320-90073-3	Hydrolyzed PSDA		11	UG/KG	PQL	11	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-28-20220714-R	07/14/2022 320-90073-3	R-EVE		9.1	UG/KG	PQL	9.1	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-8D-20220713-R	07/13/2022 320-90045-12	Perfluoro(2-ethoxyethane)sulfonic		5.4	UG/KG	PQL	5.4	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022 320-90073-5	Perfluoro(2-ethoxyethane)sulfonic		29	UG/KG	PQL	29	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022 320-90073-5	R-PSDA		64	UG/KG	PQL	64	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022 320-90073-5	Hydrolyzed PSDA		110	UG/KG	PQL	110	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022 320-90073-4	Perfluoro(2-ethoxyethane)sulfonic		3.1	UG/KG	PQL	3.1	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022 320-90073-4	R-PSDA		6.9	UG/KG	PQL	6.9	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022 320-90073-4	R-EVE		9.3	UG/KG	PQL	9.3	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022 320-90073-6	R-PSDA		1.3	UG/KG	PQL	1.3	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022 320-90073-6	Hydrolyzed PSDA		2.1	UG/KG	PQL	2.1	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022 320-90073-6	R-EVE		2.0	UG/KG	PQL	2.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022 320-90073-6	Perfluoro(2-ethoxyethane)sulfonic		1.0	UG/KG	PQL	1.0	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022 320-90073-1	Perfluoro(2-ethoxyethane)sulfonic		5.8	UG/KG	PQL	5.8	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022 320-90073-1	R-PSDA		13	UG/KG	PQL	13	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022 320-90073-1	Hydrolyzed PSDA		22	UG/KG	PQL	22	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022 320-90073-1	R-EVE		18	UG/KG	PQL	18	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PW-10R-20220714-R	07/14/2022 320-90073-2	R-PSDA		68	UG/KG	PQL	68	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PW-10R-20220714-R	07/14/2022 320-90073-2	Hydrolyzed PSDA		110	UG/KG	PQL	110	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PW-10R-20220714-R	07/14/2022 320-90073-2	R-EVE		91	UG/KG	PQL	91	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PW-10R-20220714-R	07/14/2022 320-90073-2	PEPA		32	UG/KG	PQL	32	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D

Site: Fayetteville

Sampling Program: Passive Flux Meters Sampling

Validation Options: LABSTATS

Validation Reason Code: Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit but above 10%. The actual detection limits may be higher than reported.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
PW-10R-20220714-R	07/14/2022	320-90073-2	Perfluoro(2-ethoxyethane)sulfonic	30	UG/KG	PQL		30	UJ	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D

Site: Fayetteville

Sampling Program: Passive Flux Meters Sampling

Validation Options: LABSTATS

Validation Reason Code: Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
PW-10R-20220714-R	07/14/2022	320-90073-2	PMPPA	170	UG/KG	PQL		52	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PW-10R-20220714-R	07/14/2022	320-90073-2	PFO2HxA	1600	UG/KG	PQL		25	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PW-10R-20220714-R	07/14/2022	320-90073-2	NVHOS, Acid Form	60	UG/KG	PQL		34	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022	320-90073-1	PEPA	33	UG/KG	PQL		6.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022	320-90073-1	PFO2HxA	420	UG/KG	PQL		4.8	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022	320-90073-1	NVHOS, Acid Form	14	UG/KG	PQL		6.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-6S-20220714-R	07/14/2022	320-90073-1	PMPPA	140	UG/KG	PQL		10	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022	320-90073-6	PMPPA	88	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022	320-90073-6	PEPA	34	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022	320-90073-6	PFO2HxA	97	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-40-20220714-R	07/14/2022	320-90073-6	NVHOS, Acid Form	1.4	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022	320-90073-4	PEPA	18	UG/KG	PQL		3.3	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022	320-90073-4	PFO2HxA	180	UG/KG	PQL		2.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022	320-90073-4	NVHOS, Acid Form	6.2	UG/KG	PQL		3.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022	320-90073-4	Hydrolyzed PSDA	12	UG/KG	PQL		11	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-4-20220714-R	07/14/2022	320-90073-4	PMPPA	49	UG/KG	PQL		5.3	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022	320-90073-5	R-EVE	120	UG/KG	PQL		87	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022	320-90073-5	PEPA	620	UG/KG	PQL		31	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022	320-90073-5	PFO2HxA	4700	UG/KG	PQL		24	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022	320-90073-5	NVHOS, Acid Form	160	UG/KG	PQL		32	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-30-20220714-R	07/14/2022	320-90073-5	PMPPA	2100	UG/KG	PQL		49	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-8D-20220713-R	07/13/2022	320-90045-12	PMPPA	190	UG/KG	PQL		9.3	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-28-20220714-R	07/14/2022	320-90073-3	PEPA	220	UG/KG	PQL		3.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D

Site: Fayetteville

Sampling Program: Passive Flux Meters Sampling

Validation Options: LABSTATS

Validation Reason Code: Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
OW-28-20220714-R	07/14/2022	320-90073-3	PFO2HxA	280	UG/KG	PQL		2.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-28-20220714-R	07/14/2022	320-90073-3	NVHOS, Acid Form	4.2	UG/KG	PQL		3.4	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-8D-20220713-R	07/13/2022	320-90045-12	PEPA	74	UG/KG	PQL		5.8	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-8D-20220713-R	07/13/2022	320-90045-12	PFO2HxA	830	UG/KG	PQL		4.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-8D-20220713-R	07/13/2022	320-90045-12	NVHOS, Acid Form	33	UG/KG	PQL		6.1	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
OW-28-20220714-R	07/14/2022	320-90073-3	PMMA	420	UG/KG	PQL		5.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7S-20220713-R	07/13/2022	320-90045-9	R-EVE	34	UG/KG	PQL		18	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7S-20220713-R	07/13/2022	320-90045-9	PEPA	220	UG/KG	PQL		6.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7S-20220713-R	07/13/2022	320-90045-9	PFO2HxA	690	UG/KG	PQL		4.8	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7S-20220713-R	07/13/2022	320-90045-9	NVHOS, Acid Form	53	UG/KG	PQL		6.6	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7S-20220713-R	07/13/2022	320-90045-9	PMMA	430	UG/KG	PQL		10	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7S-20220713-R	07/13/2022	320-90045-9	R-PSDA	18	UG/KG	PQL		13	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-3D-20220713-R	07/13/2022	320-90045-6	PMMA	350	UG/KG	PQL		5.1	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7D-20220713-R	07/13/2022	320-90045-8	PEPA	71	UG/KG	PQL		30	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7D-20220713-R	07/13/2022	320-90045-8	PFO2HxA	3300	UG/KG	PQL		23	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7D-20220713-R	07/13/2022	320-90045-8	NVHOS, Acid Form	120	UG/KG	PQL		31	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-3D-20220713-R	07/13/2022	320-90045-6	PEPA	150	UG/KG	PQL		3.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-3D-20220713-R	07/13/2022	320-90045-6	PFO2HxA	450	UG/KG	PQL		2.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-3D-20220713-R	07/13/2022	320-90045-6	NVHOS, Acid Form	5.5	UG/KG	PQL		3.3	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-7D-20220713-R	07/13/2022	320-90045-8	PMMA	280	UG/KG	PQL		48	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	PEPA	79	UG/KG	PQL		2.8	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	PFO2HxA	240	UG/KG	PQL		2.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1S-20220713-R	07/13/2022	320-90045-4	NVHOS, Acid Form	4.7	UG/KG	PQL		2.9	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D

Site: Fayetteville

Sampling Program: Passive Flux Meters Sampling

Validation Options: LABSTATS

Validation Reason Code: Associated LCS and/or LCSD analysis had relative percent recovery (RPR) values less than the lower control limit. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
PIW-1S-20220713-R	07/13/2022	320-90045-4	PMPA	250	UG/KG	PQL		4.5	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	PMPA	1600	UG/KG	PQL		43	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	PEPA	570	UG/KG	PQL		27	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	PFO2HxA	1900	UG/KG	PQL		21	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-1D-20220713-R	07/13/2022	320-90045-5	NVHOS, Acid Form	39	UG/KG	PQL		28	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	PEPA	1.6	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	PFO2HxA	6.2	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
PIW-11-20220713-R	07/13/2022	320-90045-3	PMPA	4.0	UG/KG	PQL		1.0	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	PMPA	460	UG/KG	PQL		10	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	R-PSDA	30	UG/KG	PQL		13	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	R-EVE	56	UG/KG	PQL		18	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	PEPA	260	UG/KG	PQL		6.2	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	PFO2HxA	800	UG/KG	PQL		4.9	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
DUP-20220713-R	07/13/2022	320-90045-10	NVHOS, Acid Form	59	UG/KG	PQL		6.6	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	PMPA	420	UG/KG	PQL		10	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	R-PSDA	14	UG/KG	PQL		13	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	Hydrolyzed PSDA	38	UG/KG	PQL		22	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	R-EVE	27	UG/KG	PQL		18	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	PEPA	190	UG/KG	PQL		6.3	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	PFO2HxA	780	UG/KG	PQL		4.9	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D
LTW-04-20220713-R	07/13/2022	320-90045-11	NVHOS, Acid Form	49	UG/KG	PQL		6.7	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D

Site: Fayetteville

Sampling Program: Passive Flux Meters Sampling

Validation Options: LABSTATS

Validation Reason Code:

Associated MS and/or MSD analysis had relative percent recovery (RPR) values less than the lower control limit but above the rejection limit. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
OW-28-20220714-R	07/14/2022	320-90073-3	PFO3OA	74	UG/KG	PQL		3.9	J	Cl. Spec. Table 3 Compound SOP		Shake_Bath_14D