



The Chemours Company
Fayetteville Works
22828 NC Highway 87 W
Fayetteville, NC 28306

August 8, 2019

Linda Culpepper
Director, Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699-1611
linda.culpepper@ncdenr.gov

Re: PFAS Observations at Chemours Fayetteville Works Cape Fear River Intake and
Outfall 002 in May and June 2019

Dear Ms. Culpepper,

Following up on your discussion with Kevin Garon of Chemours on Thursday, July 25, please find enclosed a memorandum and associated data table and figures prepared by our consultant Geosyntec Consultants of NC, P.C. (Geosyntec) regarding elevated PFAS concentrations observed during routine surface water sample collection at Fayetteville Works in late May and early June 2019. As noted in Geosyntec's memorandum, the elevated PFAS concentrations have since declined, and Chemours is implementing a number of actions to enhance data for future monitoring.

If you have any questions, please contact me at Brian.D.Long@chemours.com.

Sincerely,

A handwritten signature in blue ink that reads 'Brian D. Long'.

Brian D. Long
Plant Manager
Chemours – Fayetteville Works

Enclosure

Geosyntec Memorandum

Cc:

Sheila Holman, DEQ

William F. Lane, DEQ

Francisco Benzoni, NC DOJ

Michael Abraczinskas, DAQ

Michael Scott, DWM

David C. Shelton, Chemours

John F. Savarese, WLRK

Kemp Burdette, CFRW

Geoff Gisler, SELC

Memorandum

Date: 7 August 2019
To: The Chemours Company FC, LLC
From: Geosyntec Consultants of NC, P.C.
Subject: Observations of Elevated PFAS Concentrations at the Cape Fear River
Intake and Outfall 002 Sample Locations in May and June 2019

1 INTRODUCTION

Geosyntec Consultants of NC, P.C. (Geosyntec) has prepared this memorandum for The Chemours Company FC, LLC (Chemours) to discuss elevated per- and polyfluoroalkyl substances (PFAS) concentrations observed during routine surface water sample collection at the Chemours Fayetteville Works, North Carolina site (the Site) in late May and early June 2019. Chemours collects a 3.5-day composite sample twice per week from Outfall 002, and approximately once per week Chemours collects a grab sample of river water directly from the Cape Fear River within 100 feet of the Site inlet pipe (the Intake sample) where water is pumped from the Cape Fear River for use at the Site (Figure 1). Given that the Intake sample does not sample water drawn in through the inlet pipe by the intake pumps, Intake and Outfall 002 sample results have the potential to not be correlated if a transient local disturbance occurs near either the inlet pipe or Intake sample locations. Both the Intake and Outfall 002 collected samples are analyzed for PFAS by the Table 3+ Laboratory Standard Operating Procedure (SOP) and EPA Method 537 Mod by North Carolina Department of Environmental Quality (NCDEQ) approved laboratories. Between late May and early June 2019, samples collected at these locations were observed to have increases in concentrations of several Site Associated PFAS. These increased concentrations have since declined.

2 OBSERVATIONS – MAY AND JUNE 2019

Time series concentrations of PFAS analyzed in Intake and Outfall 002 samples collected in 2019 are shown in Figures 2 to 21. Two datasets exist for Outfall 002. Samples collected at Outfall 002

are split with one portion analyzed by an external commercial laboratory and the other portion analyzed by the Chemours onsite laboratory. Data presented here from the onsite laboratory are considered preliminary. They are useful to assess trends in the Outfall 002 samples. Trends observed in data from the onsite laboratory are consistent with trends in data from the commercial laboratories. PFAS data provided by the external laboratories after June 6, 2019 are considered preliminary pending data validation. They are included in this memorandum and attached figures for the purposes of evaluating trends associated with the elevated concentrations. Additionally, the different laboratories reported data to different practical quantitation limits (PQLs). The sample data, PQLs for non-detect data and laboratory used for each sample result are listed in Table 1.

In Outfall 002 samples, PFAS concentrations have been non-detect for many of the compounds at the associated laboratory reporting limits for most of 2019. At the end of May, increases in concentrations were observed for several compounds (See Figures 2 to 21 and Table 1), analyzed by the Table 3+ SOP (PFMOAA, PFO2HxA, PFO3OA, PFO4DA, PFO5DA, Byproduct 4, Byproduct 5, PFESA-BP2 and NVHOS). On May 28, 2019, concentrations at Outfall 002 were reported at the highest concentrations to date in 2019, followed by lower concentrations on May 30 and 31, 2019. Concentrations either returned to prior values, returned to non-detect or continued to decline for all PFAS analyzed by the Table 3+ SOP. This observation appears in data from both the commercial laboratory and the onsite laboratory.

In Intake samples, PFAS concentrations have been low to non-detect at the associated laboratory reporting limits for most of 2019. In the sample collected on June 6, 2019, elevated concentrations were observed for several compounds (see Figures 2 to 21; Table 1), analyzed by the Table 3+ SOP (HFPO-DA, PFMOAA, PFO2HxA, PFO3OA, PFO4DA, PFO5DA, PEPA, PFESA-BP1, PFESA-BP2, Byproduct 4, Byproduct 5, Byproduct 6, Hydro-EVE Acid, R-EVE and NVHOS). In the sample collected the following week and thereafter, concentrations returned to levels observed before June 6, 2019.

3 DISCUSSION

The present Intake sample collection point is near to the inlet pipe but does not collect water drawn through the inlet pipe. This could lead to the May 28, 2019 Outfall 002 sample with elevated PFAS concentrations not indicating a correlation to prior Intake samples, or the elevated Intake sample on June 6, 2019 not resulting in corresponding increases in subsequent results of Outfall 002 samples.

The distribution of PFAS in the elevated Intake and Outfall 002 samples suggests these increases may be associated with the same phenomenon. The distribution of PFAS detected in the elevated May 28, 2019 Outfall 002 sample and the June 6, 2019 Intake sample are similar to each other,

with the exception of Byproduct 5 being detected in the Intake sample at a higher relative level than the May 28, 2019 Outfall samples as shown in the table below.

PFAS Detections in Elevated Outfall and Intake Samples

<i>Compound (µg/L)</i>	<i>Outfall 002 May 28, 2019</i>	<i>Intake June 6, 2019</i>
HFPO-DA	0.076	0.15
PMPA	<0.57	0.14
PEPA	<0.047	0.066
PFMOAA	5.5	14
PFO2HxA	1.4	3.5
PFO3OA	0.61	1.9
PFO4DA	0.34	2.0
PFO5DA	0.15	1.9
PFECA-G	<0.041	<0.0041
PFECA B	<0.06	<0.006
R-EVE	<0.07	0.31
EVE Acid	<0.024	0.0034
Hydro-EVE Acid	<0.028	0.12
NVHOS	0.16	0.90
PES	<0.046	<0.0046
PFESA-BP1	<0.027	0.085
PFESA-BP2	0.22	4.8
Byproduct 4	<0.16	3.1
Byproduct 6	<0.015	0.10
Byproduct 5	1.1	17

A preliminary review of Site activities in Spring 2019 was conducted to identify potential causes contributing to the elevated PFAS concentrations observed at the Intake and Outfall 002. Chemours conducted a review of operating logs, checked with the manufacturing groups and reviewed daily audio, visual and olfactory monitoring reports. No spills or upsets were recorded or noted. The table below lists other activities noted by Chemours facility staff. Specifically, the Site used rental pumps to supplement water supply as two of the three pumps at the intake were temporarily inoperable. Rental pumps are infrequently used at the Site; for example, in the prior seven years the only other time rental pumps were used was September to December 2016.

Date	Activity / Observation
5/13/2019	• Maintenance performed on two of three pumps (pump #2 and pump #3) in the intake cove. Pump #3 temporarily shut down.

	• Maintenance reported that the drain valve on pump #2 had failed and this resulted in pump house water being directed back to the Cape Fear River upstream of intake cove. • Rental pumps would need to be used to provide sufficient non-contact cooling water to the facility.
5/16/2019	• Suction piping placed in intake cove in anticipation of using rental pumps as replacements for pump #2 and pump #3.
5/28/2019	• Pump # 2 failure occurred.
5/28/2019 to 5/30/2019	• Two rental pumps temporarily put online.
5/28/2019	<u>Elevated Site Associated PFAS Detections in Outfall 002 Sample</u>
5/30/2019	• Water sample collection and flow measurements in Willis Creek as part of the evaluation of PFAS mass loading in seeps and creeks.
6/3/2019	• Pump # 2 drain valve replaced.
6/6/2019 to 6/7/2019	• Testing and priming of rental pumps, suction lines rinsed.
6/6/2019	<u>Elevated Site Associated PFAS Detections in Intake Sample</u>
6/7/2019	• Two rental pumps go online to supplement pump #1.
6/7/2019 to 6/26/2019	• Rental pump use continues; • Site associated PFAS detections in Outfall 002 either become non-detect, return to prior values or continue to decline.

The increases in PFAS concentrations observed in Outfall 002 data and the Intake data on May 28th and June 6th both occurred at times when rental pumps were in use. Rental pump use continued throughout the month of June, and over this time period the PFAS concentrations reported in the Intake samples and the Outfall 002 samples declined.

Together the sequence of these detections in both the Outfall 002 May 28, 2019 sample and Intake June 6, 2019 sample appear associated with the rental pump startup activities. These activities may have disturbed local conditions resulting in transient increases in PFAS. For instance, this could come from potentially increased groundwater contributions containing PFAS in these samples. Chemours has recently installed additional groundwater wells in the vicinity of the intake and has collected sediment samples in the vicinity of the intake. These data are not yet available but will be considered as appropriate as part of the Onsite and Offsite Assessment report due by September 30, 2019.

4 SUMMARY AND RECOMMENDED ACTIONS

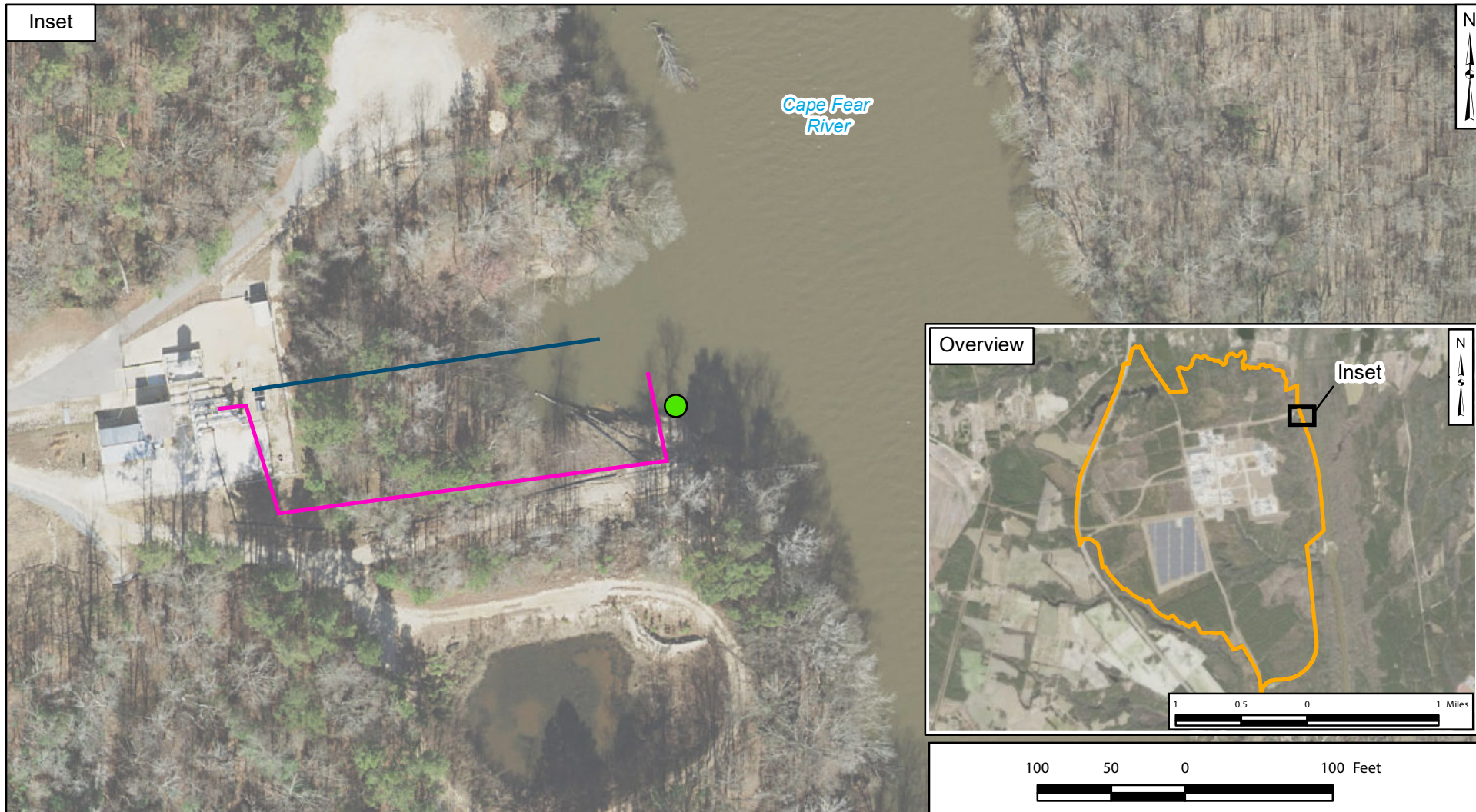
Following elevated PFAS concentrations at the Intake and Outfall 002, PFAS concentrations at both locations have either returned to prior concentrations, are non-detect or are declining. The elevated concentrations both occurred when rental pump use was initiated, suggesting that this activity temporarily disturbed the local environment and led to the elevated PFAS. The rental pumps continued to be used for the month of June and in this period the Site Associated PFAS concentrations at Outfall 002 either declined or became non-detect.

Chemours is implementing a number of actions in connection with its identification of elevated PFAS concentration excursions to enhance data for future monitoring. On a routine basis Chemours will collect samples from the flow of water collected through the inlet pipe, potentially from where the intake pumps draw water. Also, Chemours has requested Geosyntec to routinely review PFAS concentration data from the Onsite laboratory during the same 18-month assessment period as provided for in Consent Order Paragraph 11(c) initial characterization, to assess PFAS concentration changes. Onsite laboratory data allow for a more expeditious assessment than what is possible using current reporting timelines from the external laboratories. In the future if supplemental intake suction piping is used the piping should be suspended in the water column to avoid potential disturbances to the local environment.

ATTACHMENTS

- Figure 1: Intake Sample Location
- Figures 2 to 21: River Intake and Outfall 002 Site Associated PFAS Concentrations
- Table 1: River Intake and Outfall 002 2019 PFAS Concentrations

* * * * *



Legend

- Approximate Location of River Water Intake Sample
- Inlet Pipe
- Approximate Position of Intakes for Rental Pump Suction Lines
- Site Boundary

Notes:
Aerial imagery provided by Esri Basemaps (2017).

River Water Intake

Chemours Fayetteville Works, North Carolina

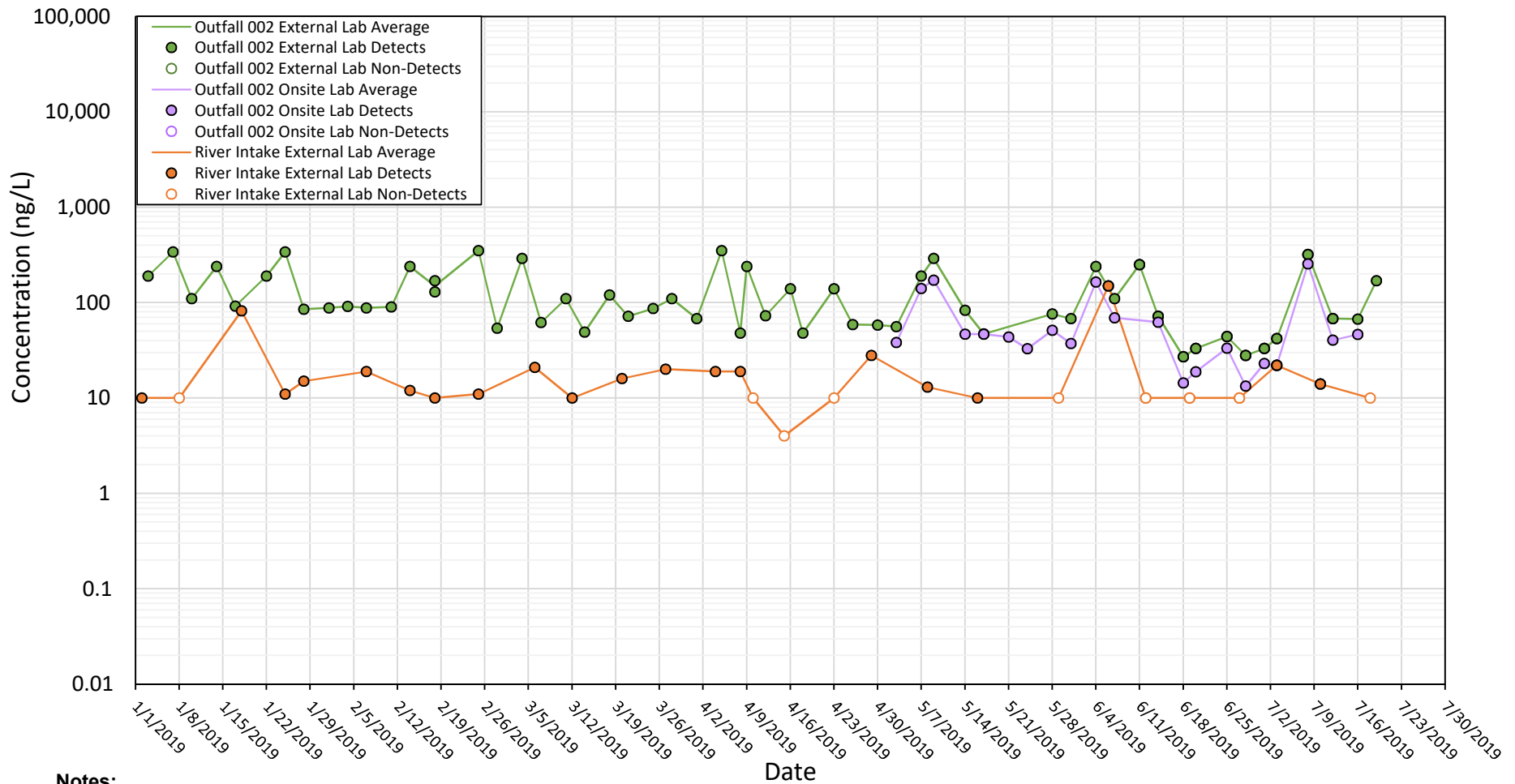
Geosyntec
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Raleigh

August 2019

Figure

1



Notes:

Outfall 002 samples are 3.5 day composite samples
River intake samples are grab samples.

Acronyms:

ng / L: nanograms per liter

River Intake and Outfall 002 Concentrations - HFPO-DA

Chemours Fayetteville Works, North Carolina

Geosyntec

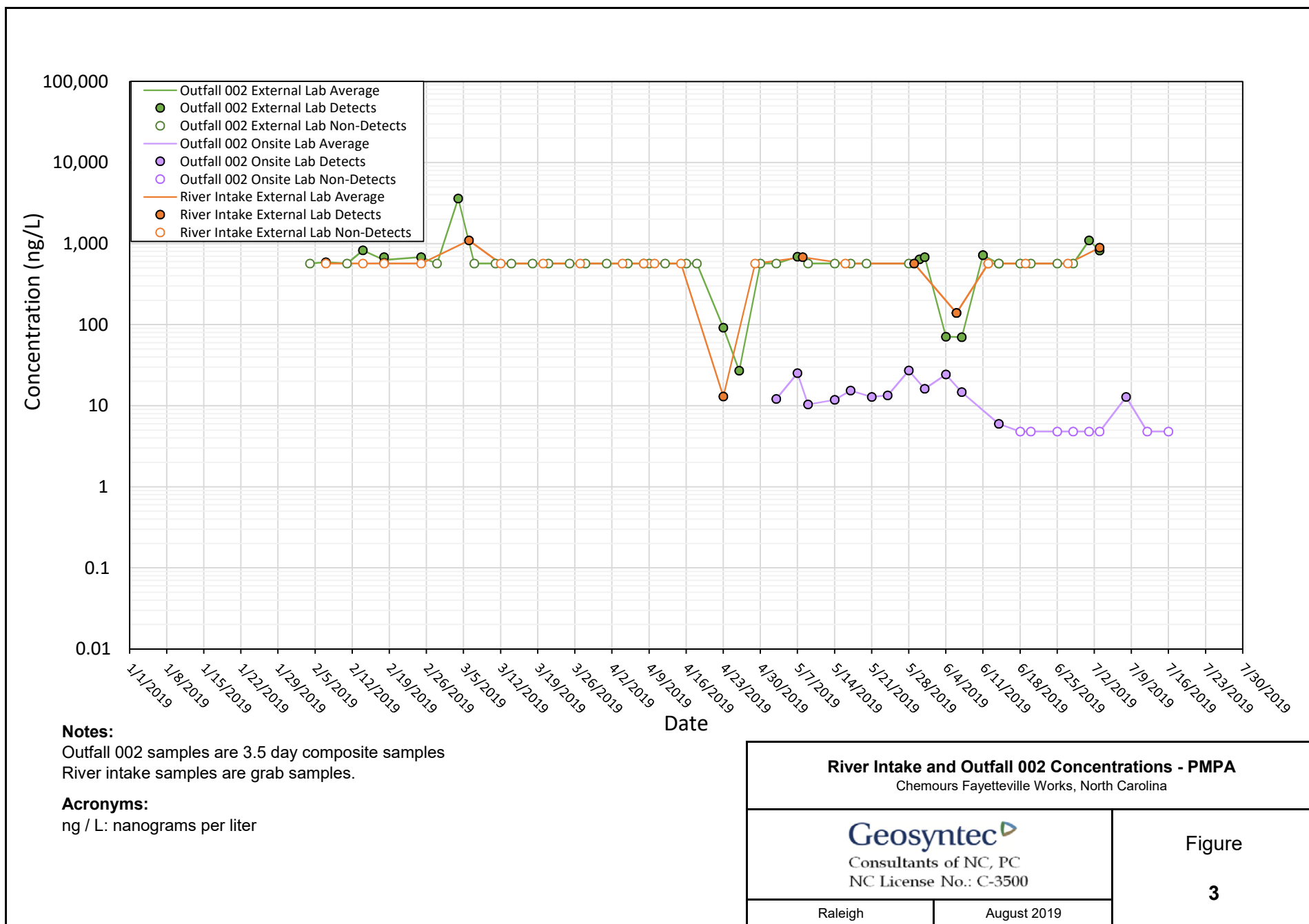
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Raleigh

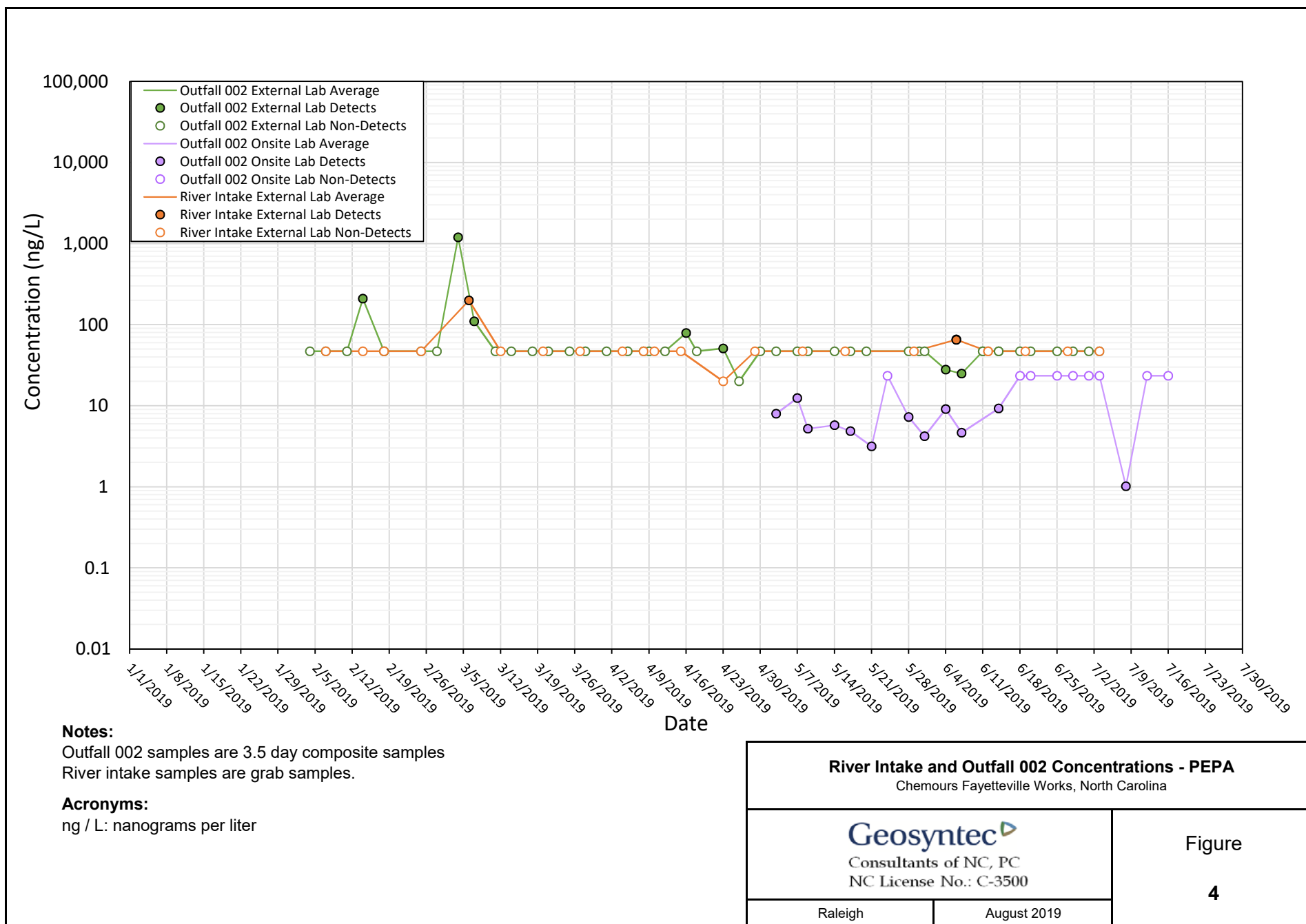
August 2019

Figure

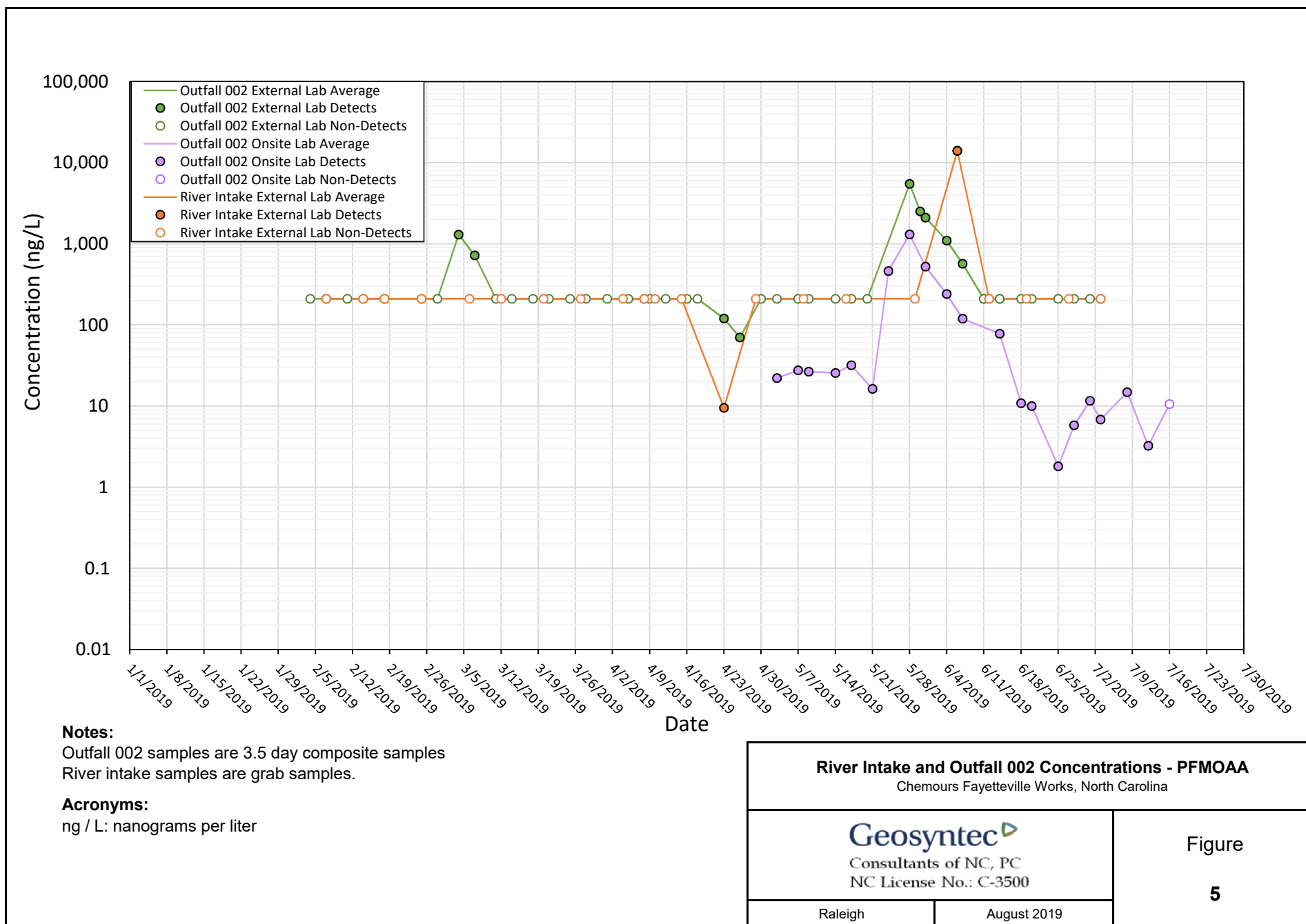
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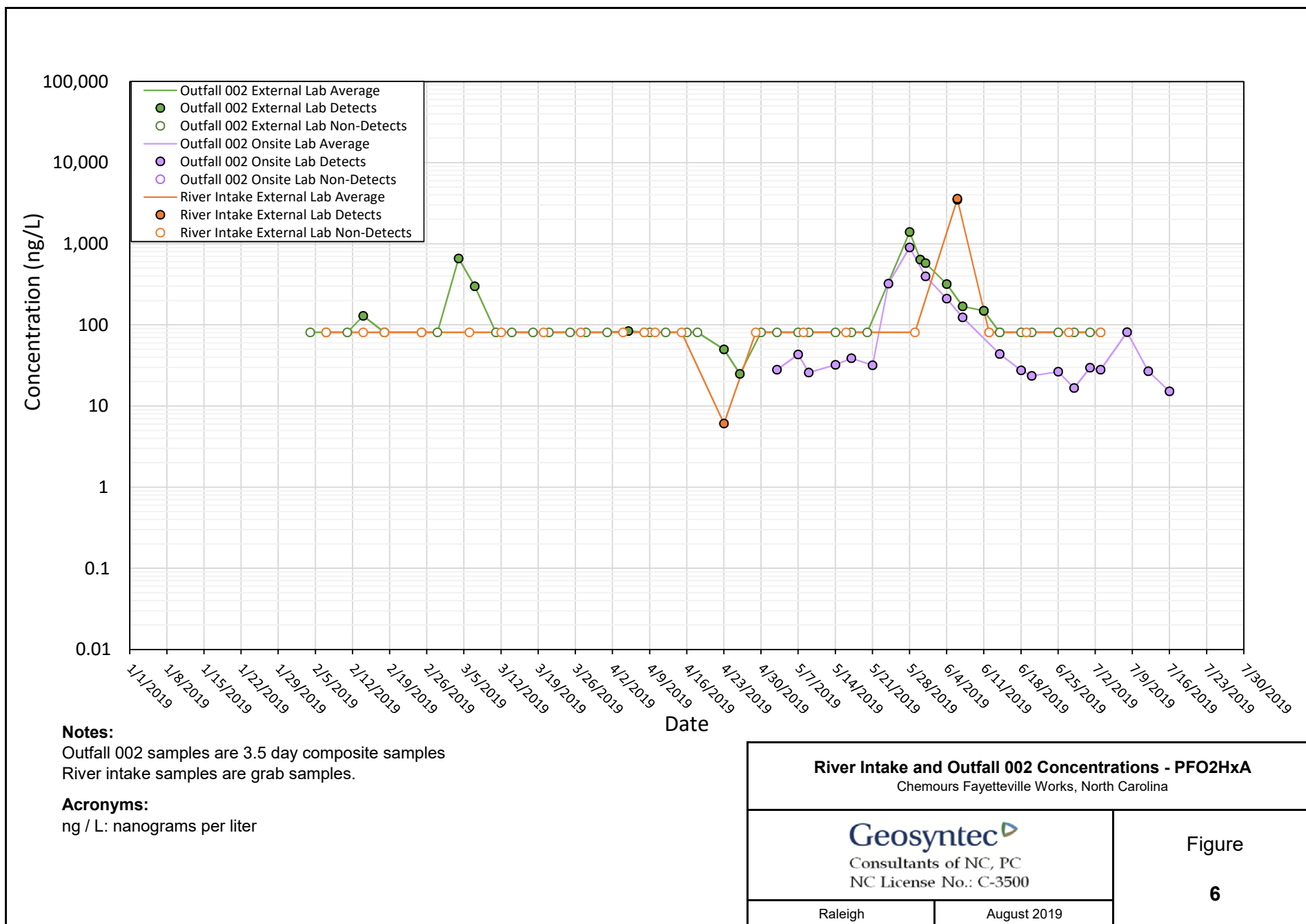
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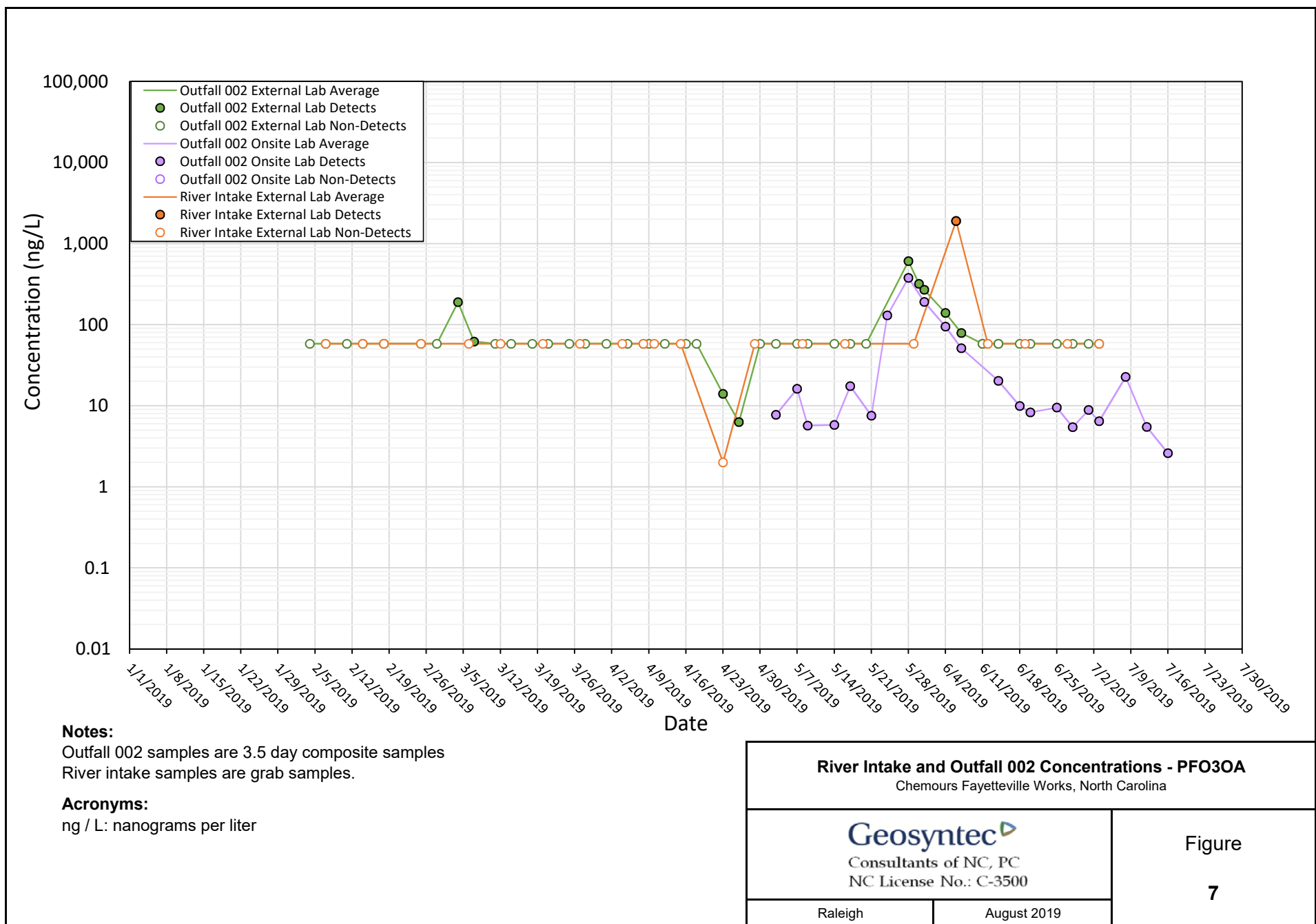
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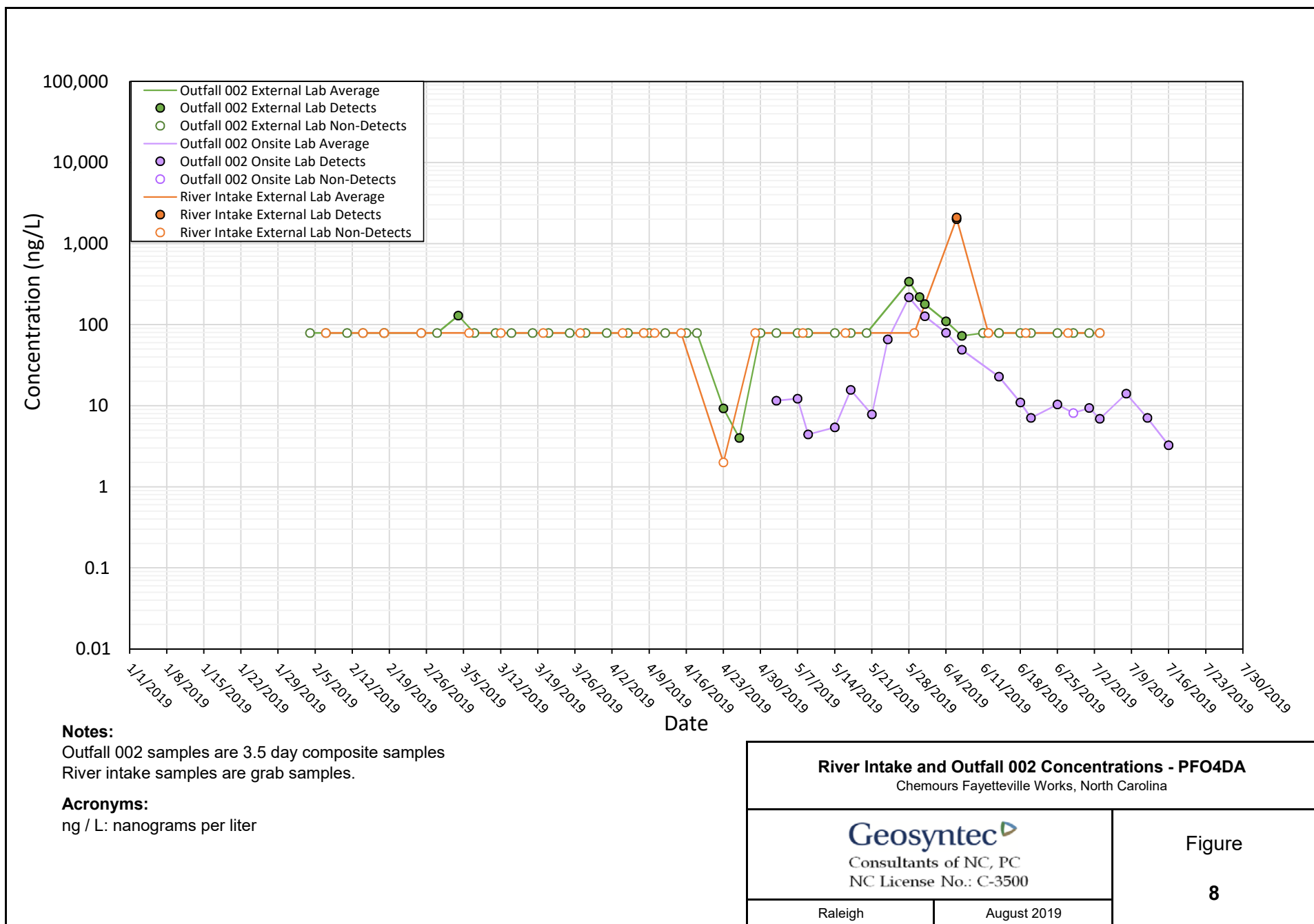
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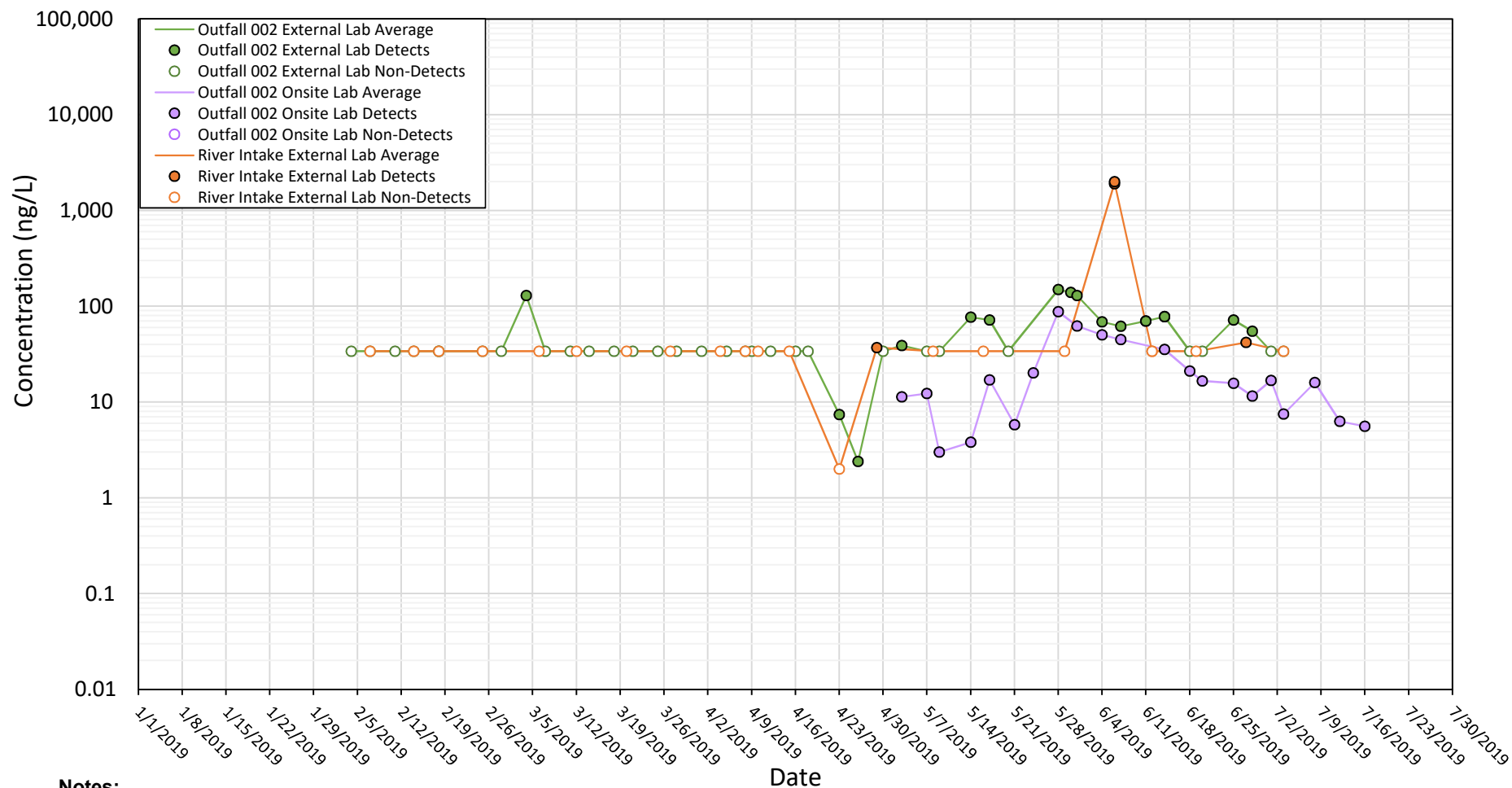
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PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



Notes:

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River intake samples are grab samples.

Acronyms:

ng / L: nanograms per liter

River Intake and Outfall 002 Concentrations - PFO5DA

Chemours Fayetteville Works, North Carolina

Geosyntec

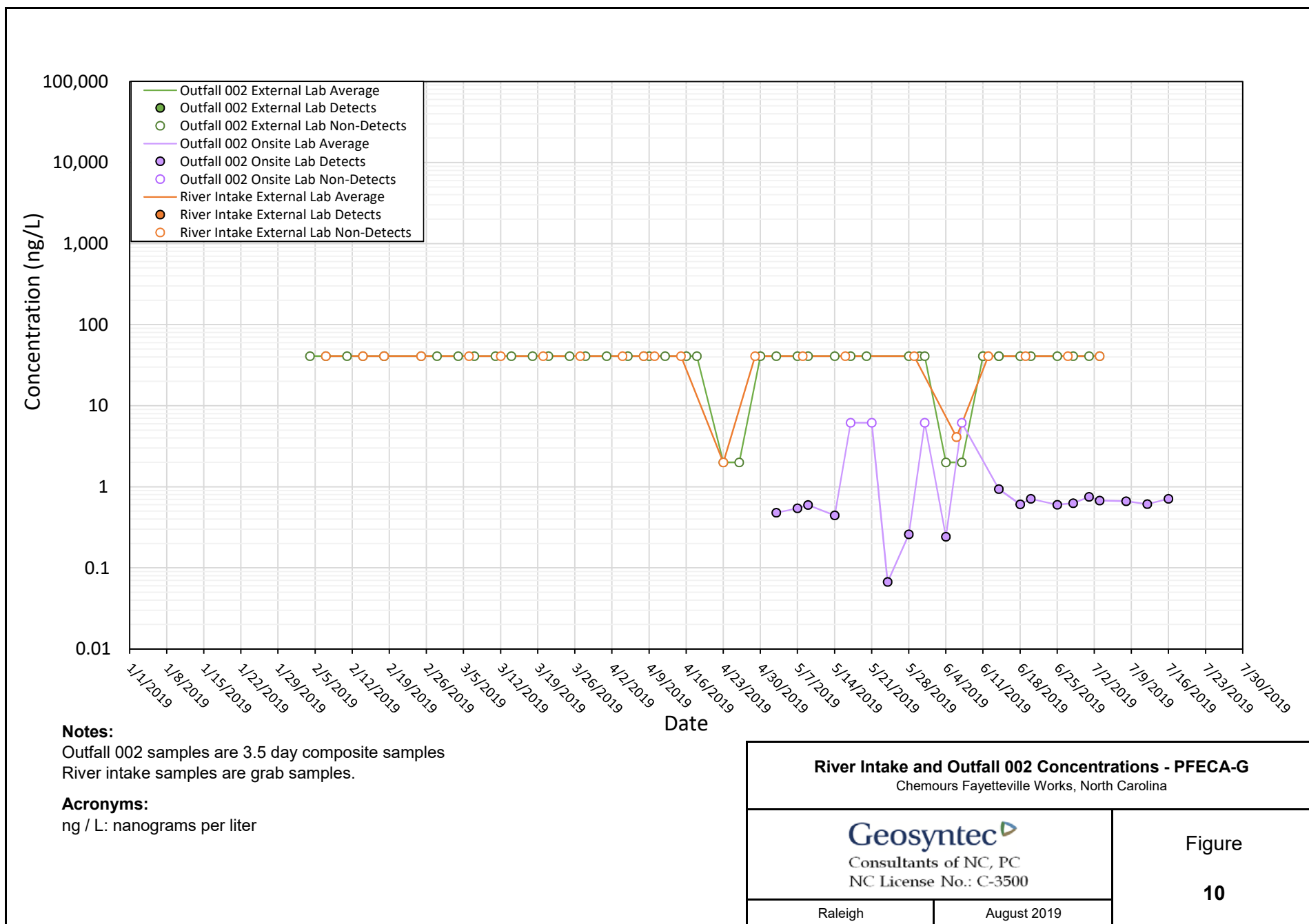
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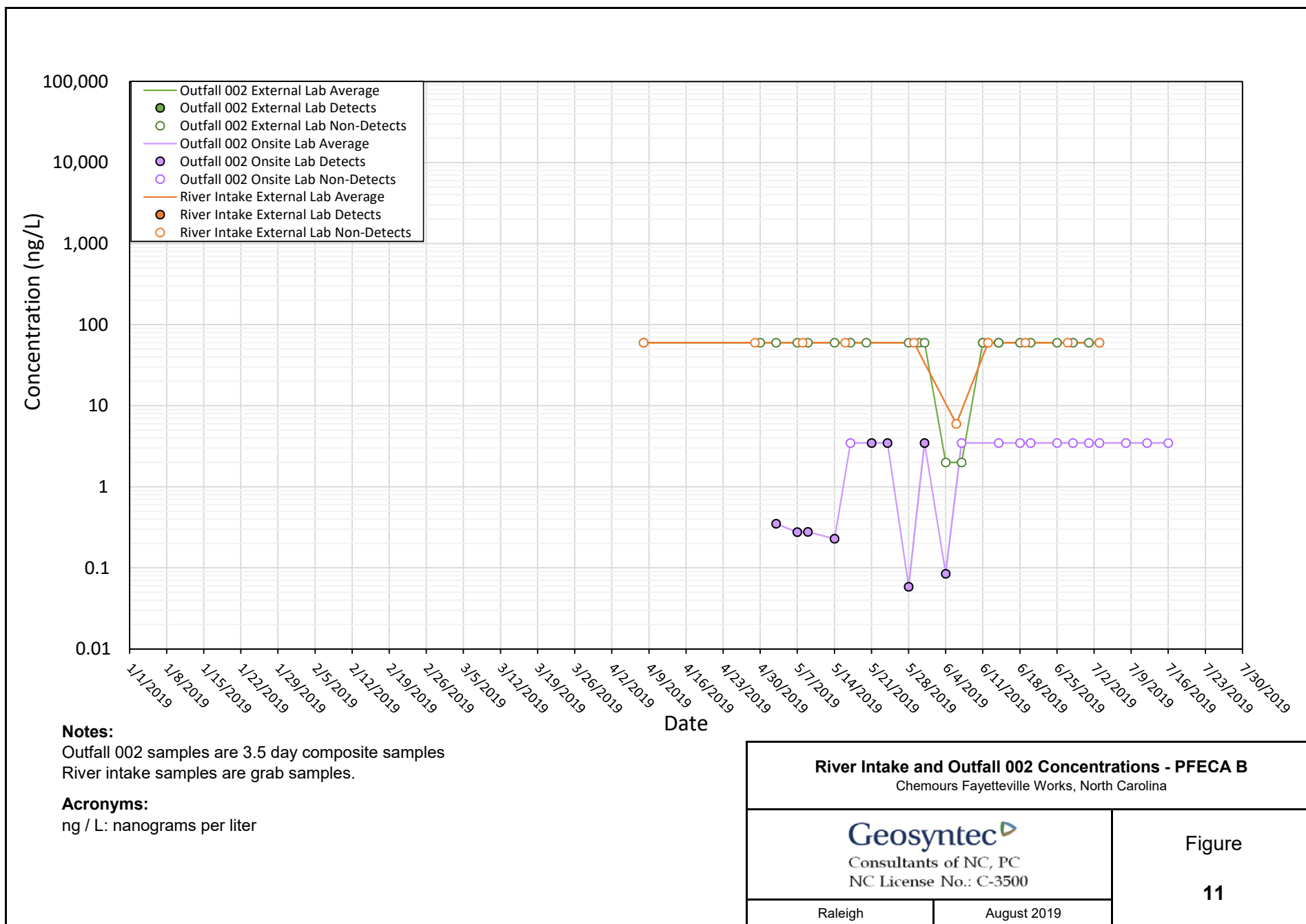
August 2019

Figure

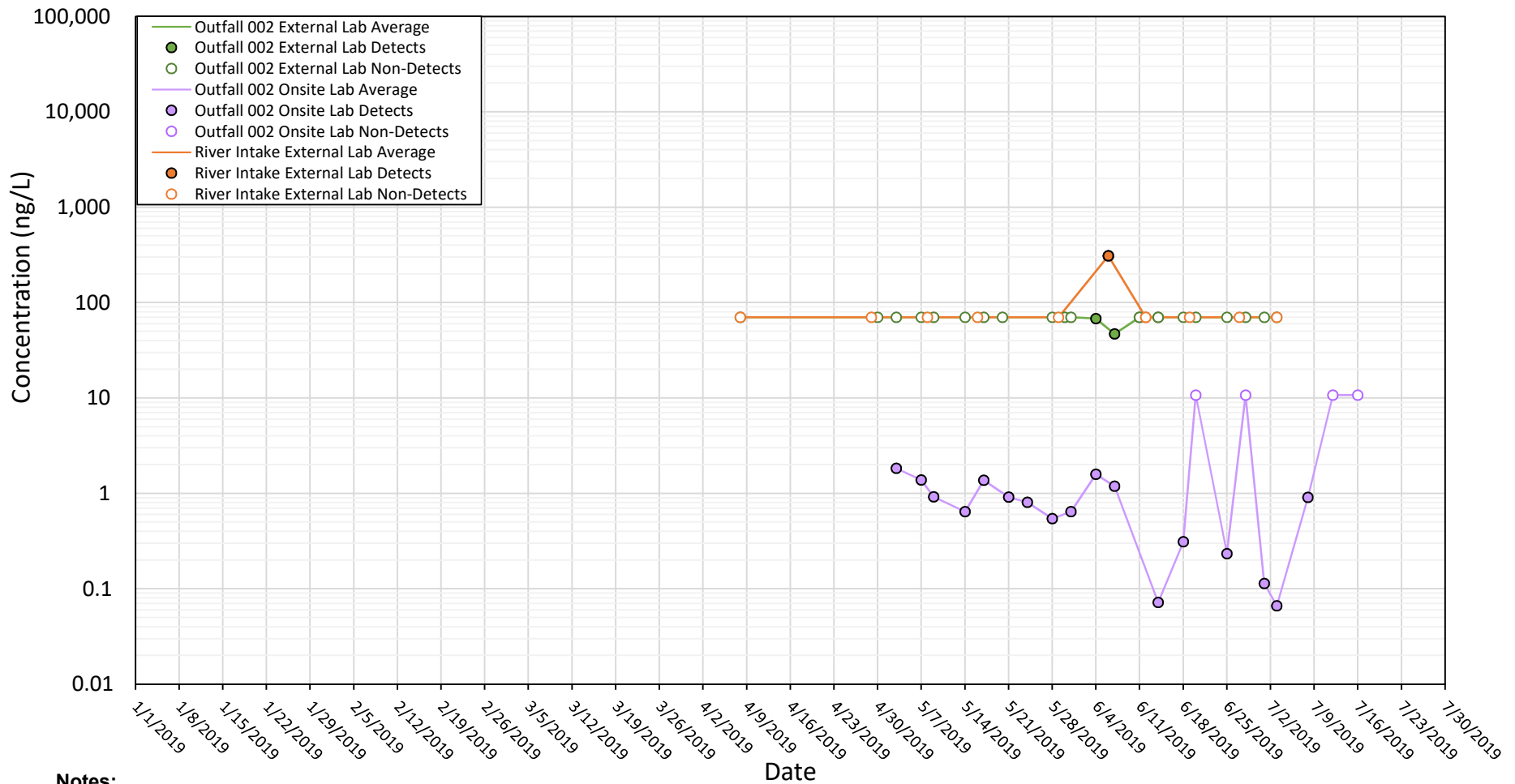
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PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



Notes:

Outfall 002 samples are 3.5 day composite samples
River intake samples are grab samples.

Acronyms:

ng / L: nanograms per liter

River Intake and Outfall 002 Concentrations - R-EVE

Chemours Fayetteville Works, North Carolina

Geosyntec

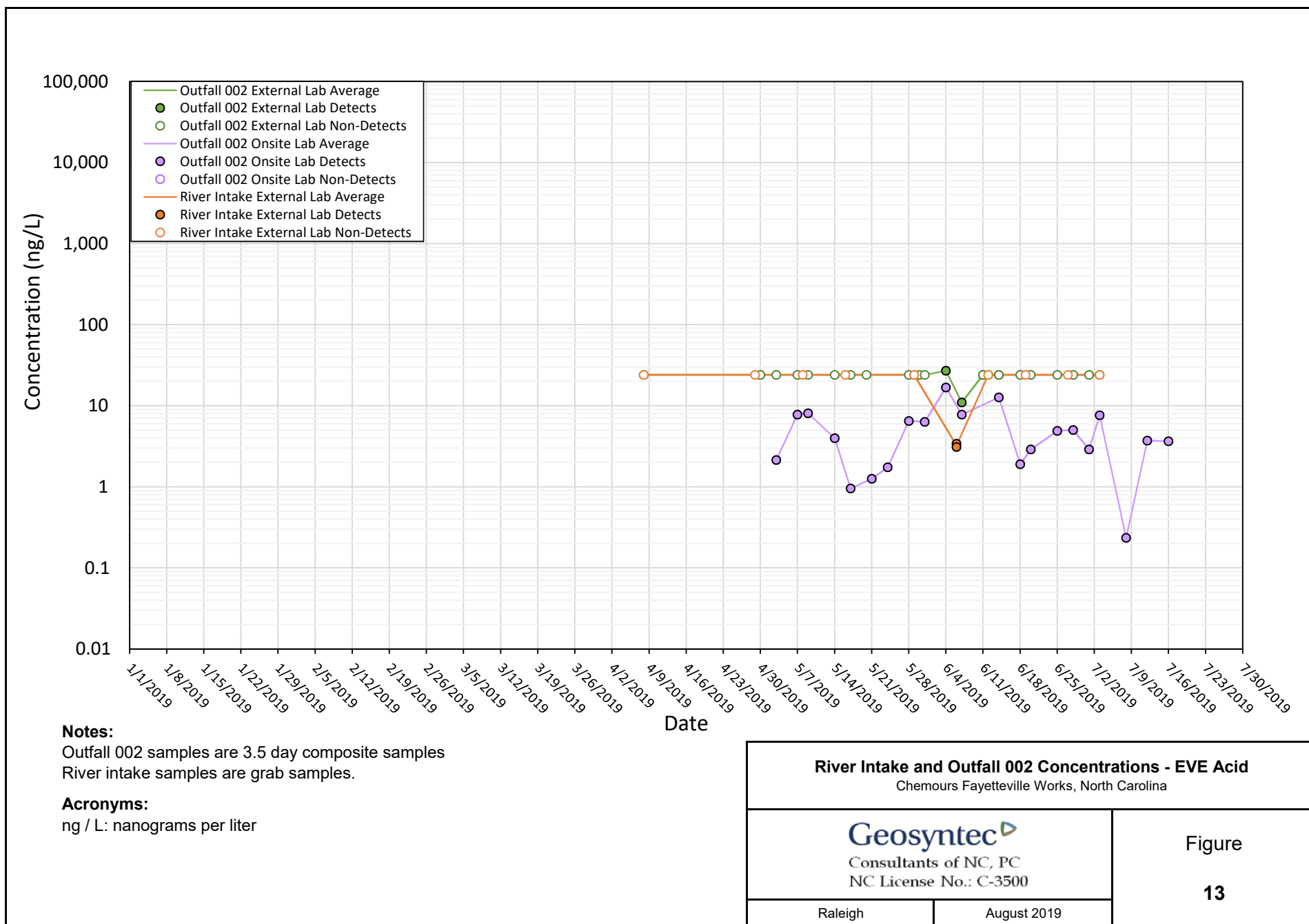
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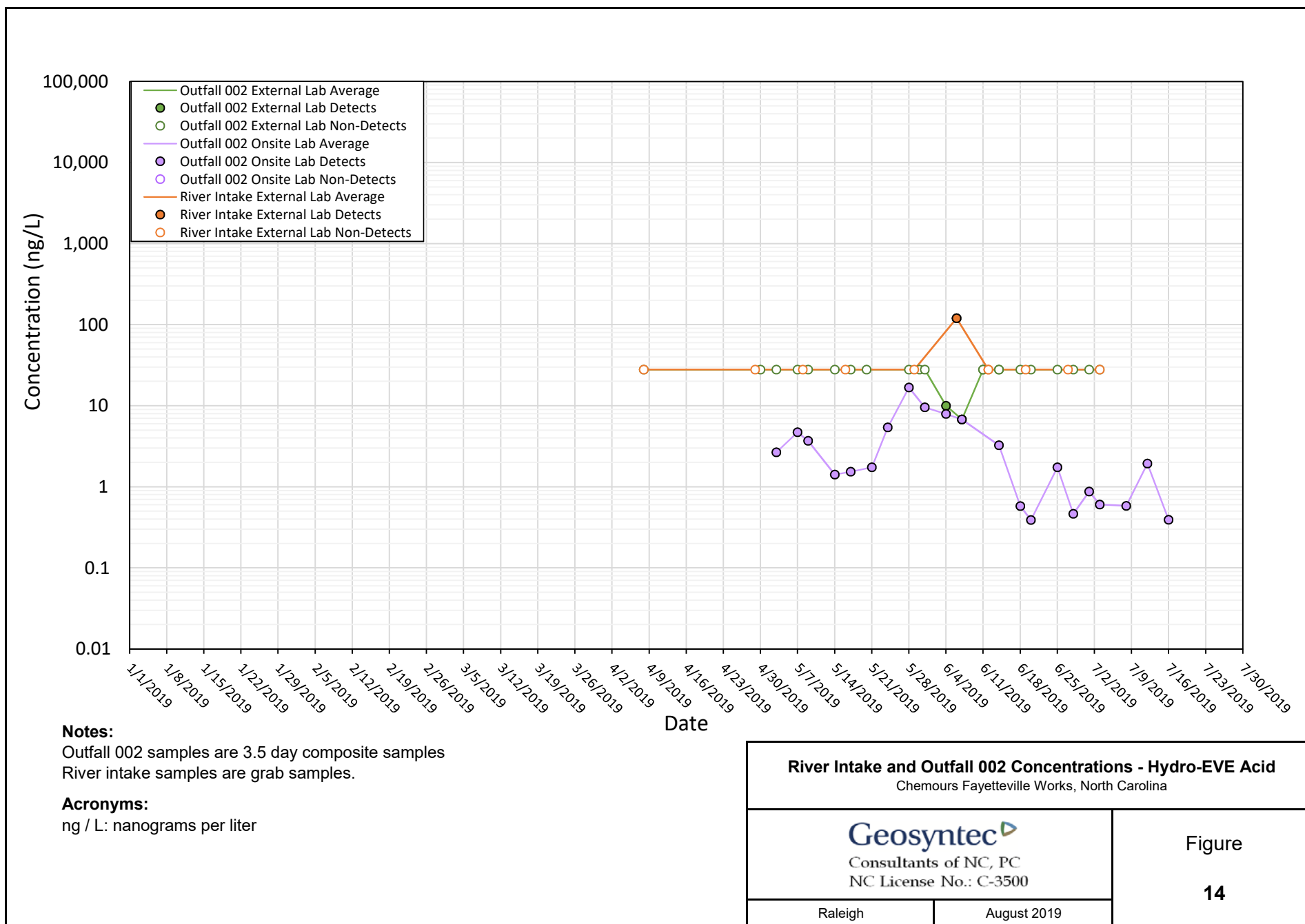
August 2019

Figure

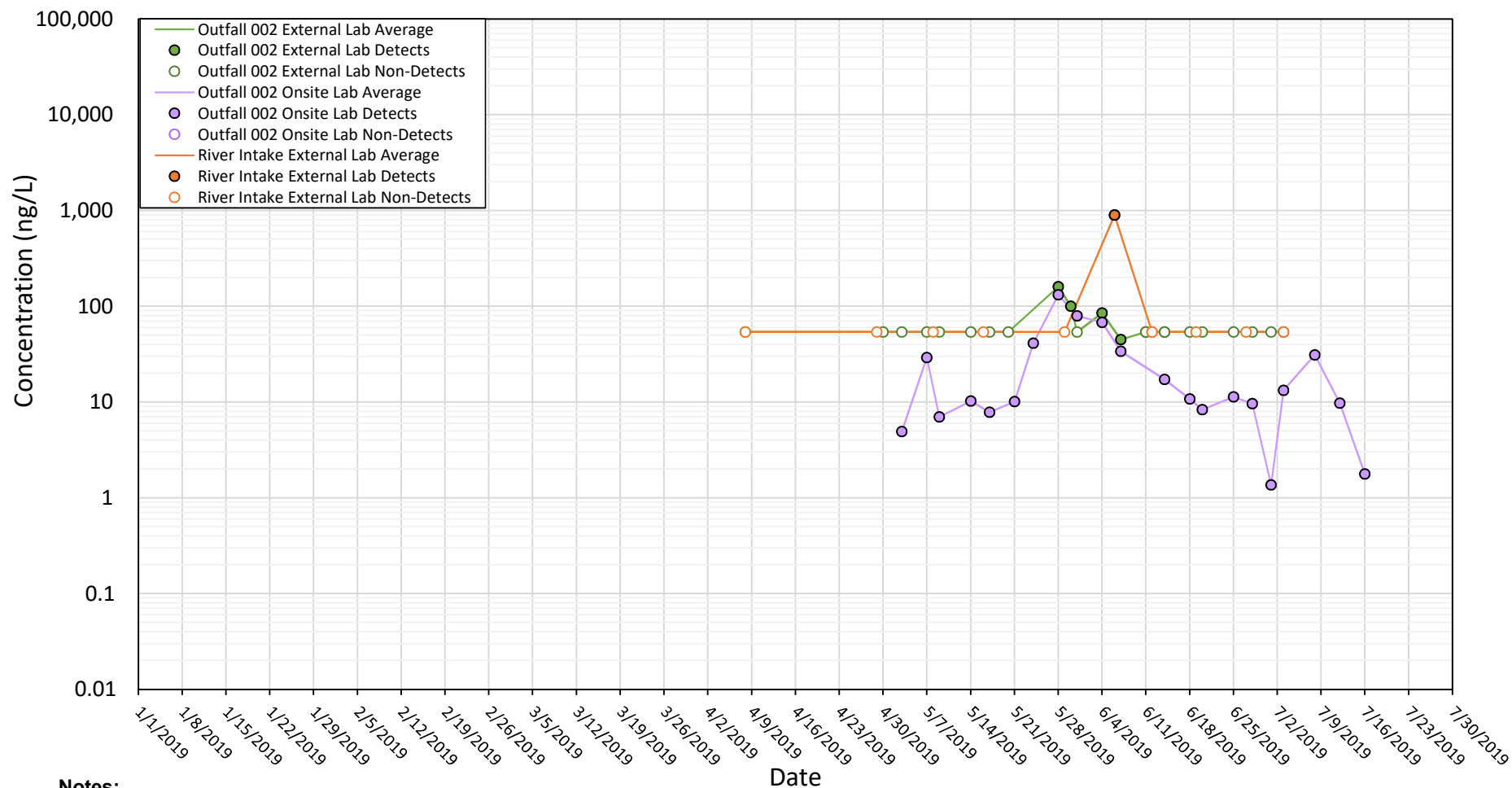
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PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



Notes:

Outfall 002 samples are 3.5 day composite samples
River intake samples are grab samples.

Acronyms:

ng / L: nanograms per liter

River Intake and Outfall 002 Concentrations - NVHOS

Chemours Fayetteville Works, North Carolina

Geosyntec

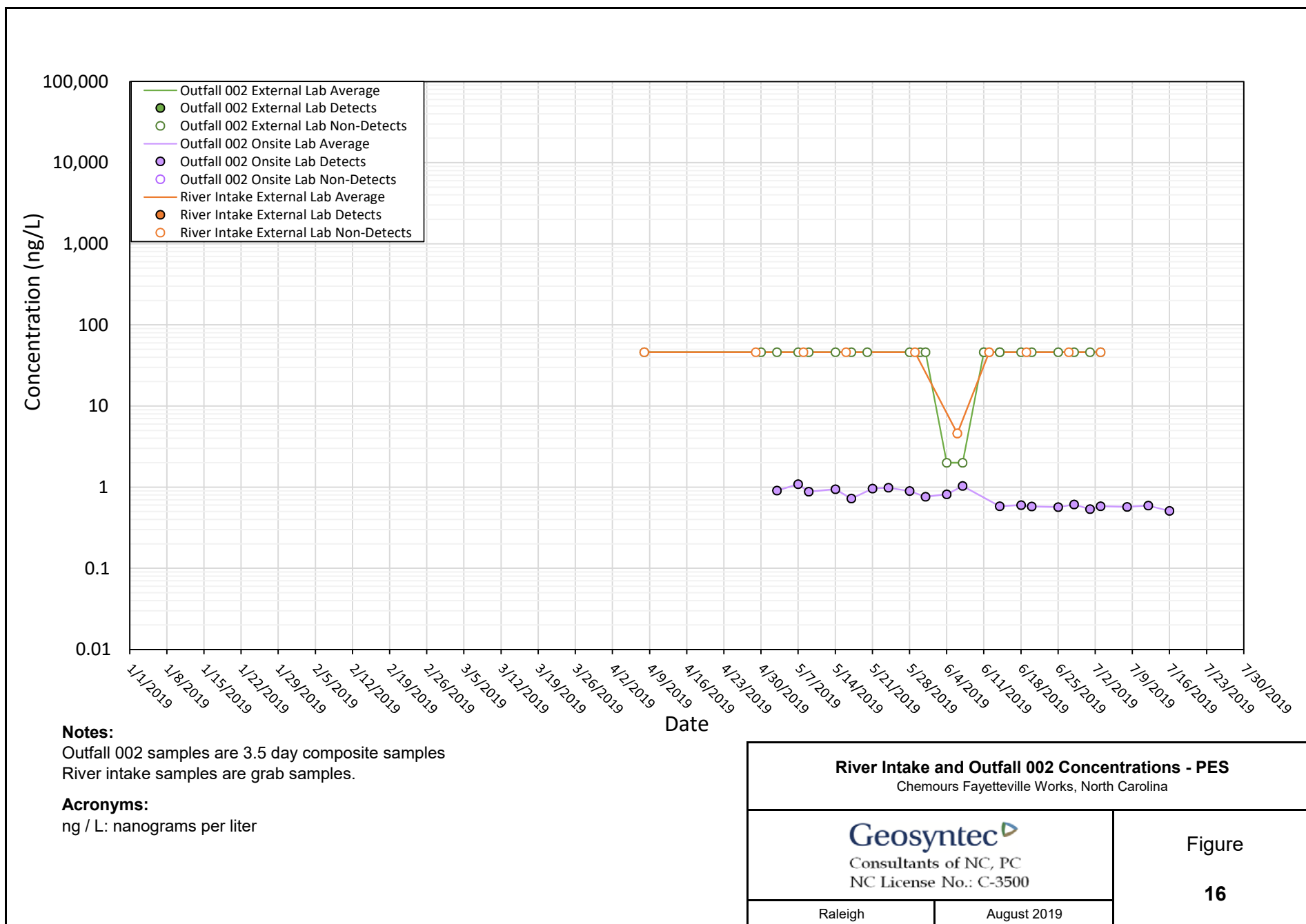
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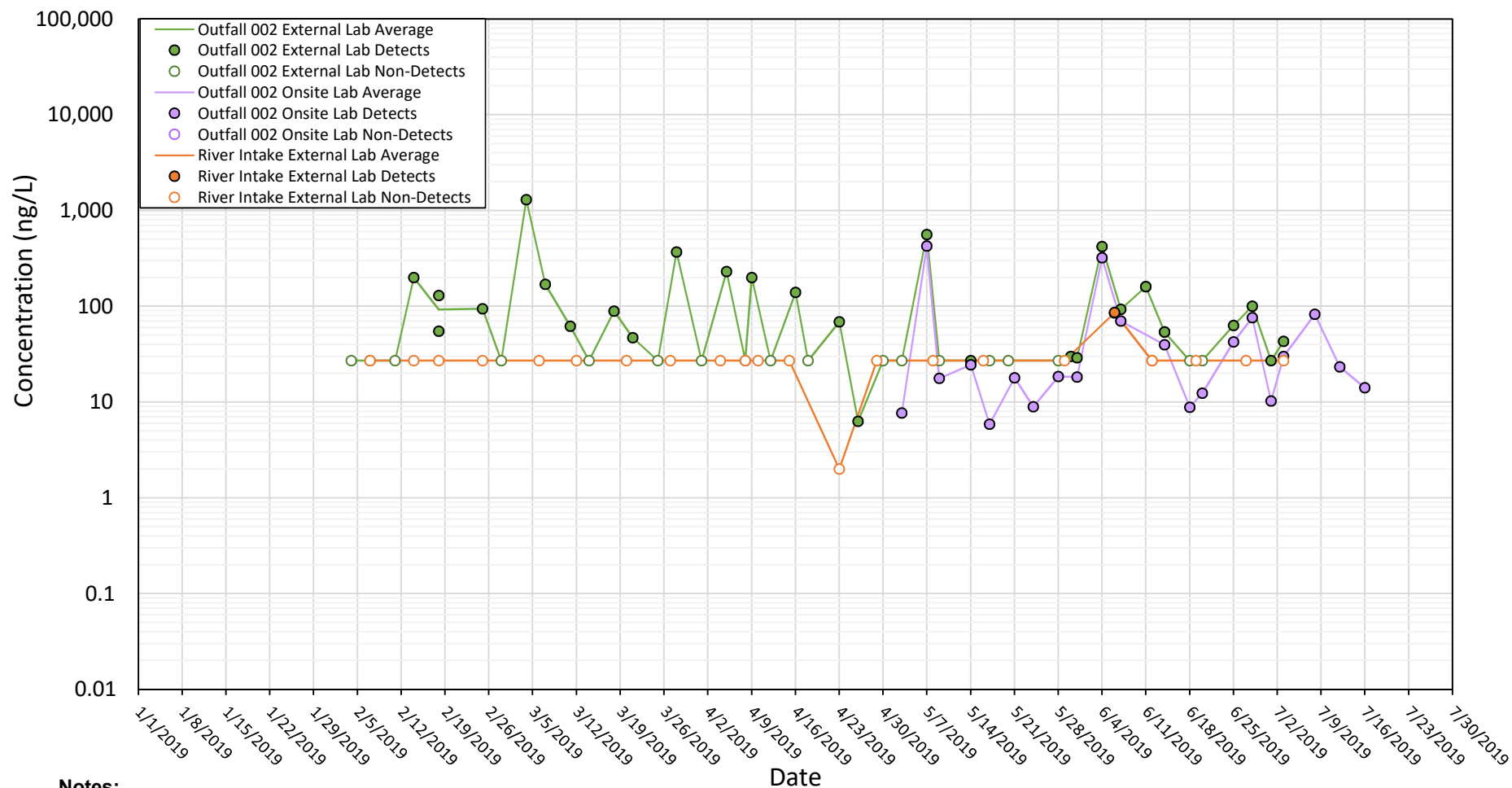
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Figure

15



PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



Notes:

Outfall 002 samples are 3.5 day composite samples
River intake samples are grab samples.

Acronyms:

ng / L: nanograms per liter

River Intake and Outfall 002 Concentrations - Byproduct 1

Chemours Fayetteville Works, North Carolina

Geosyntec

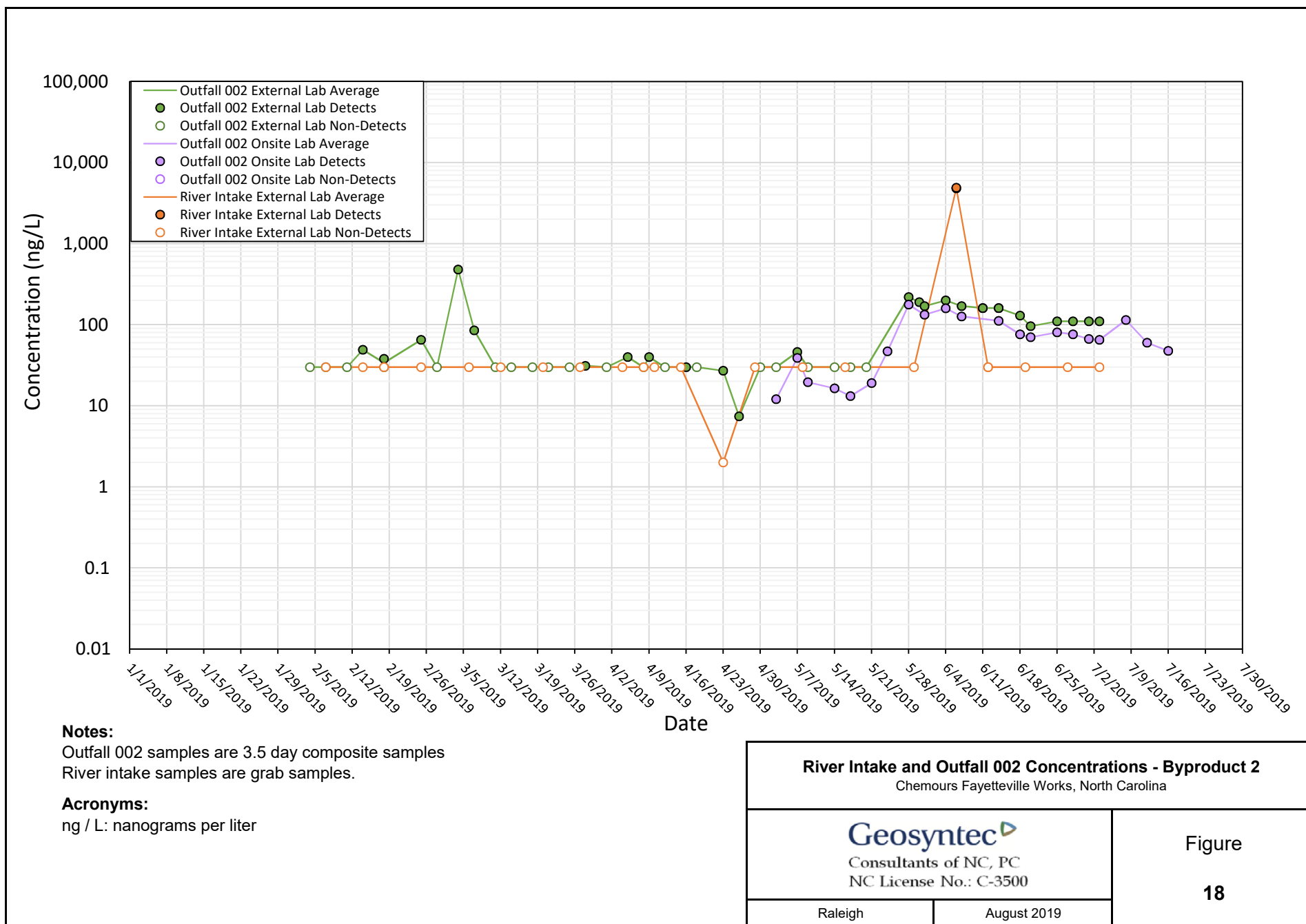
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Raleigh

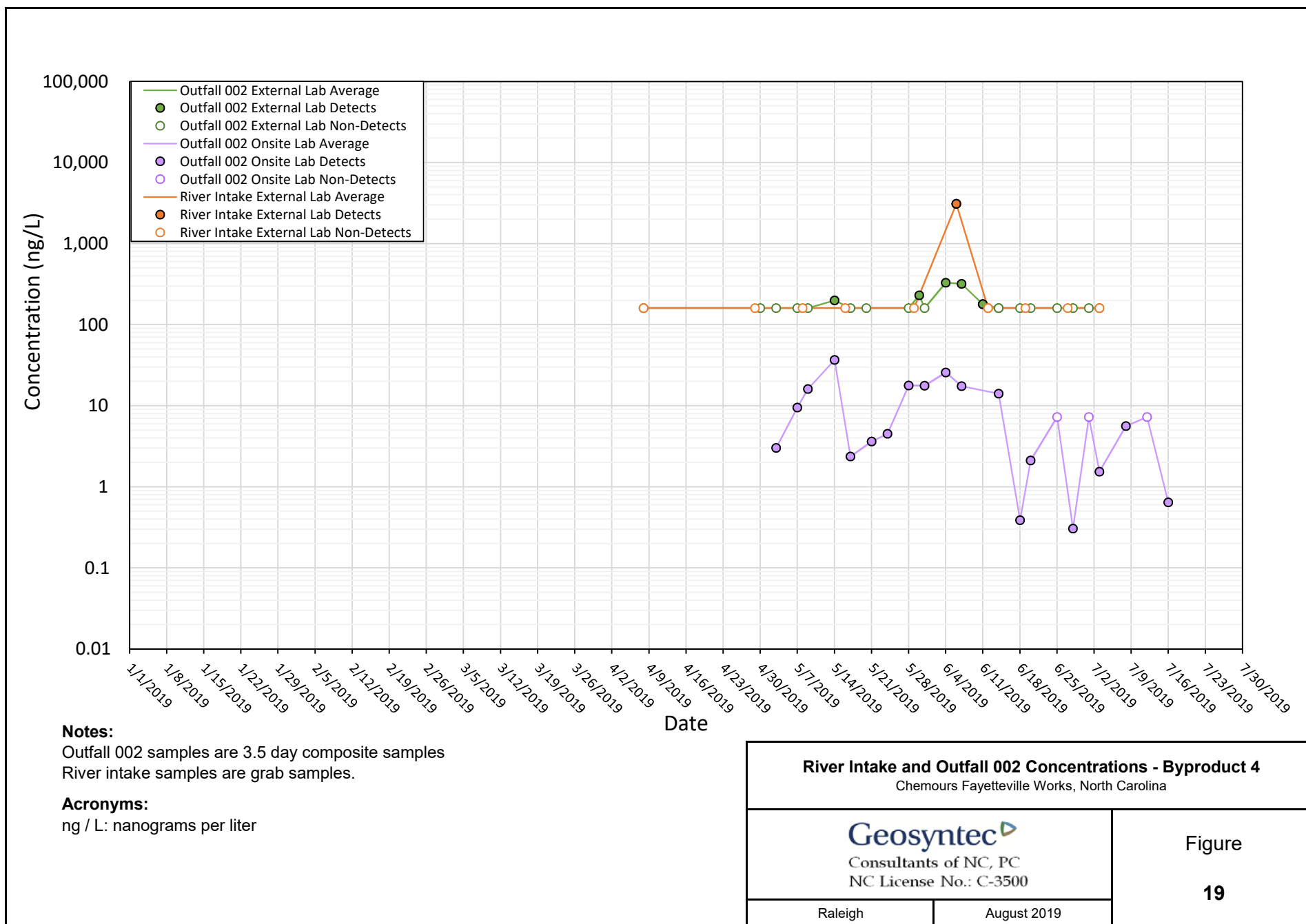
August 2019

Figure

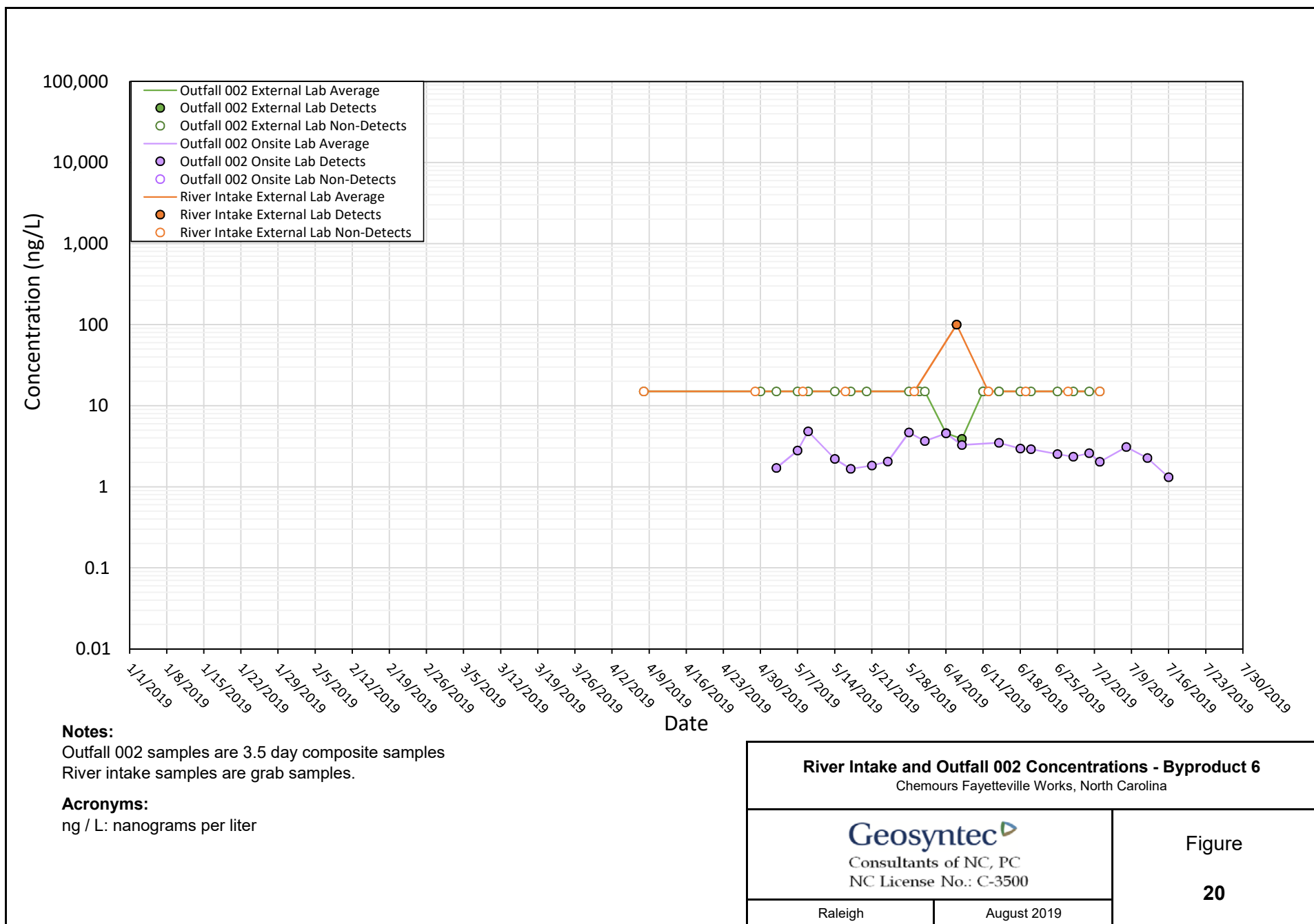
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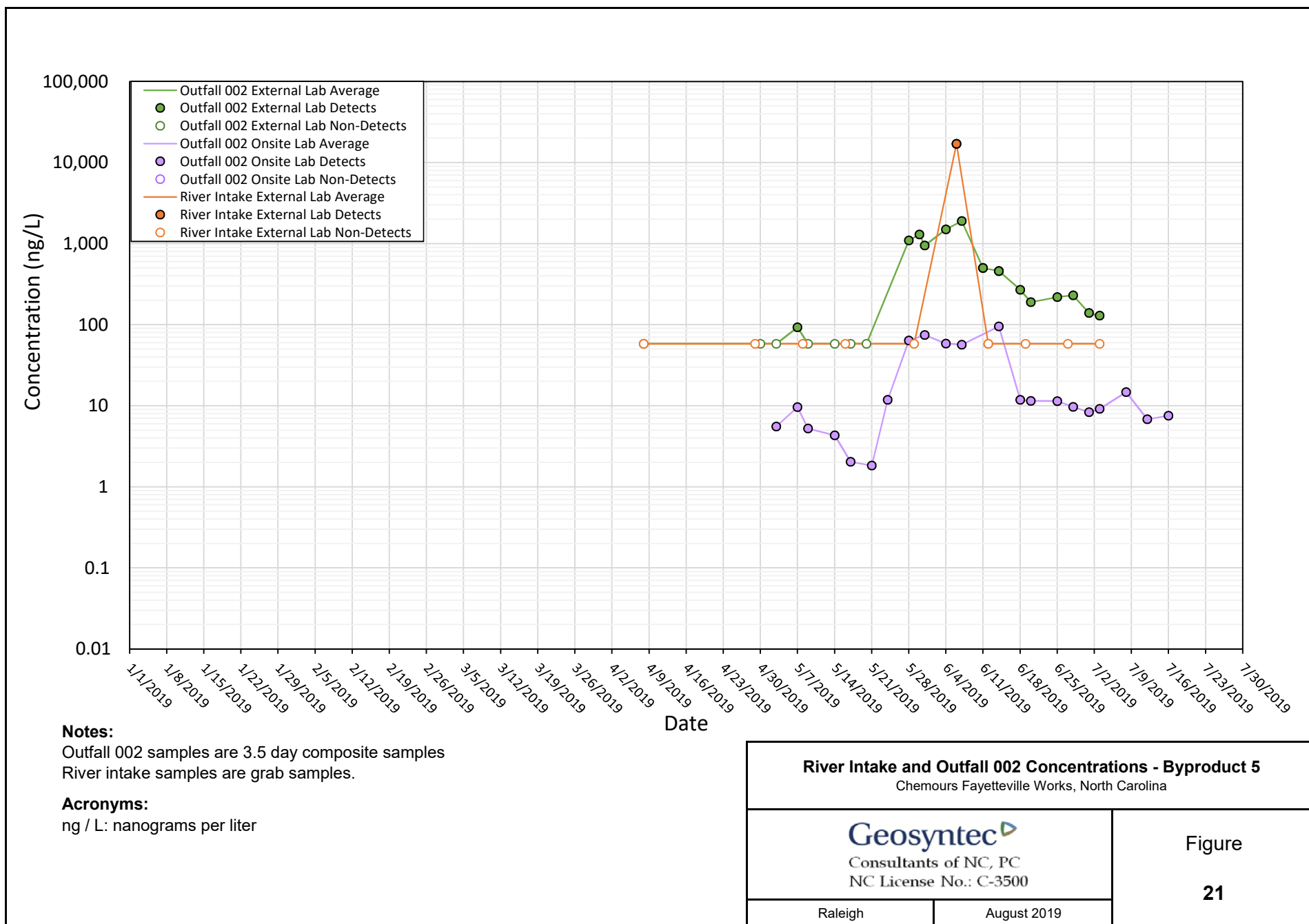
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PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED



PRELIMINARY -- SOME ANALYTICAL RESULTS NOT YET VALIDATED

TABLE 1
RIVER INTAKE AND OUTFALL 002 - 2019 PFAS CONCENTRATIONS
Chemours Fayetteville Works, North Carolina

Location ID	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002
Field Sample ID	O90103 - OUTFALL 002	O90107 - OUTFALL 002	O90110 - OUTFALL 002	O90114 - Outfall 002	O90117 - Outfall 002	O90122 - OUTFALL 002	O90125 - OUTFALL 002	O90128-OUTFALL 002	PM0119-O90128	O90201-OUTFALL 002	O90204-Outfall 002	O90207-Outfall 002	O90211-OUTFALL 002	O90214-OUTFALL 002	O90218-Outfall 002
Date Sampled	01/03/2019	01/07/2019	01/10/2019	01/14/2019	01/17/2019	01/22/2019	01/25/2019	01/28/2019	01/28/2019	02/01/2019	02/04/2019	02/07/2019	02/11/2019	02/14/2019	02/18/2019
Lab Location	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab
External Lab	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	190	340	110	240	92	190	340	85	--	88	91	88	90	240	170
HFPO-DA (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	--	--	--	--	--	--	--	5.2	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	--	--	--	--	--	--	--	--	--	--	<47	<47	<47	210	<47
PFECA-G	--	--	--	--	--	--	--	--	--	--	<41	<41	<41	<41	<41
PFMOAA	--	--	--	--	--	--	--	--	--	--	<210	<210	<210	<210	<210
PFO2HxA	--	--	--	--	--	--	--	--	--	--	<81	<81	<81	130	<81
PFO3OA	--	--	--	--	--	--	--	--	--	--	<58	<58	<58	<58	<58
PFO4DA	--	--	--	--	--	--	--	--	--	--	<79	<79	<79	<79	<79
PMPA	--	--	--	--	--	--	--	--	--	--	<570	590	<570	830	680
Hydro-EVE Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EVE Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PFECA B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-EVE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PFO5DA	--	--	--	--	--	--	--	--	--	--	<34	<34	<34	<34	<34
Byproduct 1	--	--	--	--	--	--	--	--	--	--	<27	<27	<27	200	130
Byproduct 2	--	--	--	--	--	--	--	--	--	--	<30	<30	<30	49	38
Byproduct 4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Byproduct 5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Byproduct 6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NVHOS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
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TABLE 1
RIVER INTAKE AND OUTFALL 002 - 2019 PFAS CONCENTRATIONS
Chemours Fayetteville Works, North Carolina

Location ID	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002
Field Sample ID	PM0219-O90218	O90221-Outfall 002	O90225-Outfall 002	90228-outfall 002	O90304 - Outfall 002	O90307 - Outfall 002	O90311 - OUTFALL 002	PM0319-O90312	O90314 - Outfall 002	O90318-Outfall 002	O90321-Outfall 002	O90325 - Outfall 002	O90328 - Outfall 002	090401-Outfall 002	090405-Outfall 002
Date Sampled	02/18/2019	02/18/2019	02/25/2019	02/28/2019	03/04/2019	03/07/2019	03/11/2019	03/12/2019	03/14/2019	03/18/2019	03/21/2019	03/25/2019	03/28/2019	04/01/2019	04/05/2019
Lab Location	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab
External Lab	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	--	130	350	54	290	62	110	--	49	120	72	87	110	68	350
HFPO-DA (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	9	--	--	--	--	--	--	7.1	--	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	--	<47	<47	<47	1200	110	<47	--	<47	<47	<47	<47	<47	<47	<47
PFECA-G	--	<41	<41	<41	<41	<41	<41	--	<41	<41	<41	<41	<41	<41	<41
PFMOAA	--	<210	<210	<210	1300	720	<210	--	<210	<210	<210	<210	<210	<210	<210
PFO2HxA	--	<81	<81	<81	660	300	<81	--	<81	<81	<81	<81	<81	<81	84
PFO3OA	--	<58	<58	<58	190	62	<58	--	<58	<58	<58	<58	<58	<58	<58
PFO4DA	--	<79	<79	<79	130	<79	<79	--	<79	<79	<79	<79	<79	<79	<79
PMPA	--	580	680	<570	3600	<570	<570	--	<570	<570	<570	<570	<570	<570	<570
Hydro-EVE Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EVE Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PFECA B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R-EVE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PFO5DA	--	<34	<34	<34	130	<34	<34	--	<34	<34	<34	<34	<34	<34	<34
Byproduct 1	--	55	94	<27	1300	170	62	--	<27	89	47	<27	370	<27	230
Byproduct 2	--	<30	65	<30	480	85	<30	--	<30	<30	<30	<30	31	<30	40
Byproduct 4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Byproduct 5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Byproduct 6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NVHOS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Chemours Fayetteville Works, North Carolina

Location ID	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002
Field Sample ID	W2019-OUTFALL02-04081	O90409 - Outfall 002	O90412 - Outfall 002	O90416-OUTFALL 002	O90418-OUTFALL 002	O90423-Outfall 002	O90423 - Outfall 002	PM0419-O90423	O90426- Outfall 002	O90426 - Outfall 002	O90430-Outfall 002	O90503-Outfall 002	O90503.d	O090507-Outfall 002	O90507.d
Date Sampled	04/08/2019	04/09/2019	04/12/2019	04/16/2019	04/18/2019	04/23/2019	04/23/2019	04/23/2019	04/26/2019	04/26/2019	04/30/2019	05/03/2019	05/03/2019	05/07/2019	05/07/2019
Lab Location	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab
External Lab	TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-SAC	TAL-SAC	TAL-DEN	LANC	TAL-DEN	TAL-DEN	LANC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	--	240	73	--	--	140	--	--	59	--	58	56	--	190	--
HFPO-DA (EPA Method 537 Mod)	48	--	--	140	48	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	--	--	--	--	--	--	--	--	--	--	--	--	38	--	141
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	--	--	--	--	--	--	<5.0	--	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	<47	<47	<47	79	<47	--	51	--	--	<20	<47	<47	8	<47	12
PFECA-G	<41	<41	<41	<41	<41	--	<2.0	--	--	<2.0	<41	<41	0.5	<41	0.5
PFMOAA	<210	<210	<210	<210	<210	--	120	--	--	70	<210	<210	22	<210	28
PFO2HxA	<81	<81	<81	<81	<81	--	50	--	--	25	<81	<81	28	<81	43
PFO3OA	<58	<58	<58	<58	<58	--	14	--	--	6.3	<58	<58	7.7	<58	16
PFO4DA	<79	<79	<79	<79	<79	--	9.3	--	--	4	<79	<79	12	<79	12
PMPA	<570	<570	<570	<570	<570	--	92	--	--	27	<570	<570	12	690	25
Hydro-EVE Acid	<28	--	--	--	--	--	--	--	--	--	<28	<28	2.7	<28	4.7
EVE Acid	<24	--	--	--	--	--	--	--	--	--	<24	<24	2.1	<24	7.8
PFECA B	<60	--	--	--	--	--	--	--	--	--	<60	<60	0.3	<60	0.3
R-EVE	<70	--	--	--	--	--	--	--	--	--	<70	<70	1.8	<70	1.4
PFO5DA	<34	<34	<34	<34	<34	--	7.4	--	--	2.4	<34	39	11	<34	12
Byproduct 1	<27	200	<27	140	<27	--	69	--	--	6.3	<27	<27	7.7	560	427
Byproduct 2	<30	40	<30	30	<30	--	27	--	--	7.4	<30	<30	12	46	39
Byproduct 4	<160	--	--	--	--	--	--	--	--	--	<160	<160	3	<160	9.5
Byproduct 5	<58	--	--	--	--	--	--	--	--	--	<58	<58	5.5	93	9.6
Byproduct 6	<15	--	--	--	--	--	--	--	--	--	<15	<15	1.7	<15	2.8
NVHOS	<54	--	--	--	--	--	--	--	--	--	<54	<54	4.9	<54	29
PES	<46	--	--	--	--	--	--	--	--	--	<46	<46	0.9	<46	1.1
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	<37	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	<35	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	4.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	4.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	5.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	5.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanesulfonic acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	7.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	<20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	<2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	<2.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	<2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Field Sample ID	O90509-Outfall 002	O90509.d	O90514-Outfall 002	O90514.d	PM0519-O90516	O90517- Outfall 002	O90517.d	DSTW-OUTFALL 002-052019	O90521.d	O90524.d	O90528 - Outfall 002	O90528.d	FAY-DSTW-OUTFALL002-053019	O90531 - Outfall 002	O90531.d
Date Sampled	05/09/2019	05/09/2019	05/14/2019	05/14/2019	05/16/2019	05/17/2019	05/17/2019	05/20/2019	05/21/2019	05/24/2019	05/28/2019	05/28/2019	05/30/2019	05/31/2019	05/31/2019
Lab Location	Off-Site Lab	On-Site Lab	Off-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	On-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	Off-Site Lab	On-Site Lab
External Lab	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--	TAL-DEN	TAL-DEN, TAL-SAC	--	TAL-SAC	--	--	TAL-DEN, TAL-SAC	--	TAL-SAC	TAL-DEN, TAL-SAC	--
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	290	--	83	--	--	47	--	--	--	--	76	--	--	68	--
HFPO-DA (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	--	171	--	47	--	--	47	--	44	33	--	51	--	--	37
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	--	--	--	<5.0	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	<47	5.2	<47	5.8	--	<47	4.9	<47	3.2	<23	<47	7.3	<47	<47	4.2
PFECA-G	<41	0.6	<41	0.4	--	<41	<6.2	<41	<6.2	0.1	<41	0.3	<41	<41	<6.2
PFMOAA	<210	27	<210	26	--	<210	32	<210	16	461	5500	1306	2500	2100	524
PFO2HxA	<81	26	<81	32	--	<81	39	<81	32	324	1400	905	640	580	398
PFO3OA	<58	5.7	<58	5.8	--	<58	17	<58	7.6	130	610	378	320	270	191
PFO4DA	<79	4.4	<79	5.4	--	<79	16	<79	7.8	66	340	218	220	180	127
PMPA	<570	10	<570	12	--	<570	15	<570	13	13	<570	27	640	680	16
Hydro-EVE Acid	<28	3.7	<28	1.4	--	<28	1.5	<28	1.7	5.4	<28	17	<28	<28	9.6
EVE Acid	<24	8.1	<24	4	--	<24	1	<24	1.3	1.7	<24	6.5	<24	<24	6.3
PFECA B	<60	0.3	<60	0.2	--	<60	<3.5	<60	3.5	3.5	<60	0.1	<60	<60	3.5
R-EVE	<70	0.9	<70	0.6	--	<70	1.4	<70	0.9	0.8	<70	0.5	<70	<70	0.6
PFO5DA	<34	3	77	3.8	--	72	17	<34	5.8	20	150	88	140	130	62
Byproduct 1	<27	18	27	24	--	<27	5.9	<27	18	8.9	<27	18	30	29	18
Byproduct 2	<30	20	<30	16	--	<30	13	<30	19	47	220	177	190	170	133
Byproduct 4	<160	16	200	37	--	<160	2.4	<160	3.6	4.5	<160	18	230	<160	18
Byproduct 5	<58	5.2	<58	4.3	--	<58	2	<58	1.8	12	1100	64	1300 J	950	75
Byproduct 6	<15	4.8	<15	2.2	--	<15	1.7	<15	1.8	2.1	<15	4.7	<15	<15	3.7
NVHOS	<54	7	<54	10	--	<54	7.8	<54	10	41	160	132	100	<54	79
PES	<46	0.9	<46	0.9	--	<46	0.7	<46	1	1	<46	0.9	<46	<46	0.8
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	<60	--	--	--	--	--	<60	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	<110	--	--	--	--	--	<110	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	<37 UJ	--	--	--	--	--	<37	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	<35 UJ	--	--	--	--	--	<35	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoronanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
Bold - Analyte detected above associated reporting limit
EPA - Environmental Protection Agency
J - Analyte detected. Reported value may not be accurate or precise.
LANC - Lancaster Laboratories
ng/L - nanograms per liter
QA/QC - Quality assurance/ quality control
SOP - standard operating procedure
TAL-DEN - TestAmerica Laboratories (Denver, CO)
TAL-SAC - TestAmerica Laboratories (Sacramento, CA)
UJ - Analyte not detected. Reporting limit may not be accurate or precise.
-- - No data reported
< - Analyte not detected above associated reporting limit.

Location ID	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002
Field Sample ID	O90604-Outfall 002	O90604.d	O90607-Outfall 002	O90607.d	O90611 - Outfall 002	PM0619-O90612	O90614 - Outfall 002	O90614.d	O90618	O90618.d	O90620	O90620.d	O90625	O90625.d	O90627
Date Sampled	06/04/2019	06/04/2019	06/07/2019	06/07/2019	06/11/2019	06/12/2019	06/14/2019	06/14/2019	06/18/2019	06/18/2019	06/20/2019	06/20/2019	06/25/2019	06/25/2019	06/28/2019
Lab Location	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab
External Lab	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	TAL-DEN	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	240	--	110	--	250	--	72	--	27	--	33	--	44	--	28
HFPO-DA (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	--	165	--	--	69	--	--	62	--	14	--	19	--	33	--
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	28	9.1	25	4.7	<47	--	<47	9.3	<47	<23	<47	<23	<47	<23	<47
PFECA-G	<2.0	0.2	<2.0	<6.2	<41	--	<41	0.9	<41	0.6	<41	0.7	<41	0.6	<41
PFMOAA	1100	241	570	120	<210	--	<210	78	<210	11	<210	10	<210	1.8	<210
PFO2HxA	320	211	170	124	150	--	<81	44	<81	28	<81	24	<81	27	<81
PFO3OA	140	95	79	51	<58	--	<58	20	<58	9.9	<58	8.3	<58	9.5	<58
PFO4DA	110	79	73	49	<79	--	<79	23	<79	11	<79	7.1	<79	10	<79
PMPA	71	24	70	15	720	--	<570	6	<570	<4.8	<570	<4.8	<570	<4.8	<570
Hydro-EVE Acid	10	7.9	6.8	6.8	<28	--	<28	3.3	<28	0.6	<28	0.4	<28	1.7	<28
EVE Acid	27	17	11	7.8	<24	--	<24	13	<24	1.9	<24	2.9	<24	4.9	<24
PFECA B	<2.0	0.1	<2.0	<3.5	<60	--	<60	<3.5	<60	<3.5	<60	<3.5	<60	<3.5	<60
R-EVE	68	1.6	47	1.2	<70	--	<70	0.1	<70	0.3	<70	<11	<70	0.2	<70
PFO5DA	69	50	62	45	70	--	78	35	<34	21	<34	17	72	16	55
Byproduct 1	420	321	93	70	160	--	54	40	<27	8.8	<27	12	63	43	100
Byproduct 2	200	159	170	126	160	--	160	111	130	76	96	70	110	80	110
Byproduct 4	330	26	320	17	180	--	<160	14	<160	0.4	<160	2.1	<160	<7.3	<160
Byproduct 5	1500	59	1900	57	500	--	460	95	270	12	190	12	220	11	230
Byproduct 6	4.6	4.6	3.9	3.3	<15	--	<15	3.5	<15	3	<15	2.9	<15	2.5	<15
NVHOS	85	68	45	34	<54	--	<54	17	<54	11	<54	8.4	<54	11	<54
PES	<2.0	0.8	<2.0	1	<46	--	<46	0.6	<46	0.6	<46	0.6	<46	0.6	<46
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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-- - No data reported
< - Analyte not detected above associated reporting limit.

TABLE 1
RIVER INTAKE AND OUTFALL 002 - 2019 PFAS CONCENTRATIONS
Chemours Fayetteville Works, North Carolina

Location ID	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	River Intake	River Intake	River Intake
Field Sample ID	O90628.d	O90701	O90701.d	O90703	O90703.d	O90708	O90708.d	O90712	O90712.d	O90716	O90716.d	O90719	R90102	R90108	R90118
Date Sampled	06/28/2019	07/01/2019	07/01/2019	07/03/2019	07/03/2019	07/08/2019	07/08/2019	07/12/2019	07/12/2019	07/16/2019	07/16/2019	07/19/2019	01/02/2019	01/08/2019	01/18/2019
Lab Location	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	On-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab
External Lab	--	TAL-DEN, TAL-SAC	--	TAL-DEN, TAL-SAC	--	TAL-DEN	--	TAL-DEN	--	TAL-DEN	--	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	--	33	--	42	--	320	--	68	--	67	--	170	10	<10	82
HFPO-DA (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	13	--	23	--	22	--	255	--	40	--	46	--	--	--	--
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	<23	<47	<23	<47	<23	--	1	--	<23	--	<23	--	--	--	--
PFECA-G	0.6	<41	0.8	<41	0.7	--	0.7	--	0.6	--	0.7	--	--	--	--
PFMOAA	5.8	<210	12	<210	6.8	--	15	--	3.2	--	<11	--	--	--	--
PFO2HxA	17	<81	30	<81	28	--	81	--	27	--	15	--	--	--	--
PFO3OA	5.4	<58	8.9	<58	6.5	--	23	--	5.5	--	2.6	--	--	--	--
PFO4DA	<8.2	<79	9.4	<79	6.9	--	14	--	7.1	--	3.3	--	--	--	--
PMPA	<4.8	1100	<4.8	820	<4.8	--	13	--	<4.8	--	<4.8	--	--	--	--
Hydro-EVE Acid	0.5	<28	0.9	<28	0.6	--	0.6	--	1.9	--	0.4	--	--	--	--
EVE Acid	5	<24	2.9	<24	7.7	--	0.2	--	3.7	--	3.7	--	--	--	--
PFECA B	<3.5	<60	<3.5	<60	<3.5	--	<3.5	--	<3.5	--	<3.5	--	--	--	--
R-EVE	<11	<70	0.1	<70	0.1	--	0.9	--	<11	--	<11	--	--	--	--
PFO5DA	12	<34	17	<34	7.5	--	16	--	6.3	--	5.6	--	--	--	--
Byproduct 1	76	27	10	43	30	--	83	--	23	--	14	--	--	--	--
Byproduct 2	76	110	67	110	65	--	114	--	60	--	48	--	--	--	--
Byproduct 4	0.3	<160	<7.3	<160	1.5	--	5.6	--	<7.3	--	0.6	--	--	--	--
Byproduct 5	9.7	140	8.4	130	9.2	--	15	--	6.8	--	7.5	--	--	--	--
Byproduct 6	2.4	<15	2.6	<15	2	--	3.1	--	2.3	--	1.3	--	--	--	--
NVHOS	9.6	<54	1.4	<54	13	--	31	--	9.8	--	1.8	--	--	--	--
PES	0.6	<46	0.5	<46	0.6	--	0.6	--	0.6	--	0.5	--	--	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
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EPA - Environmental Protection Agency
J - Analyte detected. Reported value may not be accurate or precise.
LANC - Lancaster Laboratories
ng/L - nanograms per liter
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TABLE 1
RIVER INTAKE AND OUTFALL 002 - 2019 PFAS CONCENTRATIONS
Chemours Fayetteville Works, North Carolina

Location ID	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake
Field Sample ID	R90125	PM0119-R90128	R90128	R90207	R90214	PM0219-R90218	R90218	R90225	R90306	PM0319-R90312	R90312	R90320	R90327	R90404	SW 2019-INTAKE-040819
Date Sampled	01/25/2019	01/28/2019	01/28/2019	02/07/2019	02/14/2019	02/18/2019	02/18/2019	02/25/2019	03/06/2019	03/12/2019	03/12/2019	03/20/2019	03/27/2019	04/04/2019	04/08/2019
Lab Location	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab
External Lab	TAL-DEN	TAL-DEN	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-SAC
QA/QC															
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	11	--	15	19	12	--	10	11	21	--	10	16	20	19	--
HFPO-DA (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19
HFPO-DA (Table3+ SOP)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	5.2	--	--	--	7.8	--	--	--	7.7	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.6
Table 3+ Lab SOP (ng/L)															
PEPA	--	--	--	<47	<47	--	<47	<47	200	--	<47	<47	<47	<47	<47
PFECA-G	--	--	--	<41	<41	--	<41	<41	<41	--	<41	<41	<41	<41	<41
PFMOAA	--	--	--	<210	<210	--	<210	<210	<210	--	<210	<210	<210	<210	<210
PFO2HxA	--	--	--	<81	<81	--	<81	<81	<81	--	<81	<81	<81	<81	<81
PFO3OA	--	--	--	<58	<58	--	<58	<58	<58	--	<58	<58	<58	<58	<58
PFO4DA	--	--	--	<79	<79	--	<79	<79	<79	--	<79	<79	<79	<79	<79
PMPA	--	--	--	<570	<570	--	<570	<570	1100	--	<570	<570	<570	<570	<570
Hydro-EVE Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<28
EVE Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<24
PFECA B	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<60
R-EVE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<70
PFO5DA	--	--	--	<34	<34	--	<34	<34	<34	--	<34	<34	<34	<34	<34
Byproduct 1	--	--	--	<27	<27	--	<27	<27	<27	--	<27	<27	<27	<27	<27
Byproduct 2	--	--	--	<30	<30	--	<30	<30	<30	--	<30	<30	<30	<30	<30
Byproduct 4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<160
Byproduct 5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<58
Byproduct 6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<15
NVHOS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<54
PES	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<46
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<110
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<37
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<35
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.8
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.4
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.9
Perfluorononanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.9
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<20
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<20
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<20
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<20
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<20
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.1
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.1
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.0

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LANC - Lancaster Laboratories
ng/L - nanograms per liter
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RIVER INTAKE AND OUTFALL 002 - 2019 PFAS CONCENTRATIONS
Chemours Fayetteville Works, North Carolina

Location ID	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake	River Intake
Field Sample ID	R90410	R90415	PM0419-R90423	R90423	R90429	R90508	PM0519-R90516	R90516	R90529	R90606	R90606	R90612	R90619	R90627	R90703
Date Sampled	04/10/2019	04/15/2019	04/23/2019	04/23/2019	04/29/2019	05/08/2019	05/16/2019	05/16/2019	05/29/2019	06/06/2019	06/06/2019	06/12/2019	06/19/2019	06/27/2019	07/03/2019
Lab Location	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab	Off-Site Lab
External Lab	TAL-DEN, TAL-SAC	TAL-SAC	TAL-DEN	TAL-DEN, LANC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC	TAL-DEN, TAL-SAC
QA/QC										Field Duplicate					
HFPO-DA (ng/L)															
HFPO-DA (EPA Method 8321A)	<10	--	--	<10	28	13	--	10	<10	150	150	<10	<10	<10	22
HFPO-DA (EPA Method 537 Mod)	--	<4.0	--	--	--	--	--	--	--	--	--	--	--	--	--
HFPO-DA (Table3+ SOP)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (ng/L)															
Perfluorooctanoic acid (DV-LC-0012)	--	--	<5.0	--	--	--	<5.0	--	--	--	--	--	--	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Table 3+ Lab SOP (ng/L)															
PEPA	<47	<47	--	<20	<47	<47	--	<47	<47	65	66	<47	<47	<47	<47
PFECA-G	<41	<41	--	<2.0	<41	<41	--	<41	<41	<4.1	<4.1	<41	<41	<41	<41
PFMOAA	<210	<210	--	9.5	<210	<210	--	<210	<210	14000	14000	<210	<210	<210	<210
PFO2HxA	<81	<81	--	6.1	<81	<81	--	<81	<81	3600	3500	<81	<81	<81	<81
PFO3OA	<58	<58	--	<2.0	<58	<58	--	<58	<58	1900	1900	<58	<58	<58	<58
PFO4DA	<79	<79	--	<2.0	<79	<79	--	<79	<79	2100	2000	<79	<79	<79	<79
PMPA	<570	<570	--	13	<570	680	--	<570	570	140	140	<570	<570	<570	890
Hydro-EVE Acid	--	--	--	--	<28	<28	--	<28	<28	120	120	<28	<28	<28	<28
EVE Acid	--	--	--	--	<24	<24	--	<24	<24	3.1	3.4	<24	<24	<24	<24
PFECA B	--	--	--	--	<60	<60	--	<60	<60	<6.0	<6.0	<60	<60	<60	<60
R-EVE	--	--	--	--	<70	<70	--	<70	<70	310	310	<70	<70	<70	<70
PFO5DA	<34	<34	--	<2.0	37	<34	--	<34	<34	2000	1900	<34	<34	42	<34
Byproduct 1	<27	<27	--	<2.0	<27	<27	--	<27	<27	86	85	<27	<27	<27	<27
Byproduct 2	<30	<30	--	<2.0	<30	<30	--	<30	<30	4900	4800	<30	<30	<30	<30
Byproduct 4	--	--	--	--	<160	<160	--	<160	<160	3100	3100	<160	<160	<160	<160
Byproduct 5	--	--	--	--	<58	<58	--	<58	<58	17000	17000	<58	<58	<58	<58
Byproduct 6	--	--	--	--	<15	<15	--	<15	<15	100	100	<15	<15	<15	<15
NVHOS	--	--	--	--	<54	<54	--	<54	<54	900	900	<54	<54	<54	<54
PES	--	--	--	--	<46	<46	--	<46	<46	<4.6	<4.6	<46	<46	<46	<46
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EPA Method 537 Mod (ng/L)															
Perfluorobutanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorononanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotetradecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorotridecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroundecanoic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorobutane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorodecane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexane Sulfonic Acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoronananesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctanesulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6:2 Fluorotelomer sulfonate	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4:2 Fluorotelomersulfonic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctadecanoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perfluorooctane Sulfonamide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ADONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NaDONA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Major	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
F-53B Minor	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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ng/L - nanograms per liter
QA/QC - Quality assurance/ quality control
SOP - standard operating procedure
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TABLE 1
RIVER INTAKE AND OUTFALL 002 - 2019 PFAS CONCENTRATIONS
Chemours Fayetteville Works, North Carolina

Location ID	River Intake	River Intake
Field Sample ID	R90710	R90718
Date Sampled	07/10/2019	07/18/2019
Lab Location	Off-Site Lab	Off-Site Lab
External Lab	TAL-DEN	TAL-DEN
QA/QC		
HFPO-DA (ng/L)		
HFPO-DA (EPA Method 8321A)	14	<10
HFPO-DA (EPA Method 537 Mod)	--	--
HFPO-DA (Table3+ SOP)	--	--
Perfluorooctanoic acid (ng/L)		
Perfluorooctanoic acid (DV-LC-0012)	--	--
Perfluorooctanoic acid (EPA Method 537 Mod)	--	--
Table 3+ Lab SOP (ng/L)		
PEPA	--	--
PFECA-G	--	--
PFMOAA	--	--
PFO2HxA	--	--
PFO3OA	--	--
PFO4DA	--	--
PMPA	--	--
Hydro-EVE Acid	--	--
EVE Acid	--	--
PFECA B	--	--
R-EVE	--	--
PFO5DA	--	--
Byproduct 1	--	--
Byproduct 2	--	--
Byproduct 4	--	--
Byproduct 5	--	--
Byproduct 6	--	--
NVHOS	--	--
PES	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	--
N-ethylperfluoro-1-octanesulfonamide	--	--
N-methyl perfluoro-1-octanesulfonamide	--	--
EPA Method 537 Mod (ng/L)		
Perfluorobutanoic Acid	--	--
Perfluorodecanoic Acid	--	--
Perfluorododecanoic Acid	--	--
Perfluoroheptanoic Acid	--	--
Perfluorononanoic Acid	--	--
Perfluorohexanoic Acid	--	--
Perfluoropentanoic Acid	--	--
Perfluorotetradecanoic Acid	--	--
Perfluorotridecanoic Acid	--	--
Perfluoroundecanoic Acid	--	--
Perfluorobutane Sulfonic Acid	--	--
Perfluorodecane Sulfonic Acid	--	--
Perfluoroheptane sulfonic acid (PFHpS)	--	--
Perfluorohexane Sulfonic Acid	--	--
Perfluorononanesulfonic acid	--	--
Perfluorooctanesulfonic acid	--	--
Perfluoropentane sulfonic acid (PFPeS)	--	--
10:2 Fluorotelomer sulfonate	--	--
8:2 Fluorotelomersulfonic acid	--	--
6:2 Fluorotelomer sulfonate	--	--
4:2 Fluorotelomersulfonic acid	--	--
N-ethyl perfluorooctane sulfonamidoacetic acid	--	--
N-methyl perfluorooctane sulfonamidoacetic acid	--	--
Perfluorododecane sulfonic acid (PFDoS)	--	--
Perfluorohexadecanoic acid (PFHxDA)	--	--
Perfluorooctadecanoic acid	--	--
Perfluorooctane Sulfonamide	--	--
ADONA	--	--
NaDONA	--	--
F-53B Major	--	--
F-53B Minor	--	--

Notes:
Bold - Analyte detected above associated reporting limit
EPA - Environmental Protection Agency
J - Analyte detected. Reported value may not be accurate or precise.
LANC - Lancaster Laboratories
ng/L - nanograms per liter
QA/QC - Quality assurance/ quality control
SOP - standard operating procedure
TAL-DEN - TestAmerica Laboratories (Denver, CO)
TAL-SAC - TestAmerica Laboratories (Sacramento, CA)
UJ - Analyte not detected. Reporting limit may not be accurate or precise.
-- - No data reported
< - Analyte not detected above associated reporting limit.