

US Army Corps of Engineers
Baltimore District



**QUARTERLY OM&M
REPORT NO. 6**

October to December 2021

PFOS/PFOA Mitigation
Interim Storm Water Treatment System
Long Term Operation, Maintenance, and Monitoring Services

Stewart Air National Guard Base, New York
Contract No. W912DR-21-C-0035

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ACRONYMS AND ABBREVIATIONS

AFFF	aqueous film forming foam
ANG	Air National Guard
BES	Bristol Environmental Solutions, LLC
GAC	granular activated carbon
GPM	gallons per minute
HA	Health Advisory
ISWTS	Interim Storm Water Treatment System
mg/L	milligrams per liter
NTU	nephelometric turbidity units
OM&M	Operations, Maintenance, and Monitoring
PFAS	polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
ppt	parts per trillion
SANGB	Stewart Air National Guard Base
TOC	total organic carbon
USACE	US Army Corps of Engineers

1.0 INTRODUCTION

Bristol Environmental Solutions, LLC (BES), under Contract with the US Army Corps of Engineers (USACE) is operating an Interim Storm Water Treatment System (ISWTS) on behalf of the Air National Guard (ANG) at Stewart Air National Guard Base (SANGB) in Newburgh, New York. The stormwater is contaminated with perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). PFOS and PFOA are two constituents of aqueous film-forming foam (AFFF), that have been detected above the U.S. Environmental Protection Agency (EPA) drinking water lifetime Health Advisory (HA) standard of 70 parts per trillion (ppt) (individually or combined).

The ISWTS intercepts stormwater from Recreation Pond and discharges treated effluent over the existing Recreation Pond outfall weir. When weather conditions allow, the ISWTS draws down the pond level and treats all stormwater discharges. The Recreation Pond drawdown provides a storage reservoir to prevent discharge of PFOS/PFOA when precipitation occurs. When precipitation events occur that exceed the ISWTS capacity and fill up the Recreation Pond both treated effluent and untreated stormwater go over the outfall weir.

This is the sixth quarterly report that summarizes Operations, Maintenance, and Monitoring (OM&M) activities conducted by BES at SANGB. This report summarizes ISWTS operations between 01 October and 31 December 2021 at SANGB.

2.0 GENERAL COMPLIANCE SUMMARY

The ISWTS operations began treatment of water on 13 July 2020, following installation and commissioning of pretreatment system improvements in June and early July 2020. This report summarizes OM&M between 01 October and 31 December 2021 or months 16, 17, and 18 post start-up. During the performance period the system influent, intra-process monitoring (3 locations) and effluent was monitored weekly to confirm treatment

system effectiveness for PFOS and PFOA as well as other per- and polyfluoroalkyl substances (PFAS). Performance sampling was conducted a total of 13 days during the quarterly period. Final PFAS results are provided in **Table 1**. Based on validated analytical data, all effluent sample results were well below the discharge criteria of 70 ppt (individually or combined) in the off-base stormwater discharge at Recreation Pond.

3.0 ISWTS CONFIGURATION DURING PERFORMANCE PERIOD

The ISWTS maintained the following unit processes; centrifugal separator, coarse sand filtration, fine sand filtration, primary and secondary bag filtration, primary and secondary granular activated carbon (GAC), and ion exchange resin serving as a polishing media throughout this performance period. Peracetic acid continued to be introduced prior to the centrifugal separator at a low (safe) concentration to reduce biological growth in the system. The system configuration is shown on **Figure 1**.

4.0 GENERAL FACILITY OPERATIONS SUMMARY

During the performance period, a total of 38,989,660 gallons of stormwater was treated and discharged over the outfall weir by the ISWTS. No stormwater was treated and recirculated to the Recreation Pond during the performance period. The table below summarizes the total volume treated (gallons), operational time (hours), run time (% of total time), and average treatment rate (gallons per minute) during each month of system operations. The total gallons summarized below represent the total water discharged over the weir as no water was treated and recycled back to the pond. As noted in the below summary, the ISWTS and influent pump does not run all the time. It is turned off when system maintenance is being performed, during power failures, and during periods when Recreation Pond drawdown objectives were achieved.

Month	Volume Treated (Gallons)	Operational Time ¹ (Hours)	Run Time ² (Percent)	Average Treatment Flow ³ (GPM)
October 2021	13,123,300	726	98%	301
November 2021	11,063,155	695	97%	265
December 2021	14,803,205	695	99%	355
Total	38,989,660	2,116		
¹ Operation Time – Hours influent pump in operation during month ² Run Time – Hours pump running divided by the total period time ³ Average GPM – Average flow total gallons divided by operational hours				

There were 92 days of operation between 01 October and 31 December 2021. During this period of performance, the Recreation Pond was drawn down for 39 of the 92 days or 42% of the time. The Recreation Pond level during the performance period is shown on **Figure 2**.

5.0 FACILITY PERFORMANCE MONITORING

5.1 INFLUENT AND EFFLUENT PFOS AND PFOA MONITORING

As previously noted, PFOS and PFOA samples were collected 13 times on the influent and effluent during the performance period. **Figure 3** shows the influent and effluent combined PFOS and PFOA concentrations based on the validated results. As shown in **Figure 3**, the combined PFOS and PFOA influent and effluent averaged concentrations during the performance period were 296 ppt and 0.24 ppt, respectively. The maximum combined PFOS and PFOA influent concentration was 480 ppt on November 9, 2021, and the maximum combined PFOS and PFOA effluent concentration was 1.2 ppt on November 22, 2022, of the performance period.

5.2 INTRA-PROCESS PFOS AND PFOA MONITORING

With exception to the media exchange period, intra-process monitoring for PFOS and PFOA was performed after the primary and secondary GAC and Ion Exchange resin to confirm media effectiveness. The media was replaced between 16 and 22 November 2021.

During that period, sampling was only performed on the overall system influent and effluent. Based on intra-process sample results the maximum detection of PFOS/PFOA in the primary GAC was 90.3 ppt prior to the media change. The maximum detection of PFOS and PFOA in the secondary GAC was 1.4 ppt and the Ion Exchange resin was 4.8 ppt prior to the media exchange and still demonstrating adequate removal. The media exchange was primarily performed because the media condition was restricting throughput and causing excessive maintenance. Following media changeout of the primary and secondary GAC and Ion Exchange resin, intra-process sampling for PFOS and PFOA were continued on a weekly basis to further confirm their effectiveness. Increased frequency would have been performed if reduced treatment system performance was observed. However, media performance for PFAS removal was sufficient for the remainder of the quarter.

5.3 OTHER WATER QUALITY MONITORING

During the performance period additional monitoring was performed monthly for total organic carbon (TOC), and glycols on the influent, secondary GAC effluent and final effluent. These results are shown in **Table 2**. Elevated TOC is known to impact treatment media life. The Ion Exchange resin manufacturer recommends that TOC not be more than 2 milligrams per liter (mg/L). The average influent TOC was 3.3 mg/L and the GAC effluent (influent to the resin) was 0.8 mg/L indicating that the influent TOC level to the Ion Exchange resin was acceptable. Glycol was not detected in any of the samples. No results were cause for concern or believed to negatively impact the ISWTS performance.

5.4 TURBIDITY MONITORING

Turbidity is a measurement that can quantify the level of solids present in the water. It is an on-site test that is helpful to measure in real time, the influent water quality and intra-process performance to confirm the effectiveness of the treatment system in removing solids. During the performance period, influent and effluent turbidity averaged 5.08

nephelometric turbidity units (NTU) and 0.64 NTU, respectively. A graph of the influent and effluent turbidity during the performance period is included in **Figure 4**.

5.5 PERACETIC ACID ADDITION

As discussed, peracetic acid was added to the process influent to help reduce biological growth in the system. During the performance period 21.5 gallons of Peracetic Acid was introduced and the average dose was 0.55 gallons of peracetic acid per million gallons of water treated or 1.99 pounds per day.

6.0 SCHEDULED PREVENTIVE MAINTANANCE

During the performance period the following preventive maintenance activities were completed:

- Coarse and fine sand filter backwashes;
- Coarse and fine sand filter cleanings;
- Coarse and fine sand filter media exchange;
- Primary and secondary bag filter changes;
- Primary and secondary carbon backwashing; and,
- Ion Exchange resin skimming.

During the performance period the coarse and fine sand filters were backwashed 641 and 675 times, respectively and a total of 8 cleaning events were completed. The Sand Media was replaced once during the quarter on 15 and 16 November 2021. The primary and secondary bag filters were changed 14 and 29 times, respectively, during the performance period. To maintain acceptable PFAS treatment media pressure, the primary and secondary GAC was backwashed 16 and 3 times, respectively during the quarter. The resin was skimmed one time to remove solids and inspected/leveled on follow up event. All carbon and resin were replaced once during the performance period between 16 and 22 November 2021. The sand filter maintenance, bag filter changes, GAC backwash

events, media change outs and Ion Exchange resin skimming activities are summarized in **Table 3**.

7.0 MATERIAL DISPOSAL

Waste sand filter media, spent bag filters, as well as spent GAC and Ion Exchange Resin were generated during the quarter. Most waste was generated during the November 2021 media change. However, all waste generated during the quarter was staged on site and will be disposed during the first quarter 2022.

8.0 PROJECTED ACTIVITIES FOR NEXT PERFORMANCE PERIOD

During the next performance period one additional media change is anticipated to meet performance objectives. We also plan to manage the wastes currently staged on site. No capital improvements are planned at this time.

TABLES

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1S9635V1 - 10/05/2021

RESULTS OF ANALYSES OF WATER

		VALIDATED DATA									
BV Labs ID		QVY513	QVY518	QVY519	QVY517	QVY516	QVY515	QVY514			
Sampling Date		2021/10/05 08:15	2021/10/05 08:52	2021/10/05 08:52	2021/10/05 08:45	2021/10/05 08:38	2021/10/05 08:30	2021/10/05 08:22			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	SANG-FB-10052021	SANG-INF-10052021	SANG-INF-10052021D	SANG-PBG1-10052021	SANG-PBG2-10052021	SANG-PBR1-10052021	SANG-EFF-10052021	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	12	12	20	1.4 U	8.1	4.1	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	45	44	22	1.2 U	1.2 U	1.2 U	0.52	1.2	2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	35	36	6.9	1.4 U	1.4 U	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	21	20	1.6 J	1.2 U	1.2 U	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	19	19	0.79 J	1.2 U	1.2 U	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	6.1	5.9	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4	3.8	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	0.62 J	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTReDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	8.4	8.2	0.92 J	1.2 U	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	8.1	7.8	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	60	57	1.4 J	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	2.4	2.5	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	180 (1)	180 (1)	1.7 J	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	46	45	0.91 J	1.6 U	1.6 U	1.6 U	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	13	12	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANGB = Stewart Air National Guard Base

Sample SANG-FB-10052021 is a field blank.

Sample SANG-INF-10052021D is a field duplicate of SANG-INF-10052021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PBG1 = post B train GAC Unit 1

PBG2 = post B train GAC Unit 2

PBR1 = post B train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1T6707V1 - 10/12/2021

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID	Sampling Date	VALIDATED DATA									DL	LOD	LOQ
		QXL819	QXL824	QXL825	QXL823	QXL822	QXL821	QXL820					
		2021/10/12 07:40	2021/10/12 08:10	2021/10/12 08:10	2021/10/12 08:05	2021/10/12 07:59	2021/10/12 07:53	2021/10/12 07:45					
	UNITS	SANG-FB-10122021	SANG-INF-10122021	SANG-INF-10122021D	SANG-PCG1-10122021	SANG-PCG2-10122021	SANG-PCR1-10122021	SANG-EFF-10122021					
Perfluorinated Compounds													
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	31	33	26	1.4 U	18	13	0.67	1.4	2		
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	130 (1)	120 (1)	36	1.2 U	2.0 J	1.2 U	5.2	12	20		
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	76	85	14	1.4 U	1.4 U	1.4 U	0.7	1.4	2		
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	41	44	4.1	1.2 U	1.2 U	1.2 U	0.51	1.2	2		
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	37	39	2.3	1.2 U	1.2 U	1.2 U	0.49	1.2	2		
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.8	10	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2		
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.5	4.7	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2		
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2		
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2		
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2		
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2		
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	18	21	1.7 J	1.2 U	1.2 U	1.2 U	0.47	1.2	2		
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	21	20	0.94 J	1.6 U	1.6 U	1.6 U	0.73	1.6	2		
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	170 (1)	160 (1)	6.3	1.2 U	1.2 U	1.2 U	5.3	12	20		
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	5.2	5.9	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2		
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	390 (1)	440 (1)	13	1.2 U	0.55 J	0.55 J	4.3	12	20		
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2		
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2		
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4		
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4		
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4		
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.97 J	1.1 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4		
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	99	120 (1)	4.1	1.6 U	1.6 U	1.6 U	5.9	16	40		
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	11	11	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4		
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4		
4,8-Dioxo-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4		
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4		
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4		

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

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Sample SANG-FB-10122021 is a field blank.

Sample SANG-INF-10122021D is a field duplicate of SANG-INF-10122021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PCG1 = post C train GAC Unit 1

PCG2 = post C train GAC Unit 2

PCR1 = post C train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1U5279V1 - 10/19/2021

RESULTS OF ANALYSES OF WATER

		VALIDATED DATA										
Bureau Veritas ID		QZG606	QZG611	QZG612	QZG610	QZG609	QZG608	QZG607				
Sampling Date		2021/10/19 08:15	2021/10/19 09:00	2021/10/19 09:00	2021/10/19 08:38	2021/10/19 08:33	2021/10/19 08:28	2021/10/19 08:20				
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a				
	UNITS	SANG-FB-10192021	SANG-INF-10192021	SANG-INF-10192021D	SANG-PDG1-10192021	SANG-PDG2-10192021	SANG-PDR1-10192021	SANG-EFF-10192021	DL	LOD	LOQ	
Perfluorinated Compounds												
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	21	23	25	1.3 J	20	16	0.67	1.4	2	
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	68	72	38	1.2 U	1.8 J	1.2 U	0.52	1.2	2	
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	54	58	16	1.4 U	1.4 U	1.4 U	0.7	1.4	2	
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	28	31	5.4	1.2 U	1.2 U	1.2 U	0.51	1.2	2	
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	26	28	3.7	1.2 U	1.2 U	1.2 U	0.49	1.2	2	
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	6.9	7.6	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2	
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	3.9	4.1	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2	
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2	
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.5 J	1.2 U	1.2 U	1.2 U	0.94 J	1.2 U	0.59	1.2	2	
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.8 J	1.2 U	1.2 U	1.2 U	1.0 J	1.2 U	0.48	1.2	2	
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.7 J	1.2 U	1.2 U	1.2 U	0.76 J	1.2 U	0.37	1.2	2	
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	12	14	2.3	1.2 U	1.2 U	1.2 U	0.47	1.2	2	
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	13	15	1.5 J	1.6 U	1.6 U	1.6 U	0.73	1.6	2	
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	79	86	8.3	1.2 U	1.2 U	1.2 U	0.53	1.2	2	
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.4	4	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2	
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	240 (1)	250 (1)	16	1.2 U	0.72 J	0.72 J	4.3	12	20	
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2	
Perfluorodecane sulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2	
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	1.2 J	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4	
MeFOSAA	ng/L	3.0 U	3.6 J	3.0 U	3.0 U	3.0 U	2.1 J	3.0 U	1.2	3	4	
EtFOSAA	ng/L	3.0 U	3.8 J	3.0 U	3.0 U	3.0 U	2.2 J	3.0 U	1.4	3	4	
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.81 J	0.80 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4	
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	65	71	5.6	1.6 U	1.6 U	1.6 U	0.59	1.6	4	
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	13	14	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4	
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4	
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4	
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4	
11CI-PF3OUds (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4	

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANGB = Stewart Air National Guard Base

Sample SANG-FB-10192021 is a field blank.

Sample SANG-INF-10192021D is a field duplicate of SANG-INF-10192021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PDG1 = post D train GAC Unit 1

PDG2 = post D train GAC Unit 2

PDR1 = post D train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1V4221V1 - 10/26/2021

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID	VALIDATED DATA												
		RBE478	RBE483	RBE484	RBE482	RBE481	RBE480	RBE479					
Sampling Date		2021/10/26 08:00	2021/10/26 08:28	2021/10/26 08:28	2021/10/26 08:23	2021/10/26 08:17	2021/10/26 08:11	2021/10/26 08:05					
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a					
	UNITS	SANG-FB-10262021	SANG-INF-10262021	SANG-INF-10262021D	SANG-PAG1-10262021	SANG-PAG2-10262021	SANG-PAR1-10262021	SANG-EFF-10262021	DL	LOD	LOQ		
Perfluorinated Compounds													
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	7.7	7.5	17	1.5 U	7.8	11	0.74	1.5	2.2		
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	26	25	30	1.3 U	1.3 U	1.3 U	0.57	1.3	2.2		
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	20	19	13	1.5 U	1.5 U	1.5 U	0.77	1.5	2.2		
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	11	11	3.3	1.3 U	1.3 U	1.3 U	0.56	1.3	2.2		
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	11	11	2.1 J	1.3 U	1.3 U	1.3 U	0.54	1.3	2.2		
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	2.8	2.8	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.2		
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	1.9 J	1.9 J	1.5 U	1.5 U	1.5 U	1.5 U	0.7	1.5	2.2		
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2		
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.2		
Perfluorotridecanoic acid (PFTDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.2		
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.41	1.3	2.2		
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	4.8	4.6	1.4 J	1.3 U	1.3 U	1.3 U	0.52	1.3	2.2		
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	4.7	4.5	1.8 U	1.8 U	1.8 U	1.8 U	0.8	1.8	2.2		
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	30	31	3.7	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2		
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	0.93 J	0.93 J	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.2		
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	92	88	12	1.3 U	1.3 U	1.3 U	0.47	1.3	2.2		
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.7	1.5	2.2		
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2		
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.4		
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.4		
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.4		
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.4		
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	23	22	2.5 J	1.8 U	1.8 U	1.8 U	0.65	1.8	4.4		
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	6	5.5	1.8 U	1.8 U	1.8 U	1.8 U	0.83	1.8	4.4		
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.4		
4,8-Dioxo-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.4		
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.4		
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.4		

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANGB = Stewart Air National Guard Base

Sample SANG-FB-10262021 is a field blank.

Sample SANG-INF-10262021D is a field duplicate of SANG-INF-10262021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PAG1 = post A train GAC Unit 1

PAG2 = post A train GAC Unit 2

PAR1 = post A train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1W2423V1 - 11/02/2021

RESULTS OF ANALYSES OF WATER

RESULTS OF ANALYSES OF WATER				VALIDATED DATA							
Bureau Veritas ID		RCX633	RCX638	RCX639	RCX637	RCX636	RCX635	RCX634			
Sampling Date		2021/11/02 08:00	2021/11/02 08:30	2021/11/02 08:30	2021/11/02 08:25	2021/11/02 08:18	2021/11/02 08:11	2021/11/02 08:05			
COC Number		na	na	na	na	na	na	na			
	UNITS	SANG-FB-11022021	SANG-INF-11022021	SANG-INF-11022021D	SANG-PBG1-11022021	SANG-PBG2-11022021	SANG-PBR1-11022021	SANG-EFF-11022021	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	28	27	33	3.9	39	29	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	100 (1)	100 (1)	48	1.3 J	8.3	1.8 J	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	72	68	18	1.4 U	1.4 U	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	41	40	4.5	1.2 U	1.2 U	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	39	38	2.4	1.2 U	1.2 U	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	10	10	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.4	6.3	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTTrDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	13	13	1.7 J	1.2 U	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	17	16	0.99 J	1.6 U	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	120 (1)	120 (1)	4.1	1.2 U	1.2 U	1.2 U	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.9	4.7	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	370 (1)	370 (1)	5.1	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.97 J	0.94 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	94 (1)	89 (1)	1.9 J	1.6 U	1.6 U	1.6 U	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	32	31	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANGB = Stewart Air National Guard Base

Sample SANG-FB-11022021 is a field blank.

Sample SANG-INF-11022021D is a field duplicate of SANG-INF-11022021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PBG1 = post B train GAC Unit 1

PBG2 = post B train GAC Unit 2

PBR1 = post B train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1X0748V1 - 11/09/2021

RESULTS OF ANALYSES OF WATER

VALIDATED DATA

Bureau Veritas ID		RER532	RER537	RER538	RER536	RER535	RER534	RER533			
Sampling Date		2021/11/09 07:30	2021/11/09 08:00	2021/11/09 08:00	2021/11/09 07:55	2021/11/09 07:50	2021/11/09 07:42	2021/11/09 07:35			
	UNITS	SANG-FB-11092021	SANG-INF-11092021	SANG-INF-11092021D	SANG-PCG1-11092021	SANG-PCG2-11092021	SANG-PCR1-11092021	SANG-EFF-11092021	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	42	42	39	9.9	40	41	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	130 (1)	130 (1)	88	6.4	30	5.1	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	97 (1)	100 (1)	50	1.2 J	8	1.4 U	7	14	20
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	54	56	20	1.2 U	2.3	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	50	51	16	1.2 U	1.6 J	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	13	14	3.4	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	7.5	7.6	1.1 J	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.1 J	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTDA)	ng/L	1.2 U	1.2 U	1.2 U	1.6 J	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 J	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	20	21	7	1.2 U	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid (PFPeS)	ng/L	1.6 U	24	24	5.9	1.6 U	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	150 (1)	150 (1)	40	1.2 U	1.2 U	1.2 U	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	6.6	7.1	0.99 J	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	430 (1)	450 (1)	88 (1)	1.4 J	3.2	0.62 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 J	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	2.9 J	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.97 J	0.94 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	130 (1)	130 (1)	29	1.6 U	4.5	1.6 U	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	42	45	3.1 J	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxo-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	0.55 J	2.0 U	2.0 U	2.0 U	0.52	2	4

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-11092021 is a field blank.

Sample SANG-INF-11092021D is a field duplicate of SANG-INF-11092021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PCG1 = post C train GAC Unit 1

PCG2 = post C train GAC Unit 2

PCR1 = post C train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1X8370V1 - 11/16/2021

RESULTS OF ANALYSES OF WATER

VALIDATED DATA

Bureau Veritas ID		RGG765	RGG767	RGG766			
Sampling Date		2021/11/16 08:35	2021/11/16 08:45	2021/11/16 08:40			
	UNITS	SANG-FB-11162021	SANG-INF-11162021	SANG-EFF-11162021	DL	LOD	LOQ
Perfluorinated Compounds							
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	20	34	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	70	4.6	0.52	1.2	2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	56	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	29	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	28	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.5	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	12	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid (PFPS)	ng/L	1.6 U	13	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	76	1.2 U	0.53	1.2	2
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	1.2 U	3.5	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	220 (1)	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.74 J	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	65	1.6 U	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	17	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	0.56	2	4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	0.52	2	4

Reduced number of samples collected due to concurrent media changeout activities.

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-11162021 is a field blank.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1Y9112V1 - 11/22/2021

RESULTS OF ANALYSES OF WATER

VALIDATED DATA

Bureau Veritas ID		RIP124	RIP125	RIP126			
Sampling Date		2021/11/22 08:00	2021/11/22 08:05	2021/11/22 08:10			
	UNITS	SANG-FB-11222021	SANG-EFF-11222021	SANG-INF-11222021	DL	LOD	LOQ
Perfluorinated Compounds							
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	1.4 U	32	0.70	1.5	2.1
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	1.2 U	99	0.55	1.3	2.1
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	1.4 U	78	0.74	1.5	2.1
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	1.2 U	38	0.54	1.3	2.1
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	1.2 U	38	0.51	1.3	2.1
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	1.6 U	9.8	0.84	1.7	2.1
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	1.4 U	5.4	0.67	1.5	2.1
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.7 U	0.81	1.7	2.1
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.3 U	0.62	1.3	2.1
Perfluorotridecanoic acid (PFTDA)	ng/L	1.2 U	1.2 U	1.3 U	0.50	1.3	2.1
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.3 U	0.39	1.3	2.1
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	1.2 U	17	0.49	1.3	2.1
Perfluoropentanesulfonic acid (PFPS)	ng/L	1.6 U	1.6 U	20	0.77	1.7	2.1
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	1.2 U	110 (1)	5.3	12	20
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	1.2 U	1.2 U	5.5	0.60	1.3	2.1
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	1.2 J	300 (1)	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.5 U	0.67	1.5	2.1
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.3 U	0.56	1.3	2.1
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.1 U	0.85	2.1	4.2
MeFOSAA	ng/L	3.0 U	3.0 U	3.2 U	1.3	3.2	4.2
EtFOSAA	ng/L	3.0 U	3.0 U	3.2 U	1.5	3.2	4.2
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	1.2 J	0.72	1.7	4.2
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	83	0.62	1.7	4.2
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	15	0.79	1.7	4.2
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.1 U	0.89	2.1	4.2
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.3 U	0.33	1.3	4.2
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.1 U	0.59	2.1	4.2
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.1 U	0.55	2.1	4.2

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-11222021 is a field blank.

Sample SANG-INF-11222021D is a field duplicate of SANG-INF-11222021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1Z8463V1 - 11/30/2021

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RKU156	RKU161	RLR091	RKU160	RKU159	RKU158	RKU157			
Sampling Date		2021/11/30 08:35	2021/11/30 09:15	2021/11/30 09:15	2021/11/30 09:05	2021/11/30 08:55	2021/11/30 08:50	2021/11/30 08:40			
	UNITS	SANG-FB-11302021	SANG-INF-11302021	SANG-INF-11302021D	SANG-PAG1-11302021	SANG-PAG2-11302021	SANG-PAR1-11302021	SANG-EFF-11302021	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 UJ	40 J	39 J	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 UJ	120 (1) J	120 (1) J	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 UJ	99 J	96 J	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 UJ	46 J	45 J	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 UJ	45 J	44 J	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 UJ	11 J	11 J	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 UJ	6.6 J	6.7 J+	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.59	1.2	2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.48	1.2	2
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 UJ	20 J	19 J	0.56 J	0.62 J+	0.54 J+	0.77 J	0.47	1.2	2
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 UJ	23 J	23 J	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	0.73	1.6	2
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 UJ	130 (1) J	130 (1) J	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 UJ	6.4 J	6.4 J	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 UJ	380 (1) J	370 (1) J	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	0.81	2	4
MeFOSAA	ng/L	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	1.2	3	4
EtFOSAA	ng/L	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	3.0 UJ	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 UJ	1.5 J+	1.6 J+	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 UJ	89 J+	91 J+	1.6 UJ	1.9 J	2.0 J	1.6 UJ	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 UJ	19 J	17 J	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	0.31	1.2	4
9CI-PF3ONS (F-53B Major)	ng/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	0.56	2	4
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	0.52	2	4

Note:

ng/L - nanograms per Liter or parts per trillion.

J= The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample

J+= The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J-= The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ= The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-11302021 is a field blank.

Sample SANG-INF-11302021D is a field duplicate of SANG-INF-11302021.

Analyses highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Holding time exceedances were flagged as **bold in black**, additional EIS exceedance were flagged as **bold in red**.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PAG1 = post A train GAC unit 1

PAG2 = post A train GAC unit 2

PAR1= post A-train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1Y3482V1 - 12/07/2021

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID	Sampling Date	VALIDATED DATA									DL	LOD	LOQ
		RHJ802	RHJ807	RHJ808	RHJ806	RHJ805	RHJ804	RHJ803					
		2021/12/07 08:00	2021/12/07 08:30	2021/12/07 08:30	2021/12/07 08:25	2021/12/07 08:17	2021/12/07 08:11	2021/12/07 08:05					
	UNITS	SANG-FB-12072021	SANG-INF-12072021	SANG-INF-12072021D	SANG-PBG1-12072021	SANG-PBG2-12072021	SANG-PBR1-12072021	SANG-EFF-12072021					
Perfluorinated Compounds													
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	26	25	1.5 U	1.5 U	1.5 U	1.5 U	0.74	1.5	2.2		
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	91	89	1.3 U	1.3 U	1.3 U	1.3 U	0.57	1.3	2.2		
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	74	71	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	2.2		
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	33	33	1.3 U	1.3 U	1.3 U	1.3 U	0.56	1.3	2.2		
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	34	33	1.3 U	1.3 U	1.3 U	1.3 U	0.54	1.3	2.2		
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	8.1	7.8	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.2		
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	5.1	5.0	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2		
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2		
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.2		
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.2		
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.41	1.3	2.2		
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	16	16	1.3 U	1.3 U	1.3 U	1.3 U	0.52	1.3	2.2		
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	17	16	1.8 U	1.8 U	1.8 U	1.8 U	0.80	1.8	2.2		
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	100	98	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2		
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.8	4.7	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.2		
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	250 (1)	260 (1)	1.3 U	1.3 U	1.3 U	1.3 U	0.47	1.3	2.0		
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2		
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2		
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.4		
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.4		
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.4		
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.4 J	1.3 J	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.4		
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	91	90	1.8 U	1.8 U	1.8 U	1.8 U	0.65	1.8	4.4		
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	19	19	1.8 U	1.8 U	1.8 U	1.8 U	0.83	1.8	4.4		
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.4		
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.4		
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.4		
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.4		

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-12072021 is a field blank.

Sample SANG-INF-12072021D is a field duplicate of SANG-INF-12072021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PBG1 = post B train GAC Unit 1

PBG2 = post B train GAC Unit 2

PBR1 = post B train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1Z0655 - 12/14/2021

RESULTS OF ANALYSES OF WATER

RESULTS OF ANALYSES OF WATER				VALIDATED DATA							
Bureau Veritas ID		RIY461	RIY466	RIY467	RIY465	RIY464	RIY463	RIY462			
Sampling Date		2021/12/14 08:00	2021/12/14 08:28	2021/12/14 08:28	2021/12/14 08:22	2021/12/14 08:15	2021/12/14 08:10	2021/12/14 08:05			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	SANG-FB-12142021	SANG-INF-12142021	SANG-INF-12142021D	SANG-PCG1-12142021	SANG-PCG2-12142021	SANG-PCR1-12142021	SANG-EFF-12142021	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	30	30	0.96 J	1.5 U	1.5 U	0.81 J	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	85	84	1.3 U	1.3 U	1.3 U	1.3 U	0.57	1.3	2.2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	67	65	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	30	31	1.3 U	1.3 U	1.3 U	1.3 U	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	30	30	1.3 U	1.3 U	1.3 U	1.3 U	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.7	7.5	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	5.3	5.4	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTnDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	14	13	1.3 U	1.3 U	1.3 U	1.3 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPeS	ng/L	1.6 U	14	13	1.8 U	1.8 U	1.8 U	1.8 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	90	91	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4	4	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	220 (1)	240 (1)	1.3 U	1.3 U	1.3 U	1.3 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.4
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.4
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.5 J	1.4 J	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	66	69	1.8 U	1.8 U	1.8 U	1.8 U	0.65	1.8	4.4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	13	13	1.8 U	1.8 U	1.8 U	1.8 U	0.83	1.8	4.4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.4
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.4
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.4

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-12142021 is a field blank.

Sample SANG-INF-12142021D is a field duplicate of SANG-INF-12142021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PCG1 = post C train GAC Unit 1

PCG2 = post C train GAC Unit 2

PCR1 = post C train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1AC2476V1 - 12/21/2021

RESULTS OF ANALYSES OF WATER

RESULTS OF ANALYSES OF WATER				VALIDATED DATA							
Bureau Veritas ID		RLQ668	RLQ673	RLQ674	RLQ672	RLQ671	RLQ670	RLQ669			
Sampling Date		2021/12/21 07:50	2021/12/21 08:28	2021/12/21 08:28	2021/12/21 08:20	2021/12/21 08:12	2021/12/21 08:05	2021/12/21 07:55			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	SANG-FB-12212021	SANG-INF-12212021	SANG-INF-12212021D	SANG-PDG1-12212021	SANG-PDG2-12212021	SANG-PDR1-12212021	SANG-EFF-12212021	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	17	17	1.2 J	1.5 U	1.3 J	1.2 J	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	61	61	0.77 J	1.3 U	1.3 U	1.3 U	0.57	1.3	2.2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	49	49	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	23	23	1.3 U	1.3 U	1.3 U	1.3 U	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	24	24	1.3 U	1.3 U	1.3 U	1.3 U	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	5.9	5.6	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.7	4.6	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	0.80 J	0.76 J	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	0.42 J	0.50 J	0.48 J	0.43 J	1.3 U	1.3 U	0.41 J	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	9.6	9.2	1.3 U	1.3 U	1.3 U	1.3 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	10	10	1.8 U	1.8 U	1.8 U	1.8 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	58	57	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.1	2.9	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	170 (1)	160 (1)	1.3 U	1.3 U	1.3 U	1.3 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.4
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.4
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.2 J	1.2 J	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	53	51	1.8 U	1.8 U	1.8 U	1.8 U	0.65	1.8	4.4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	12	12	1.8 U	1.8 U	1.8 U	1.8 U	0.83	1.8	4.4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.4
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.4
11CI-PF3OUdS (F-53B Minor)	ng/L	0.61 J	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.4

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-12212021 is a field blank.

Sample SANG-INF-12212021D is a field duplicate of SANG-INF-12212021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PDG1 = post D train GAC Unit 1

PDG2 = post D train GAC Unit 2

PDR1 = post D train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 1 PFOS and PFOA Water Quality Monitoring Results

C1AF769V1 - 12/28/2021

RESULTS OF ANALYSES OF WATER

VALIDATED DATA

Bureau Veritas ID		RMN955	RMN960	RMN961	RMN959	RMN957	RMN958	RMN956			
Sampling Date		2021/12/28 08:00	2021/12/28 08:38	2021/12/28 08:38	2021/12/28 08:30	2021/12/28 08:15	2021/12/28 08:22	2021/12/28 08:05			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	SANG-FB-12282021	SANG-INF-12282021	SANG-INF-12282021D	SANG-PCG1-12282021	SANG-PCR1-12282021	SANG-PCG2-12282021	SANG-EFF-12282021 MS/MSD	DL	LOD	LOQ
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	31	32	2.1	1.4 U	1.4 U	1.7 J	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	84	84	0.74 J	1.2 U	1.2 U	1.2 U	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	68	67	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	32	32	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	34	34	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.4	7.3	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.8	6.5	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid (PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	12	12	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid (PFPS)	ng/L	1.6 U	12	13	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid (PFHxS)	ng/L	1.2 U	74	75	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	1.2 U	3.0	3.3	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	190 (1)	200 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.92 J	0.95 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	73	71	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	16	17	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxo-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9CI-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11CI-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

Note:

ng/L - nanograms per Liter or parts per trillion.

U - Undetected. Compound was analyzed for, but not detected.

J - Estimated result. Associated value may not be accurate or precise.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG=Stewart Air National Guard

Sample SANG-FB-12282021 is a field blank.

Sample SANG-INF-12282021D is a field duplicate of SANG-INF-12282021.

Analytes highlighted in gray are the UCMR3 compounds.

(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x). Some results reference different lab limits due to dilution.

Results bolded in red text are qualified based on validation.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1.

PCG1 = post C train GAC Unit 1

PCG2 = post C train GAC Unit 2

PCR1 = post C train Resin 1

Effluent (EFF) = Treated water that has passed through the ISWTS

Influent (INF) = Untreated water from Recreational Pond

ISWTS = Interim Storm Water Treatment System

TABLE 2 - OTHER WATER QUALITY MONITORING RESULTS

Glycols				
Sample Parameter	Sampling Date	Influent (mg/L)	PAG2 Effluent (mg/L)	Effluent (mg/L)
Diethylene glycol	11/30/2021	<52	<52	<52
Ethylene glycol		<10	<10	<10
Propylene glycol		<10	<10	<10
Triethylene Glycol		<54	<54	<54

Total Organic Carbon (TOC)				
Sample Parameter	Sampling Date	Influent (mg/L)	GAC2 Effluent	Effluent (mg/L)
TOC	11/30/2021	3.30	0.80	0.99

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
10/1/2021	25 Micron Pleated					
10/4/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
10/5/2021				Fine Sand Filters 4A/4B		
10/7/2021			Primary Carbon vessels A, B, C, & D	Fine Sand Filters 5A/4B		
10/8/2021	25 Micron Pleated					
10/11/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
10/12/2021			Secondary Carbon vessels A, B, C, & D			
10/13/2021	25 Micron Pleated	10 Micron Pleated				Skimmed approximately 4" off each Resin vessels
10/14/2021			Primary Carbon vessels A, B, C, & D			
10/15/2021	25 Micron Pleated					
10/18/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
10/21/2021		10 Micron Regular	Primary Carbon vessels A, B, C, & D			
10/22/2021	25 Micron Pleated					

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
10/25/2021		10 Micron Pleated				
10/26/2021			Primary Carbon vessels A, B, C, & D			
10/28/2021			Primary Carbon vessels A, B, C, & D			
10/29/2021	25 Micron Pleated					
11/1/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
11/2/2021				Coarse Sand Filters 2A/2B		
11/3/2021			Secondary Carbon vessels A, B, C, & D			
11/4/2021			Primary Carbon vessels A, B, C, & D	Fine Sand Filters 3A/3B		
11/5/2021						
11/8/2021		10 Micron Pleated				
11/9/2021			Primary Carbon vessels A, B, C, & D			
11/11/2021	25 Micron Pleated	10 Micron Regular				
11/15/2021					Replaced Media in Coarse Sand Filters 1A/1B and 2A/2B and Fine Sand Filters 3A/3B	

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
11/16/2021		10 Micron Regular			Replaced Media in Fine Sand Filters 4A/4B and 5A/5B	
11/17/2021					Train C Media Removed and Replaced	
11/18/2021			Train C Primary and Secondary GAC		Train C put on Line Train D media removed & Replaced	
11/19/2021			Train D Primary and Secondary GAC		Train D put on Line Train B media removed & Replaced	
11/20/2021	25 Micron Regular	10 Micron Regular	Train B Primary and Secondary GAC		Train B put on Line Train A media removed & Replaced	
11/22/2021			Train A Primary and Secondary GAC			
11/23/2021		10 Micron Regular				
11/24/2021	25 Micron Pleated					
11/29/2021		10 Micron Pleated				
12/1/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
12/2/2021		10 Micron Regular		Coarse Sand Filters 1A/1B		
12/3/2021	25 Micron Pleated					
12/6/2021		10 Micron Pleated				

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
12/7/2021		10 Micron Pleated				
12/8/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
12/9/2021		10 Micron Pleated				
12/10/2021	25 Micron Pleated	10 Micron Regular				
12/10/2021		10 Micron Regular				
12/13/2021		10 Micron Regular	Secondary Carbon vessels A, B, C, & D			
12/14/2021		10 Micron Pleated				
12/15/2021		10 Micron Regular		Coarse Sand Filters 2A/2B		
12/15/2021		10 Micron Regular				
12/16/2021		10 Micron Pleated	Primary Carbon vessels A, B, C, & D			
12/17/2021	25 Micron Pleated					
12/20/2021		10 Micron Pleated				
12/21/2021				Fine Sand Filters 3A/3B		
12/22/2021		10 Micron Regular	Primary Carbon vessels A, B, C, & D			

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
12/23/2021	25 Micron Pleated					
12/27/2021		10 Micron Pleated				
12/28/2021				Fine Sand Filters 4A/4B		
12/29/2021			Primary Carbon vessels A, B, C, & D			Inspected & Leveled Media in Resin vessels (No Skimming)
12/30/2021	25 Micron Pleated					

FIGURES

FIGURE 1

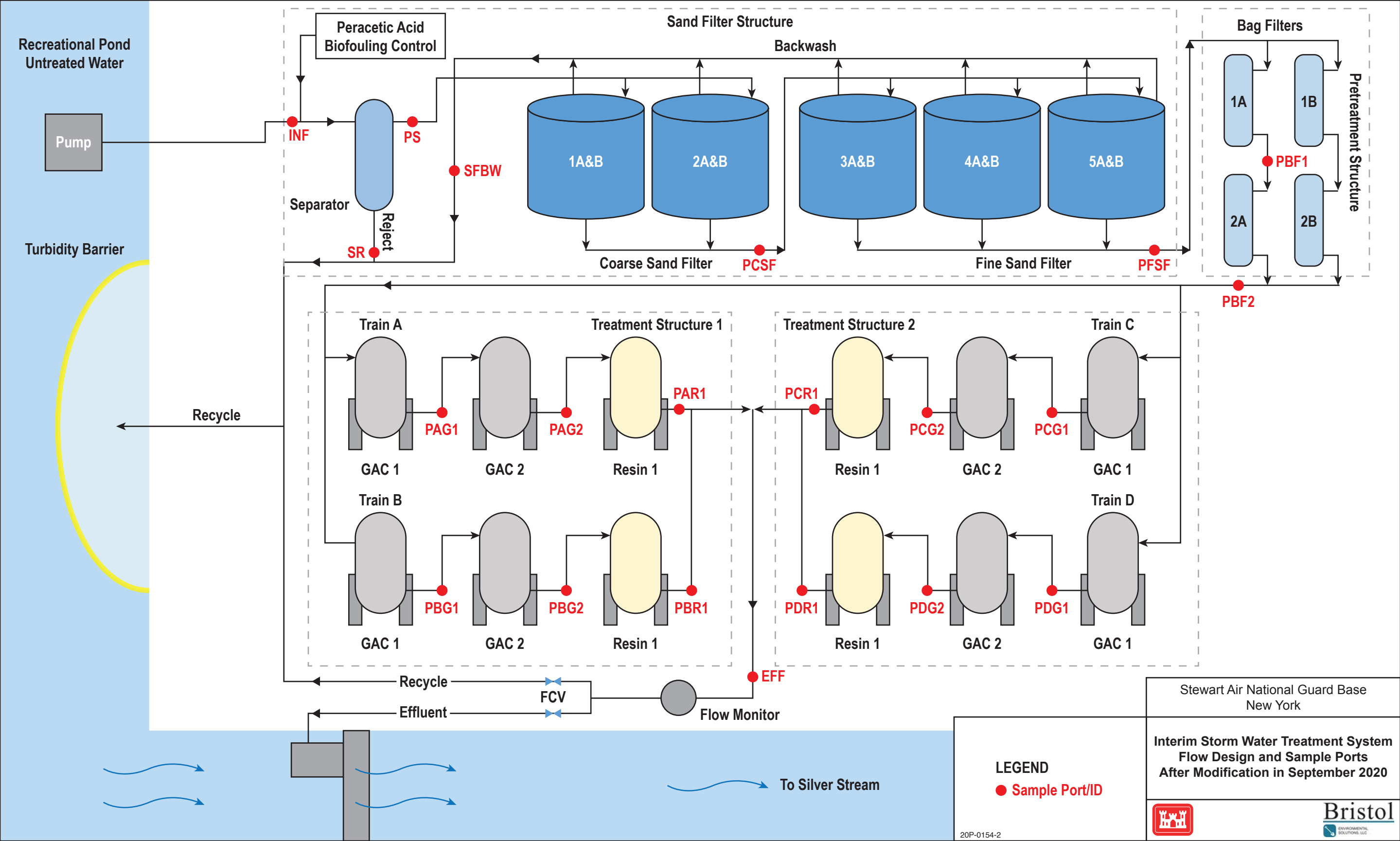


FIGURE 2 - RECREATION POND LEVEL CHART

OCTOBER TO DECEMBER 2021

ISWTS SANGB - RECREATION POND LEVEL

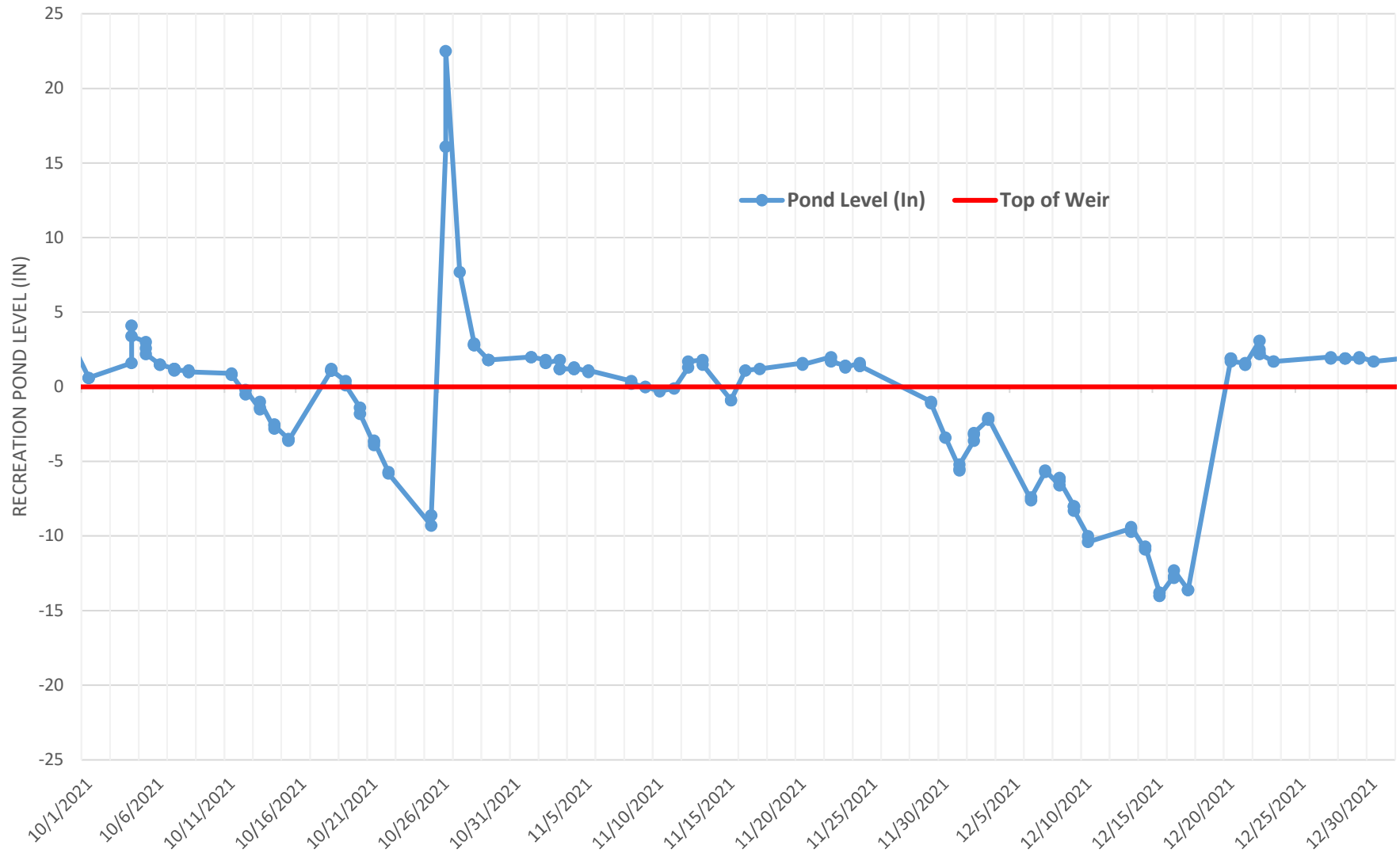


FIGURE 3 - INFLUENT AND EFFLUENT PFOS AND PFOA CHARTS

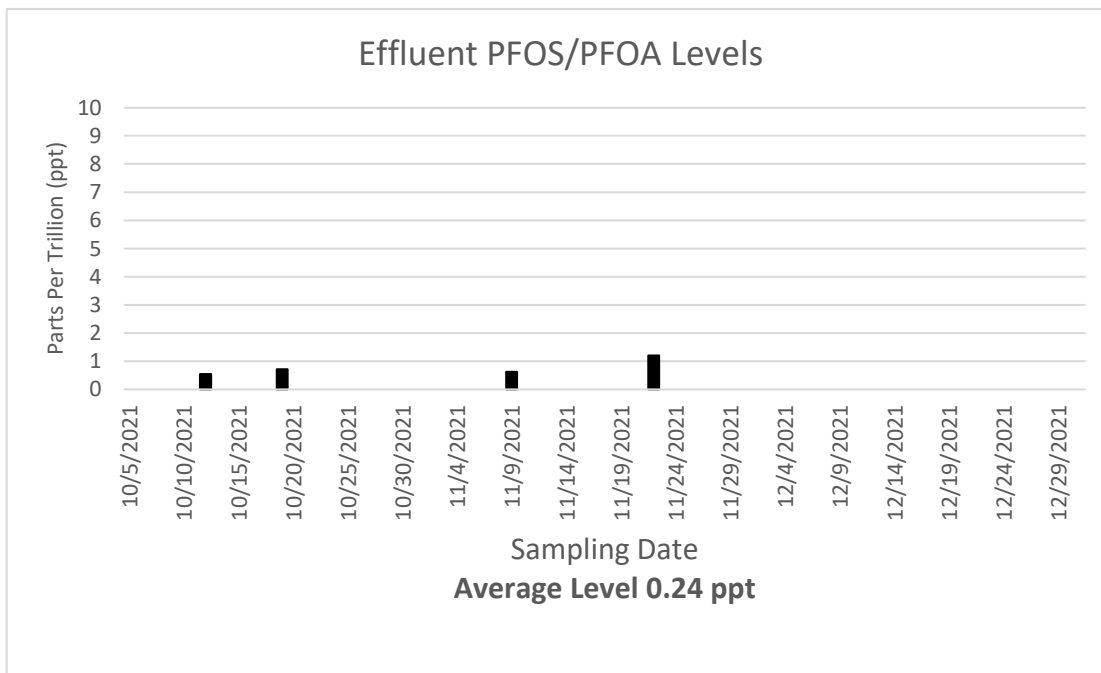
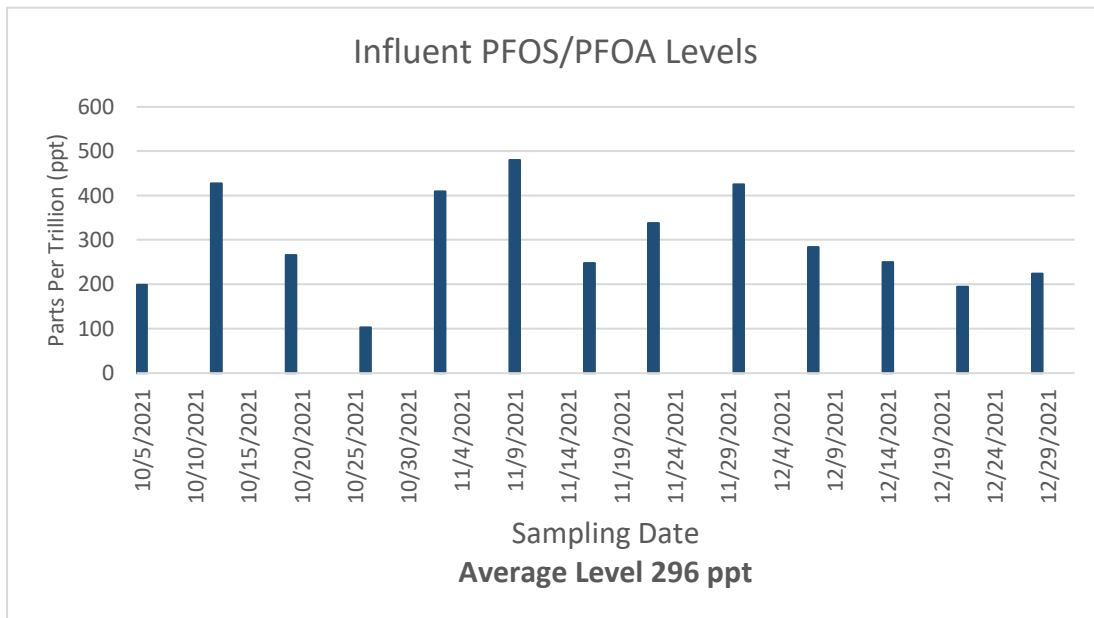


FIGURE - 4 - INFLUENT AND EFFLUENT TURBIDITY CHART

October to December 2021
Influent and Effluent Turbidity

