US Army Corps of Engineers
Baltimore District

QUARTERLY OM&M REPORT NO. 13

July to September 2023

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
EPA	U.S Environmental Protection Agency
F400	Calgon Filtrasorb 400
GAC	granular activated carbon
GPM	gallons per minute
HA	Health Advisory
ISWTS	Interim Storm Water Treatment System
IX	ion exchange resin
NTU	nephelometric turbidity units
OEC	Onion Equipment Company
OM&M	Operations, Maintenance, and Monitoring
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
ppt	parts per trillion
SANGB	Stewart Air National Guard Base

EXECUTIVE SUMMARY

An Interim Storm Water Treatment System (ISWTS) has been operating at Stewart Air National Guard Base (SANGB) in Newburgh, New York, since July 13, 2020. The ISWTS treats stormwater in the Recreation Pond. 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 2016 U.S. Environmental Protection Agency (EPA) drinking water lifetime Health Advisory (HA) standard of 70 parts per trillion (ppt) (individually or combined).

This report summarizes ISWTS Operations, Maintenance and Monitoring (OM&M) between July 1 and September 30, 2023. The ISWTS consists of pretreatment systems and four PFOS/PFOA treatment trains with three treatment vessels per train. Each treatment train consists of two granular activated carbon (GAC) vessels followed by one ion exchange resin (IX) vessel.

Performance monitoring PFOS/PFOA samples are normally collected weekly from the ISWTS influent, effluent, and intra-process sample ports to monitor ISWTS performance and PFOS/PFOA breakthrough. Intra-process sample ports are on the effluent from each PFOS/PFOA treatment vessel on all four trains, but only one of the four treatment trains are sampled each week.

No PFOS/PFOA media change was performed during the performance period. However, a media change is scheduled during the next performance period (October 2023) because breakthrough was observed from the first two stages (primary and secondary GAC vessels) and fouling of the media restricted the hydraulic capacity to operate the ISWTS effectively. Bristol Environmental Solutions, LLC (BES) is also planning to replace the sand media during the next media change.

During the performance period, a total of 24.3 million gallons of stormwater were treated and discharged over the outfall weir by the ISWTS. There were 92 days between July 1 and September 30, 2023. The Recreation Pond was drawn down below the outfall weir for 22 of the 92 days or 24% of the quarter. Reduced drawdown below the weir during this performance period was impacted by a loss of normal power to the ISWTS. Normal power was interrupted on July 16, 2023, due to a failure of a SANGB high voltage breaker. After SANGB confirmed that no replacement high voltage breakers were immediately available, BES was authorized to supply temporary backup power from a diesel generator. The generator, fuel supply and associated electrical modifications were performed and backup power was started on August 11, 2023, allowing restart of the ISWTS. The time required to provide and commission a temporary diesel generator was 26 days.

PFOS and PFOA samples were collected nine times on the influent and effluent during the performance period. The combined PFOS and PFOA influent average concentration during the performance period was 265 ppt. The highest combined PFOS and PFOA effluent detection was 0.8 ppt for the OM&M period between July 1 and September 30, 2023.

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 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 2016 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 the Recreation Pond and discharges treated effluent over the existing Recreation Pond outfall weir. When weather conditions allow, the ISWTS draws down the pond level below the outfall weir and treats all stormwater discharges. The Recreation Pond drawdown below the weir provides a storage reservoir to prevent discharge of untreated stormwater when precipitation occurs. When precipitation events occur that exceed the ISWTS capacity the Recreation Pond fills up and both treated effluent and untreated stormwater go over the outfall weir.

This is the 13th Quarterly Report that summarizes Operations, Maintenance, and Monitoring (OM&M) activities conducted by BES at SANGB. This report summarizes ISWTS operations between July 1 and September 30, 2023, at SANGB.

2.0 GENERAL OPERATIONAL SUMMARY

The ISWTS has been operating since July 13, 2020, following installation and commissioning of pretreatment system improvements in June and early July 2020. The ISWTS consists of four treatment trains with three treatment vessels per train. This report summarizes OM&M between July 1 and September 30, 2023, or months 37, 38, and 39 post startup.

During the performance period the system influent, intra-process monitoring (three 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 for a total of nine 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 criteria of 70 ppt (individually or combined) in the off-base treated stormwater at Recreation Pond.

Intra-process performance monitoring during the performance period demonstrated increased PFOS/PFOA breakthrough in the primary and secondary GAC over time. Minimal PFOS/PFOA breakthrough was observed in the IX resin effluent during the performance period. PFOS/PFOA results received on September 26, 2023, for samples collected on September 19, 2023, indicated significant breakthrough had occurred at the secondary GAC effluent. This data combined with increased media fouling that was restricting ISWTS throughput to approximately 250 gallons per minute (GPM) caused BES to schedule a complete media exchange event for October 2023. Analytical results from the Train C intra-process sampling and the overall effluent collected on September 19, 2023, are summarized as follows:

Sample Location	PFOS/PFOA Conc. (ppt)
Train C Primary Carbon Effluent	96.0
Train C Secondary Carbon Effluent	43.4
Train C IX Resin Effluent	0.6
Combined Effluent (Trains A, B, C, and D)	0.8

BES expedited the mobilization for the next media change with Onion Equipment Company (OEC) to perform comprehensive media changeout and system inspections between October 2 and 13, 2023.

The media change was completed between October 3 and 11, 2023. The final performance sample collected for this reporting period was collected on September 26, 2023.

The analytical method used for all PFAS monitoring during the performance period was EPA 537.1 M. Final PFAS results for the entire quarter are provided in **Table 1**.

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, followed by three stages of PFOS/PFOA adsorption treatment media. The three stages of PFOS/PFOA adsorption treatment media consist of primary and secondary GAC and IX.

During this reporting period, four PFOS/PFOA treatment trains (Trains A, B, C and D) comprised of Primary GAC, Secondary GAC, and IX were employed. During previous reporting periods, BES determined that this configuration outperformed three stages of GAC.

To improve the reliability of intra-process breakthrough monitoring and reporting, BES utilized the 12 new sample ports, installed directly on the effluent port from each treatment vessel, to evaluate system performance from each process flow location results. BES discontinued intra-process sampling at the old sample ports located on the bottom of each vessel.

As described in Quarterly Report No. 12 (April to June 2023), a comparison of the performance of the GAC-GAC-IX regime against an all GAC treatment regime was concluded and the (12) new intra-process sample ports would be used for all future intra-process monitoring. The GAC media used during the quarter was Calgon Filtrasorb 400 (F400) and the IX resin is Purolite PFA694. Peracetic acid was available but not introduced this quarter to see if any increased biofouling was observed as a result of not introducing it to the ISWTS influent. During the quarter, the ultrasonic device (Pulsar

3000) continued to show reduction in seasonal algae growth and will continue to be monitored to reduce biofouling and extend media life. The system configuration is shown in **Figure 1**.

4.0 GENERAL FACILITY OPERATIONS SUMMARY

During the performance period, a total of 24,276,835 gallons of stormwater were treated and discharged over the outfall weir by the ISWTS. All treated effluent was discharged over the outfall weir and no effluent was 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 treated water discharged over the weir. 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. Recreation Pond drawdown is managed to reduce excessive sediment intake from the bottom of the pond that would impact ISWTS operations and maintenance. Lower run times and volume treated in July and August are due to 26 days without electrical power or the ability to drawdown the pond below the weir. This is a primary example why reduced run times can occur.

Month	Volume Treated (Gallons)	Operational Time[1] (Hours)	Run Time[2] (Percent)	Average Treatment Flow[3] (GPM)
July 2023	4,983,880	328	44%[4]	253
August 2023	8,754,870	460	64%[4]	317
September 2023	10,538,085	665	99%	264
Total	24,276,835	1453		

[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

[4] ISWTS off between July 16 and August 11, 2023, due to loss of power.

There were 92 days of scheduled operation between July 1 and September 30, 2023. During this period of performance, the Recreation Pond was drawn down below the weir for 22 of the 92 days or 24% of the time. The Recreation Pond level during the performance period is shown in **Figure 2**.

5.0 FACILITY PERFORMANCE MONITORING

The analytical method used for all PFAS monitoring during the performance period was EPA 537.1 M. Final PFAS results for the entire quarter are provided in **Table 1**.

5.1 INFLUENT AND EFFLUENT PFOS/PFOA AND TOTAL PFAS MONITORING

As previously noted, samples were collected nine times on the influent and effluent during the performance period for PFOS, PFOA, and other PFAS compounds. **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 average concentrations during the performance period were 265 ppt and 0.8 ppt, respectively. The maximum combined PFOS and PFOA influent concentration was 404 ppt on September 5, 2023. The maximum detection of PFOS/PFOA in the combined effluent, was 0.8 ppt on August 22, September 19, and September 26, 2023. All influent and effluent PFAS Sample results are provided in **Table 1**.

5.2 INTRA-PROCESS PFOS/PFOA AND TOTAL PFAS MONITORING

During the performance period, intra-process monitoring for PFOS/PFOA and other PFAS compounds was performed after all three media stages. Sample results are provided in **Table 1**.

In March 2023, 12 new intra-process sample ports were installed directly on the outlet of each treatment vessel. Between March 2023 and June 2023, comparison sampling confirmed that these sample locations improved the accuracy of intra-process breakthrough monitoring. As a result, these new sample ports were used for all intra-

process monitoring and will be used going forward for all future sampling in lieu of the old sample ports installed on the vessel drain lines.

Weekly intra-process samples are collected to monitor the performance of GAC and IX treatment from each of the four treatment trains. Each week one of the four trains (A, B, C, or D) are sampled. When intra-process samples are collected, they are collected from the primary GAC effluent, secondary GAC effluent, and IX effluent. Normally the trains are sampled in order and each train is sampled every fourth event. Results from intra-process monitoring, showed incremental breakthrough of PFAS from the primary and then secondary GAC vessels followed by excellent PFAS removal from the IX resin in the polish position. During the performance monitoring period the highest combined PFOS/PFOA concentrations in the Primary GAC, Secondary GAC, and IX were 147, 65, and 0.8 ppt respectively.

5.3 OTHER WATER QUALITY MONITORING

During the performance period additional monitoring was not performed for total organic carbon, and glycols on the influent, secondary GAC effluent, or final effluent due to the loss of power and extended shutdown at the ISWTS. Additional water quality monitoring will resume during the next period.

5.4 TURBIDITY MONITORING

Turbidity is a measurement that can quantify the level of solids present in the water. It is an onsite test that is helpful to measure in real time, the influent water quality and intra-process performance to confirm the effectiveness of the pretreatment and filtration systems in removing solids. During the performance period, influent and effluent turbidity averaged 6.15 nephelometric turbidity units (NTUs) and 0.62 NTUs, respectively. A graph of the influent and effluent turbidity during the performance period is included as **Figure 4**.

5.5 BIOFOULING CONTROL

Peracetic acid was not introduced into the process influent during the performance period for biofouling mitigation. Instead, ultrasonic treatment in the pond was trialed to see how effective it was in reducing algae growth and mitigation of biofouling and ISWTS maintenance. See section 8.0 for additional discussion on the observed effectiveness of the ultrasonic treatment.

6.0 SCHEDULED PREVENTIVE MAINTENANCE

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

- Coarse and fine sand filter backwashes;
- Coarse and fine sand filter cleanings;
- Primary and secondary bag filter changes;
- Primary, and secondary carbon backwashing;
- Isolated system flushes, system inspections, and checks;
- Ion exchange resin inspections and;
- Replaced sample ports and sample tubing.

The coarse and fine sand filters were each backwashed 469 and 466 times, respectively and a total of four cleaning events were completed. The primary and secondary bag filters were changed 14 and 28 times, respectively, during the performance period. To maintain acceptable PFAS treatment media pressure, the primary, and secondary GAC vessels were backwashed 18 times during the quarter. The resin was inspected twice during the quarter, initially on July 3, 2023 and final inspection on September 27, 2023. The sand filter maintenance, bag filter changes, GAC backwash events, and ion exchange resin observations are summarized in **Table 3**.

7.0 MATERIAL DISPOSAL

Waste bag filters generated during the quarter were staged on site and will be shipped off site for disposal during the next media changeout event scheduled for October 2023. At that time waste bag filters will be combined with waste sand media and spent resin for disposal in Subtitle C Landfill in Michigan. Spent GAC will be collected and shipped to Calgon Corporation for regeneration in Kentucky. Material disposal activities will be scheduled immediately following media changeout activities to eliminate any onsite storage of solid wastes.

8.0 PROJECTED ACTIVITIES FOR NEXT PERFORMANCE PERIOD

BES will continue operating the ISWTS with all four treatment trains using GAC, GAC, IX media and configured as primary GAC, secondary GAC, and IX resin polish.

As discussed earlier in this report, a media change was scheduled for early October 2023 because of both PFOS/PFOA breakthrough of the primary and secondary GAC but more importantly because of excessive media fouling in the primary GAC. At the end of the media run, the IX resin was continuing to provide excellent PFOS/PFOA removal, but the primary GAC fouling was restricting the capacity of the ISWTS to approximately 250 GPM. BES collected additional intra-process voluntary samples at the end of quarter 3 and early quarter 4 (end of media run) 2023, with the primary GAC offline to understand the impacts to the secondary GAC and IX resin performance. This testing generally demonstrated that the secondary GAC breakthrough increased with the primary GAC offline, but the IX resin did not demonstrate any reduced performance because breakthrough had not yet occurred. BES plans to collect additional voluntary samples at the end of the next media run to provide additional data on the performance impacts. If these future sample results support that the IX performance is not impacted, future consideration to take the primary GAC offline, when it is fouled and restricting throughput may be considered. This modified configuration could allow for increased

ISWTS capacity near the end of the media runs while still maintaining PFOS/PFOA removal objectives. A summary of the voluntary intra-process samples with the primary GAC offline will be presented in a future quarterly report.

The effectiveness of the Peracetic acid has been uncertain. Bristol turned off the Peracetic acid in the fourth quarter 2022 and quarters 1, 2, and 3 of 2023, to see if increased biofouling impacts can be detected. No increased biofouling effects were observed during the last four quarters and will remain off through the second quarter of 2024 to continue monitoring biofouling impacts during each seasonal influence at Recreation Pond.

The ultrasonic algae control equipment transforms electrical signals to multiple soundwaves of ultrasonic frequencies that breaks the outer membrane of individual algae cells and inhibits growth. The new technology was deployed in April 2023, and was successful in mitigating visible seasonal algae and monitored through the end of September 2023. No measurable reduction in maintenance or extended media life was evident from operating the ultrasonic equipment. However, BES will continue to operate the unit during the 2024 warm weather periods to further evaluate its effectiveness.

Bristol will continue to evaluate new technologies/materials to reduce biofouling impacts. No capital improvements are planned at this time.

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TABLES

C3J82456V1 - 07/05/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

		Bureau Veritas ID	WHN694	WHN699	WHN700	WHN696	WHN698	WHN697	WHN695			
		Sampling Date	2023/07/05 08:15	2023/07/05 08:55	2023/07/05 08:55	2023/07/05 08:30	2023/07/05 08:45	2023/07/05 08:38	2023/07/05 08:23			
		Sample ID	SANG-FB-07052023	SANG-INF-07052023	SANG-INF-07052023D	SANG-PEDR1-07052023	SANG-PEDG1-07052023	SANG-PEDG2-07052023	SANG-EFF-07052023	DL	LOD	LOQ
Perfluorinated Compounds	**Method**	**UNITS**										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	21	20	1.5 U	8.9	1.5 U	1.5 U	0.65	1.5	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	60	58	0.77 U	19	0.39 J	0.77 U	0.24	0.77	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	44	43	0.77 U	11	0.77 U	0.77 U	0.22	0.77	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	27	26	1.1 U	5.2	1.1 U	1.1 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	26	25	1.1 U	4.4	1.1 U	1.1 U	0.45	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	6.9	6.6	1.1 U	0.63 J	1.1 U	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	2.8	2.6	1.1 U	1.1 U	1.1 U	1.1 U	0.32	1.1	2.2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.41	1.1	2.2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.53	1.1	2.2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.26	0.77	2.2
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.43	1.1	2.2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	8.9	8.4	1.1 U	1.1 J	1.1 U	1.1 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	9.3	9.8	1.1 U	0.72 J	1.1 U	1.1 U	0.37	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	78	74	1.1 U	11	1.1 U	1.1 U	0.31	1.1	2.2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	2.7	2.7	1.1 U	1.1 U	1.1 U	1.1 U	0.47	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	220 (1)	210 (1)	1.1 U	36	1.1 U	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	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)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.66	1.5	2.2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.44	1.5	4.4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	4.4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.59	1.5	4.4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.1 J	1.5 U	1.5 U	1.5 U	1.5 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	54	48	1.5 U	7.3	1.5 U	1.5 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	9.3	9.3	1.5 U	0.91 J	1.5 U	1.5 U	0.58	1.5	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.45	1.5	4.4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.13	0.44	4.4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.46	1.1	4.4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.35	1.1	4.4

Notes:

(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.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-07052023 is a field blank.

Sample SANG-INF-07052023D is a field duplicate of SANG-INF-07052023.

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

PEDG1 = post E port D train GAC Unit 1

PEDG2 = post E port D train GAC Unit 2

PEDR1 = post E port 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

C3K5529V1 - 07/11/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

		Bureau Veritas ID	WJA747	WJA752	WJA753	WJA749	WJA751	WJA750	WJA748			
		Sampling Date	2023/07/11 06:55	2023/07/11 07:30	2023/07/11 07:30	2023/07/11 07:08	2023/07/11 07:23	2023/07/11 07:16	2023/07/11 07:00			
		Sample ID	**SANG-FB-07112023**	**SANG-INF-07112023**	**SANG-INF-07112023D**	**SANG-PEAR1-07112023**	**SANG-PEAG1-07112023**	**SANG-PEAG2-07112023**	**SANG-EFF-07112023**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds	**Method**	**UNITS**										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.1 J	23	22	0.85 J	15	4.5	0.95 J	0.65	1.5	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.77 U	56	58	0.77 U	33	5.5	0.77 U	0.24	0.77	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.38 J	40	39	0.77 U	20	2.8	0.77 U	0.22	0.77	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	0.53 J	26	26	1.1 U	12	1.6 J	1.1 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.1 U	25	26	1.1 U	10	1.1 J	1.1 U	0.45	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.1 U	7.5	7.6	1.1 U	2.8	0.50 J	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.1 U	4.2	4	1.1 U	1.2 J	0.36 J	1.1 U	0.32	1.1	2.2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.1 U	0.69 J	0.70 J	1.1 U	1.1 U	1.1 U	1.1 U	0.41	1.1	2.2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.1 U	0.67 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.53	1.1	2.2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.26	0.77	2.2
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.43	1.1	2.2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.1 U	8.3	8.4	1.1 U	3.3	0.52 J	1.1 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.1 U	8.9	8.8	1.1 U	3	1.1 U	1.1 U	0.37	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.1 U	64	66	1.1 U	22	1.5 J	1.1 U	0.31	1.1	2.2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.1 U	3.6	3.4	1.1 U	1.3 J	1.1 U	1.1 U	0.47	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.1 U	260 (1)	250 (1)	1.1 U	74	4.4	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.5 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)	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.66	1.5	2.2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.5 U	0.83 J (2)	0.81 J (2)	1.5 U	1.5 U	1.5 U	1.5 U	0.44	1.5	4.4
MeFOSAA	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	4.4
EtFOSAA	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.59	1.5	4.4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.5 U	0.76 J (2)	0.67 J (2)	1.5 U	1.5 U	1.5 U	1.5 U	0.52	1.5	4.4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.5 U	48	47	1.5 U	14	1.1 J	1.5 U	0.69	1.5	4.4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.5 U	15	13	1.5 U	3.3 J	1.5 U	1.5 U	0.58	1.5	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.45	1.5	4.4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.13	0.44	4.4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.46	1.1	4.4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.35	1.1	4.4

Notes:

(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.

(2) Result is estimated as analyte confirmation criteria (ion ratio) was not met.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-07112023 is a field blank.

Sample SANG-INF-07112023D is a field duplicate of SANG-INF-07112023.

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

PEAG1 = post E port A train GAC Unit 1

PEAG2 = post E port A train GAC Unit 2

PEAR1 = post E port 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

C307680V1 - 08/15/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

	Bureau Veritas ID		WRY030	WRY035	WRY036	WRY032	WRY034	WRY033	WRY031			
	Sampling Date		2023/08/15 07:55	2023/08/15 08:25	2023/08/15 08:25	2023/08/15 08:06	2023/08/15 08:20	2023/08/15 08:13	2023/08/15 08:00			
	Sample ID		**SANG-FB-08152023**	**SANG-INF-08152023**	**SANG-INF-08152023D**	**SANG-PEBR1-08152023**	**SANG-PEBG1-08152023**	**SANG-PEBG2-08152023**	**SANG-EFF-08152023**			
Perfluorinated Compounds	**Method**	**UNITS**								**DL**	**LOD**	**LOQ**
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	7.7	7.6	1.4 U	9.9	5.2	1.4 U	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	27	26	0.70 U	22	8.6	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	20	21	0.70 U	15	4.2	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	12	11	1.0 U	6.1	1.2 J	1.0 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	11	11	1.0 U	5.3	0.78 J	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	2.8	2.7	1.0 U	1.2 J	1.0 U	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	2.1	2.0 J	1.0 U	1.4 J	1.0 U	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.48	1	2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.24	0.7	2
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.39	1	2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	3.7	3.5	1.0 U	2.0 J	1.0 U	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	3.3	3.3	1.0 U	1.1 J	1.0 U	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	28	29	1.0 U	12	1.4 J	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	1.1 J	1.1 J	1.0 U	1.0 U	1.0 U	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	120 (1)	120 (1)	1.0 U	48	5.9	1.0 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	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)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.6	1.4	2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.4	1.4	4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.54	1.4	4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	27	25	1.4 U	9.8	1.0 J	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	11	10	1.4 U	4.3	1.4 U	1.4 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.41	1.4	4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.12	0.4	4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42	1	4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.32	1	4

Notes:

(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.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-08152023 is a field blank.

Sample SANG-INF-08152023D is a field duplicate of SANG-INF-08152023.

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

PEBG1 = post E port B train GAC Unit 1

PEBG2 = post E port B train GAC Unit 2

PEBR1 = post E port 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

C3P6756V1 - 08/22/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

	Bureau Veritas ID		WTU742	WTU747	WTU748	WTU744	WTU746	WTU745	WTU743			
	Sampling Date		2023/08/22 07:00	2023/08/22 07:30	2023/08/22 07:30	2023/08/22 07:11	2023/08/22 07:22	2023/08/22 07:17	2023/08/22 07:05			
	Sample ID		**SANG-FB-08222023**	**SANG-INF-08222023**	**SANG-INF-08222023D**	**SANG-PECR1-08222023**	**SANG-PECG1-08222023**	**SANG-PECG2-08222023**	**SANG-EFF-08222023**			
Perfluorinated Compounds	**Method**	**UNITS**								**DL**	**LOD**	**LOQ**
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	27	27	1.4 U	24	16	1.4 U	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	82	82	0.70 U	57	31	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	63	62	0.70 U	38	17	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	35	34	1.0 U	19	7.4	0.28 J	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	30	29	1.0 U	14	4.8	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	7.9	7.7	1.0 U	2.8	0.99 J	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	5.5	5.4	1.0 U	1.7 J	0.58 J	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.68 J (1)	0.74 J	1.0 U	0.40 J	1.0 U	1.0 U	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.75 J	0.68 J	1.0 U	1.0 U	1.0 U	1.0 U	0.48	1	2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.46 J	0.51 J	0.64 J	0.50 J	0.70 U	0.48 J	0.24	0.7	2
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	0.47 J	0.49 J	0.45 J	1.0 U	1.0 U	1.0 U	0.39	1	2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	13	13	1.0 U	7	2.7	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	13	14	1.0 U	6.6	2.1	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	93	93	1.0 U	46	14	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	4.6	4.5	1.0 U	2.1	0.68 J	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	260 (2)	260 (2)	0.75 J	110 (2)	32	0.76 J	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	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)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.6	1.4	2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	0.62 J	0.62 J	1.4 U	1.4 U	1.4 U	1.4 U	0.4	1.4	4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.54	1.4	4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.1 J	1.1 J	1.4 U	0.55 J (1)	1.4 U (1)	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	75	74	1.4 U	32	9.3	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	19	18	1.4 U	6.7	1.5 J (1)	1.4 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.41	1.4	4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.12	0.4	4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42	1	4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.32	1	4

Notes:

(1) Result is estimated as analyte confirmation criteria (ion ratio) was not met.

(2) 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.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-08222023 is a field blank.

Sample SANG-INF-08222023D is a field duplicate of SANG-INF-08222023.

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

PECG1 = post E port C train GAC Unit 1

PECG2 = post E port C train GAC Unit 2

PECR1 = post E port 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

C3Q5304V1 - 08/29/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

	Bureau Veritas ID		WVP779	WVP784	WVP785	WVP781	WVP783	WVP782	WVP780			
	Sampling Date		2023/08/29 07:10	2023/08/29 07:40	2023/08/29 07:40	2023/08/29 07:22	2023/08/29 07:35	2023/08/29 07:29	2023/08/29 07:15			
	Sample ID		**SANG-FB-08292023**	**SANG-INF-08292023**	**SANG-INF-08292023D**	**SANG-PEDR1-08292023**	**SANG-PEDG1-08292023**	**SANG-PEDG2-08292023**	**SANG-EFF-08292023**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds	**Method**	**UNITS**										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	26	25	1.4 U	27	16	1.4 U	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	87	84	0.70 U	69	28	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	69	67	0.70 U	44	13	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	34	33	1.0 U	17	4.5	1.0 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	29	30	1.0 U	14	3.1	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	8.2	8.3	1.0 U	3.1	0.48 J	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	4.4	4.2	1.0 U	1.9 J	1.0 U	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.48	1	2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.70 U	0.24	0.7	2
Perfluorotetradecanoic acid(PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.39	1	2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	15	14	1.0 U	8.4	2.1	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	18	18	1.0 U	8.5	1.2 J	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid(PFHxS)	EPA 537.1 M	ng/L	1.0 U	99	98 (1)	1.0 U	43	7.5	1.0 U	2.8	10	20
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	4.8	4.8	1.0 U	1.7 J	1.0 U	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	290 (1)	280 (1)	1.0 U	110 (1)	23	1.0 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	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)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.6	1.4	2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.4	1.4	4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.54	1.4	4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	0.72 J	0.72 J	1.4 U	1.4 U	1.4 U	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	67	66	1.4 U	28	6.1	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	7.6	6.9	1.4 U	3.9 J	0.88 J	1.4 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.41	1.4	4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.12	0.4	4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42	1	4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.32	1	4

Notes:

(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.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-08292023 is a field blank.

Sample SANG-INF-08292023D is a field duplicate of SANG-INF-08292023.

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

PEDG1 = post E port D train GAC Unit 1

PEDG2 = post E port D train GAC Unit 2

PEDR1 = post E port 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

C3R1779V1 - 09/05/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

	Bureau Veritas ID		WXC350	WXC355	WXC356	WXC352	WXC354	WXC353	WXC351			
	Sampling Date		2023/09/05 09:30	2023/09/05	2023/09/05	2023/09/05 09:42	2023/09/05 09:52	2023/09/05 09:48	2023/09/05 09:35			
	Sample ID		**SANG-FB-09052023**	**SANG-INF-09052023**	**SANG-INF-09052023D**	**SANG-PEAR1-09052023**	**SANG-PEAG1-09052023**	**SANG-PEAG2-09052023**	**SANG-EFF-09052023**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds	**Method**	**UNITS**										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.5 U	26	25	1.5 U	29	22	1.5 U	0.65	1.5	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.77 U	100	98	0.77 U	71	42	0.77 U	0.24	0.77	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.77 U	80	77	0.77 U	48	23	0.77 U	0.22	0.77	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.1 U	38	36	1.1 U	20	8.1	1.1 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.1 U	34	32	1.1 U	16	5.4	1.1 U	0.45	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.1 U	8.4	8.2	1.1 U	3.6	1.1 J	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.1 U	6.4	5.8	1.1 U	2.0 J	0.62 J	1.1 U	0.32	1.1	2.2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.1 U	0.77 J	0.64 J	1.1 U	1.1 U	1.1 U	1.1 U	0.41	1.1	2.2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.1 U	0.96 J	0.84 J	1.1 U	1.1 U	1.1 U	1.1 U	0.53	1.1	2.2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.26	0.77	2.2
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.43	1.1	2.2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.1 U	16	15	1.1 U	8.6	3.4	1.1 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.1 U	19	18	1.1 U	8	2.6	1.1 U	0.37	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.1 U	120 (1)	110	1.1 U	50	14	1.1 U	0.31	1.1	2.2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.1 U	5.9	5.6	1.1 U	2.1 J	0.62 J	1.1 U	0.47	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.1 U	370 (1)	360 (1)	1.1 U	120 (1)	33	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.5 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)	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.66	1.5	2.2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.44	1.5	4.4
MeFOSAA	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	4.4
EtFOSAA	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.59	1.5	4.4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.5 U	1.4 J	1.3 J	1.5 U	0.61 J	1.5 U	1.5 U	0.52	1.5	4.4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.5 U	95	90	1.5 U	36	10	1.5 U	0.69	1.5	4.4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.5 U	19	17	1.5 U	4.1 J	1.3 J	1.5 U	0.58	1.5	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.45	1.5	4.4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.13	0.44	4.4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.46	1.1	4.4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.35	1.1	4.4

Notes:

(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.

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-09052023 is a field blank.

Sample SANG-INF-09052023D is a field duplicate of SANG-INF-09052023.

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

PEAG1 = post E port A train GAC Unit 1

PEAG2 = post E port A train GAC Unit 2

PEAR1 = post E port 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

C3S0628V1 - 09/12/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

Bureau Veritas ID			WYX883	WYX888	WYX889	WYX885	WYX887	WYX886	WYX884			
Sampling Date			2023/09/12 08:00	2023/09/12 08:28	2023/09/12 08:28	2023/09/12 08:12	2023/09/12 08:22	2023/09/12 08:17	2023/09/12 08:05			
Sample ID			**SANG-FB-09122023**	**SANG-INF-09122023**	**SANG-INF-09122023D**	**SANG-PEBR1-09122023**	**SANG-PEBG1-09122023**	**SANG-PEBG2-09122023**	**SANG-EFF-09122023**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds	**Method**	**UNITS**										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	0.65 J	22	22	0.64 J	23	18	0.61 J	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	57	58	0.70 U	49	29	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	50	50	0.70 U	33	15	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	27	28	1.0 U	15	5.5	1.0 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	23	23	1.0 U	12	3.7	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	6.2	6.2	1.0 U	2.6	0.93 J	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	4.6	4.4	1.0 U	1.6 J	0.55 J	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.75 J	0.70 J	1.0 U	1.0 U	1.0 U	1.0 U	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.76 J	0.71 J	1.0 U	1.0 U	1.0 U	1.0 U	0.48	1	2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.32 J (1)	0.31 J	0.29 J	0.70 U	0.31 J	0.70 U	0.28 J (2)	0.24	0.7	2
Perfluorotetradecanoic acid(PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.39	1	2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	11	11	1.0 U	6.3	2.5	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	12	12	1.0 U	5.8	1.7 J	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid(PFHxS)	EPA 537.1 M	ng/L	1.0 U	71	74	1.0 U	33	8.6	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	4	4	1.0 U	1.7 J	0.72 J	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	240 (3)	240 (3)	1.0 U	82	18	1.0 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	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)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.6	1.4	2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	0.53 J	0.75 J (1)	0.65 J	1.4 U	0.46 J (1)	1.4 U	0.52 J (1)	0.4	1.4	4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	4
EtFOSAA	EPA 537.1 M	ng/L	0.63 J	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.54	1.4	4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.1 J	1.2 J	1.4 U	0.76 J	1.4 U	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	64	65	1.4 U	22	5.2	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	15	16	1.4 U	3.7 J	0.98 J	1.4 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.41	1.4	4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.12	0.4	4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42	1	4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	0.38 J (1)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.32	1	4

Notes:

(1) Result is estimated as analyte confirmation criterion (ion ratio) was not met.

(2) Result is estimated as analyte confirmation criteria (ion ratio and signal to noise) were not met.

(3) Due to high concentration of the target analyte, sample required dilution. Detection limit was adjusted accordingly (10x).

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-09122023 is a field blank.

Sample SANG-INF-09122023D is a field duplicate of SANG-INF-09122023.

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

PEBG1 = post E port B train GAC Unit 1

PEBG2 = post E port B train GAC Unit 2

PEBR1 = post E port 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

C3S9507V1 - 09/19/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

		Bureau Veritas ID	XAS681	XAS686	XAS687	XAS683	XAS688	XAS685	XAS684	XAS689	XAS682			
		Sampling Date	2023/09/19 07:25	2023/09/19 07:55	2023/09/19 07:55	2023/09/19 07:37	2023/09/19 09:30	2023/09/19 07:50	2023/09/19 07:44	2023/09/19 09:32	2023/09/19 07:30			
		Sample ID	**SANG-FB-09192023**	**SANG-INF-09192023**	**SANG-INF-09192023D**	**SANG-PECR1-09192023**	**SANG-PECR1-TEST**	**SANG-PECG1-09192023**	**SANG-PECG2-09192023**	**SANG-PECG2-TEST**	**SANG-EFF-09192023**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds	**Method**	**UNITS**												
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	14	14	1.4 U	1.4 U	15	14	15	1.4 U	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	41	42	0.70 U	0.70 U	32	26	33	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	33	31	0.70 U	0.70 U	22	16	21	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	22	22	1.0 U	1.0 U	13	8.3	13	1.0 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	19	19	1.0 U	1.0 U	12	6.4	9.5	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	5.6	5.7	1.0 U	1.0 U	3.1	1.6 J	2	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	3.5	3.4	1.0 U	1.0 U	2.0 J	0.98 J	1.1 J	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.50 J	0.49 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.61 J	0.75 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.48	1	2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.70 U	0.27 J	0.70 U	0.70 U	0.25 J	0.70 U	0.70 U	0.70 U	0.24	0.7	2
Perfluorotetradecanoic acid(PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.39	1	2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	7.7	7.3	1.0 U	1.0 U	4.9	2.7	3.8	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	8.8	8.6	1.0 U	1.0 U	4.5	2.3	4.4	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid(PFHxS)	EPA 537.1 M	ng/L	1.0 U	64	62	1.0 U	1.0 U	35	16	29	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	2.4	2.4	1.0 U	1.0 U	1.4 J	0.69 J	1.1 J	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	180 (2)	180 (2)	0.57 J	0.85 J	84	37	53	0.83 J	0.47	1	2
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.4 U	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)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.6	1.4	2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.4	1.4	4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.54	1.4	4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	34	32	1.4 U	1.4 U	16	7.8	13	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	12	11	1.4 U	1.4 U	4.8	2.3 J	2.7 J	1.4 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.41	1.4	4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.12	0.4	4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42	1	4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.41 J (1)	1.0 U	1.0 U	1.0 U	0.32	1	4

Notes:

(1) Result is estimated as analyte confirmation criterion (ion ratio) was not met.

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

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-09192023 is a field blank.

Sample SANG-INF-09192023D is a field duplicate of SANG-INF-09192023.

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

PECG1 = post E port C train GAC Unit 1

PECG2 = post E port C train GAC Unit 2

PECR1 = post E port 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

C3T8370V1 - 09/26/2023

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

Bureau Veritas ID			XCQ324	XCQ329	XCQ330	XCQ326	XCQ328	XCQ327	XCQ325			
Sampling Date			2023/09/26 08:33	2023/09/26 07:04	2023/09/26 07:04	2023/09/26 06:48	2023/09/26 06:59	2023/09/26 06:53	2023/09/26 06:40			
Sample ID			**SANG-FB-09262023**	**SANG-INF-09262023**	**SANG-INF-09262023D**	**SANG-PEDR1-09262023**	**SANG-PEDG1-09262023**	**SANG-PEDG2-09262023**	**SANG-EFF-09262023**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds	**Method**	**UNITS**										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	0.73 J	18	18	1.4 U	19	16	1.4 U	0.65	1.5	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	58	57	0.70 U	48	36	0.70 U	0.24	0.77	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	40	42	0.70 U	33	20	0.70 U	0.22	0.77	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	30	31	1.0 U	20	11	1.0 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	26	29	1.0 U	17	8.8	1.0 U	0.45	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	8.5	8.9	1.0 U	5	2.3	1.0 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	5.4	5.7	1.0 U	3.1	1.4 J	1.0 U	0.32	1.1	2.2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.64 J	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	0.41	1.1	2.2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.55 J	0.61 J	1.0 U	1.0 U	1.0 U	1.0 U	0.53	1.1	2.2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.77 U	0.77 U	0.70 U	0.70 U	0.70 U	0.70 U	0.26	0.77	2.2
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	0.43	1.1	2.2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	7.5	7.8	1.0 U	5.3	3	1.0 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid PFPes	EPA 537.1 M	ng/L	1.0 U	7.7	7.5	1.0 U	4.7	2.2	1.0 U	0.37	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	69	71	1.0 U	44	20	1.0 U	0.31	1.1	2.2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	2.6	2.6	1.0 U	1.5 J	0.63 J	1.0 U	0.47	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	0.63 J	220 (2)	230 (2)	0.76 J	130 (1)	56	0.80 J	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.66	1.5	2.2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.44	1.5	4.4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.77	1.5	4.4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.59	1.5	4.4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.52	1.5	4.4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	47	50	1.4 U	25	10	1.4 U	0.69	1.5	4.4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	18	21	1.4 U	8.6	3.4 J	1.4 U	0.58	1.5	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.45	1.5	4.4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.44 U	0.44 U	0.40 U	0.40 U	0.40 U	0.40 U	0.13	0.44	4.4
9Cl-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	0.46	1.1	4.4
11Cl-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U	0.35	1.1	4.4

Notes:

(1) Result exceeds the upper limit of quantitation (ULQ) and is considered estimated.

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

DL = Detection Limit

EFF = Effluent

FB= Field Blank

INF = Influent

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

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

SANGB = Stewart Air National Guard Base

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

Sample SANG-FB-09262023 is a field blank.

Sample SANG-INF-09262023D is a field duplicate of SANG-INF-09262023.

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

PEDG1 = post E port D train GAC Unit 1

PEDG2 = post E port D train GAC Unit 2

PEDR1 = post E port 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 2 - OTHER WATER QUALITY MONITORING RESULTS

Bristol

Glycols				
Sample Parameter/Sample ID	**Sampling Date**	**Influent (SANG-INF-05092023 mg/L)**	**PBG2 Effluent (SANG-PAG2-05092023 mg/L)**	**Effluent (SANG-EFF-05092023 mg/L)**
			NO DATA COLLECTED THIS PERIOD	

Total Organic Carbon (TOC)				
Sample Parameter	**Sampling Date**	**Influent (mg/L)**	**PDG2 Effluent (mg/L)**	**Effluent (mg/L)**
			NO DATA COLLECTED THIS PERIOD	

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 or Changeout	Media Change Out	Resin Vessel Skimming
7/3/2023	25 Micron Pleated	10 Micron Pleated				Resin Vessel Inspections (Trains A,B,C,&D). No skimming
7/5/2023				Fine Sand Filters (4A/4B)		
7/6/2023			Primary Carbon vessels A1, B1, C1, & D1			
7/7/2023	25 Micron Pleated	10 Micron Pleated				
7/11/2023			Primary Carbon vessels A1, B1, C1, & D1			
7/12/2023			Secondary Carbon vessels A2, B2, C2, & D2			
7/13/2023				Fine Sand Filters (5A/5B)		
7/14/2023	25 Micron Pleated	10 Micron Pleated				
7/16/2023	Loss of Site Power from SANGB. System off line until power restored or temporary power mobilized.					
8/11/2023	Mobilized and connected 150 KW generator to temporarily power ISWTS until normal power from SANGB is restored.					
8/11/2023	25 Micron Regular	10 Micron Regular				
8/14/2023		10 Micron Pleated				
8/15/2023		10 Micron Pleated	Primary Carbon vessels A1, B1, C1, & D1			
8/16/2023				Coarse Sand Filters (1A/1B)		

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 or Changeout	Media Change Out	Resin Vessel Skimming
8/17/2023		10 Micron Regular	Secondary Carbon vessels A2, B2, C2, & D2			
8/18/2023	25 Micron Pleated	10 Micron Pleated				
8/21/2023		10 Micron Regular				
8/22/2023		10 Micron Regular				
8/23/2023	25 Micron Regular	10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			
8/24/2023		10 Micron Regular		Coarse Sand Filters (2A/2B)		
8/25/2023	25 Micron Pleated	10 Micron Pleated				
8/28/2023		10 Micron Regular				
8/29/2023	25 Micron Regular	10 Micron Regular				
8/30/2023		10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			
8/31/2023		10 Micron Regular				
9/1/2023	25 Micron Pleated	10 Micron Pleated	Primary Carbon vessels A1, B1, C1, & D1			
9/5/2023		10 Micron Regular				

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 or Changeout	Media Change Out	Resin Vessel Skimming
9/6/2023		10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			
9/7/2023		10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			
9/8/2023	25 Micron Pleated	10 Micron Pleated				
9/11/2023			Primary Carbon vessels A1, B1, C1, & D1			
9/12/2023		10 Micron Regular				
9/13/2023	25 Micron Regular		Primary Carbon vessels A1, B1, C1, & D1			
9/14/2023		10 Micron Regular	Secondary Carbon vessels A2, B2, C2, & D2			
9/15/2023	25 Micron Pleated	10 Micron Pleated	Primary Carbon vessels A1, B1, C1, & D1			
9/18/2023			Primary Carbon vessels A1, B1, C1, & D1			
9/19/2023		10 Micron Regular				
9/20/2023						
9/21/2023			Primary Carbon vessels A1, B1, C1, & D1			
9/22/2023	25 Micron Pleated	10 Micron Pleated				
9/25/2023						

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 or Changeout	Media Change Out	Resin Vessel Skimming
9/26/2023			Primary Carbon vessels A1, B1, C1, & D1			
9/27/2023						Resin Vessel Inspections (Trains A,B,C,&D). No skimming
9/28/2023			Primary Carbon vessels A1, B1, C1, & D1			
9/29/2023	25 Micron Pleated	10 Micron Pleated				

FIGURES

FIGURE 1

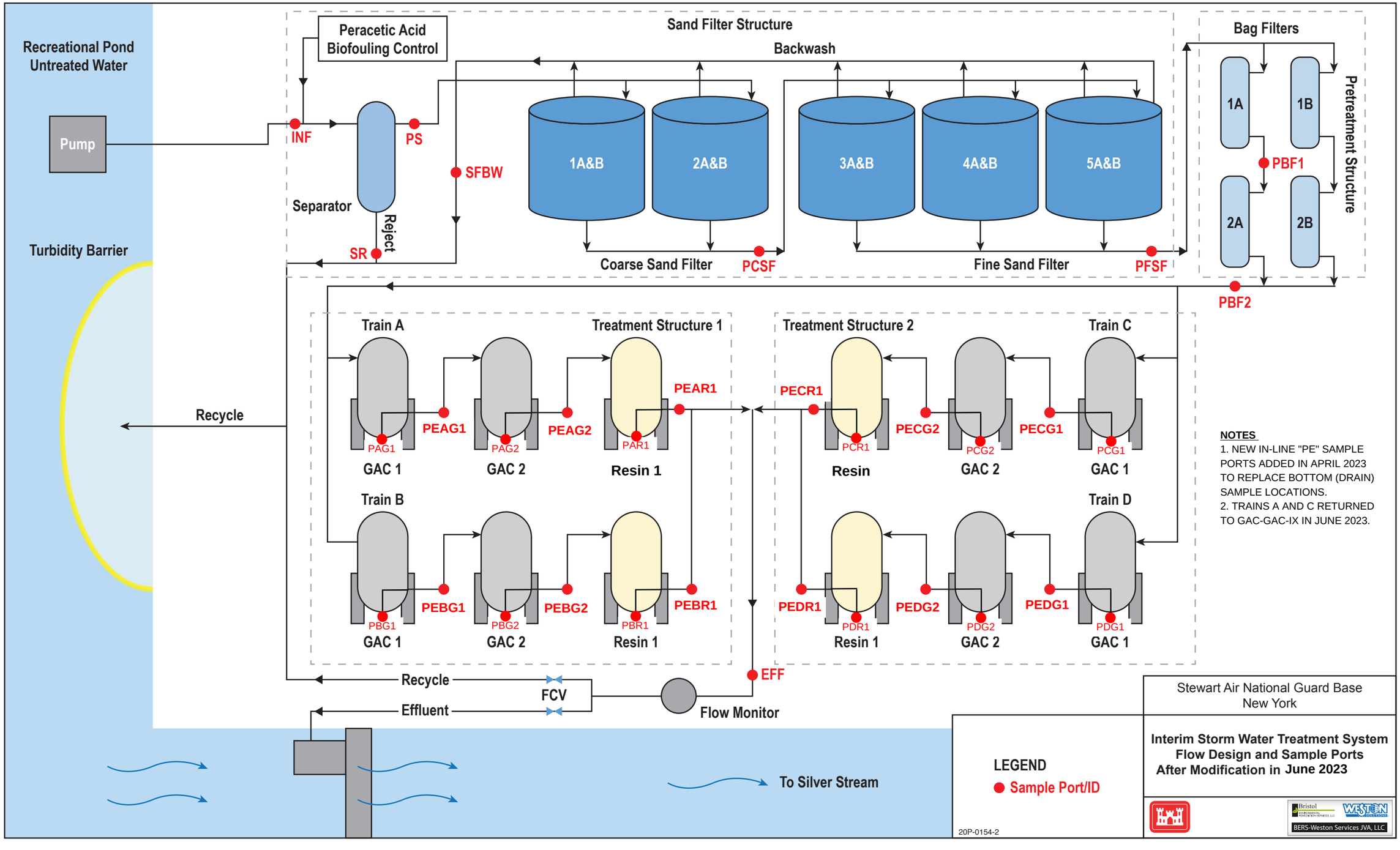

Recreational Pond
Untreated Water
Pump
Turbidity Barrier
Peracetic Acid
Biofouling Control
Sand Filter Structure
Backwash
INF
PS
SFBW
Separator
Reject
SR
1A&B
2A&B
3A&B
4A&B
5A&B
Coarse Sand Filter
PCSF
Fine Sand Filter
PFSF
Bag Filters
1A
1B
2A
2B
PBF1
PBF2
Pretreatment Structure
Train A
Treatment Structure 1
PEAG1
PEAG2
PEAR1
PAG1
PAG2
PAR1
GAC 1
GAC 2
Resin 1
Train B
PEBG1
PEBG2
PEBR1
PBG1
PBG2
PBR1
GAC 1
GAC 2
Resin 1
Treatment Structure 2
Train C
PECR1
PECG2
PECG1
PCR1
PCG2
PCG1
Resin
GAC 2
GAC 1
Train D
PEDR1
PEDG2
PEDG1
PDR1
PDG2
PDG1
Resin 1
GAC 2
GAC 1
Recycle
Recycle
Effluent
FCV
EFF
Flow Monitor
To Silver Stream
NOTES
1. NEW IN-LINE "PE" SAMPLE PORTS ADDED IN APRIL 2023 TO REPLACE BOTTOM (DRAIN) SAMPLE LOCATIONS.
2. TRAINS A AND C RETURNED TO GAC-GAC-IX IN JUNE 2023.
LEGEND
Sample Port/ID
20P-0154-2
Stewart Air National Guard Base
New York
Interim Storm Water Treatment System
Flow Design and Sample Ports
After Modification in June 2023
BERS-Weston Services JVA, LLC

FIGURE 2 - RECREATION POND LEVEL CHART

July to September 2023

ISWTS SANGB - RECREATION POND LEVEL

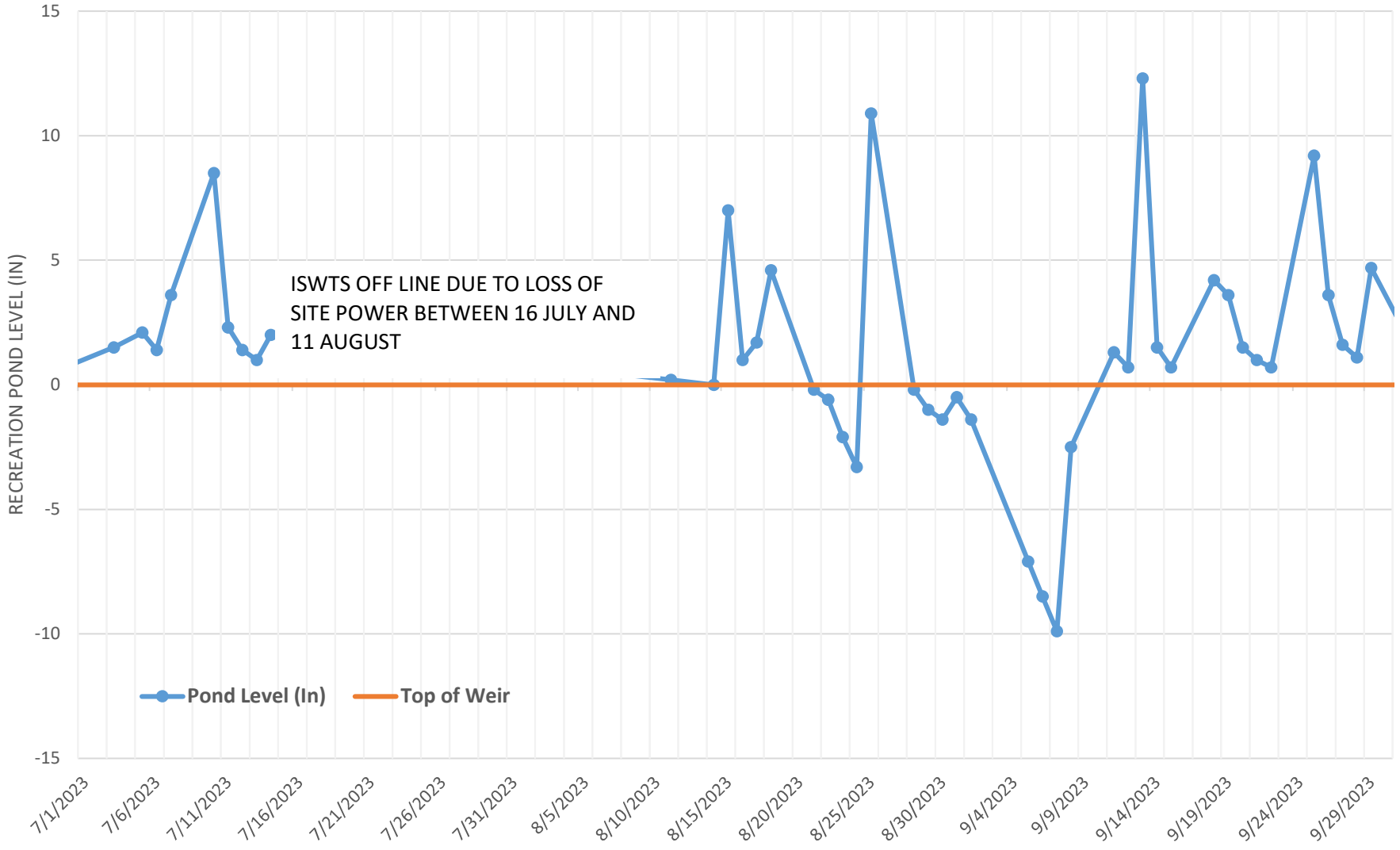
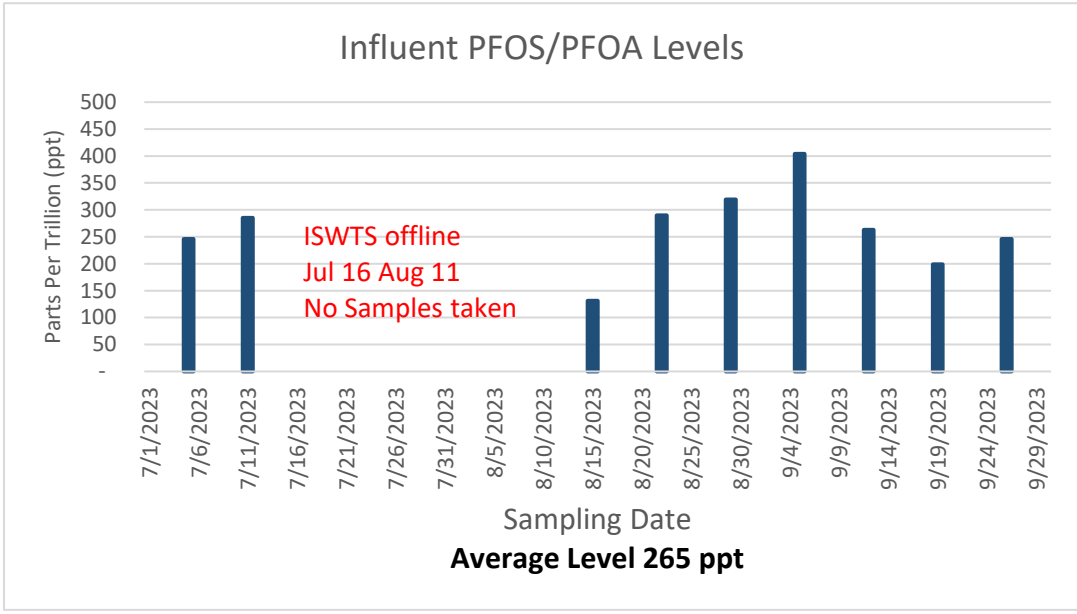
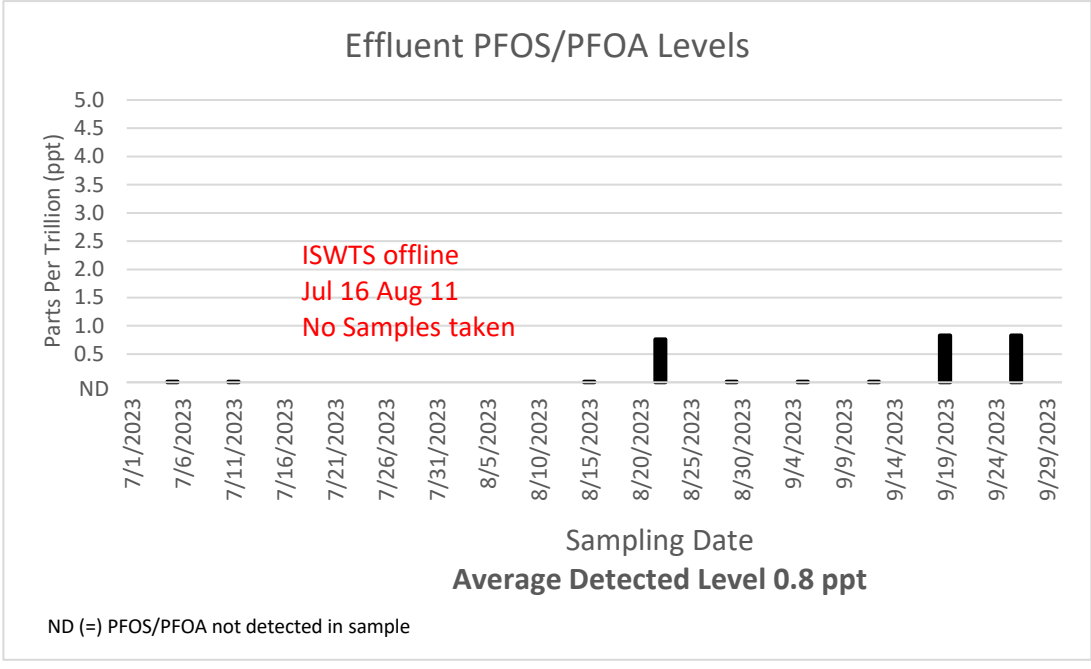


FIGURE 3 - INFLUENT AND EFFLUENT PFOS AND PFOA CHARTS





ND (=) PFOS/PFOA not detected in sample

Note: ppt = parts per trilion combined for PFOS and PFOA

FIGURE - 4 - INFLUENT AND EFFLUENT TURBIDITY CHART

July to September 2023

Influent and Effluent Turbidity