US Army Corps of Engineers Baltimore District



QUARTERLY OM&M REPORT NO. 14

October to December 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 October 1 and December 31, 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.

One PFOS/PFOA treatment media change was performed between October 10 and October 16, 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) also replaced the sand filtration media during the PFOS/PFOA media change.

During the performance period, a total of 40.9 million gallons of stormwater were treated and discharged over the outfall weir by the ISWTS. There were 92 days between

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October 1 and December 31, 2023. The Recreation Pond was drawn down below the outfall weir for 34 of the 92 days or 37% of the quarter. Reduced drawdown below the weir during this performance period was impacted by increased precipitation including seven rain events over 1-inch during the performance period.

PFOS and PFOA samples were collected thirteen times on the influent and effluent during the performance period. The combined PFOS and PFOA influent average concentration during the performance period was 285 ppt. The highest combined PFOS and PFOA effluent detection was 0.7 ppt for the OM&M period between October 1 and December 31, 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 14th Quarterly Report that summarizes Operations, Maintenance, and Monitoring (OM&M) activities conducted by BES at SANGB. This report summarizes ISWTS operations between October 1 and December 31, 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 October 1 and December 31, 2023, or months 40, 41, and 42 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 thirteen 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 reported PFOS/PFOA breakthrough in the primary and secondary GAC. Prior to the media change in early October 2023, the highest PFOS/PFOA breakthrough in the primary and secondary GAC observed was 147 and 85 ppt respectively, however the highest detectable levels in the IX effluent were less than 1 ppt. Following the media change and during the remainder of the performance period the highest PFOS/PFOA breakthrough in the primary and secondary GAC observed was 279 and 102 ppt respectively, however highest detectable levels in the IX effluent was 2.6 ppt on 19 December 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.

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 one stage of GAC with two stages of IX or three stages of GAC.

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To maintain 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 monitor 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 in June 2023.

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 was operated through October and disabled in November 2023, in preparation for winter season. The system configuration is shown in **Figure 1**.

4.0 GENERAL FACILITY OPERATIONS SUMMARY

During the performance period, over 40,900,000 gallons of stormwater were treated. Effluent is either directed over the outfall weir or recycled back to the pond. During the performance period, all effluent was discharged over the outfall weir except between 8 and 11 December when a control system problem occurred that inhibited remote access and caused 105,000 gallons of effluent to be recycled back to the pond. This issue was corrected on 11 December 2023. 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 and the recycle total during the performance period. 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

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bottom of the pond that would impact ISWTS operations and maintenance. Lower process speed and volume treated in December are due to high stormwater inflow and the ability to drawdown the pond below the weir.

Month	Volume Treated (Gallons)	Run Time ¹ (Percent)	Average Treatment Flow ² (GPM)
October 2023	13,900,345	99%	304
November 2023	15,551,060	100%	361
December 2023	11,496,790	100%	276
Total	40,948,195		

¹Run Time – Hours pump running divided by the total period time

²Average GPM – Average flow total gallons divided by operational hours

There were 92 days of scheduled operation between October 1 and December 31, 2023. During this period of performance, the Recreation Pond was drawn down below the weir for 34 of the 92 days or 37% 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 13 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 detected concentrations during the performance period were 285 ppt and 0.67 ppt, respectively. The maximum combined PFOS and PFOA influent concentration was 451 ppt on December 26, 2023. The maximum detection of PFOS/PFOA in the combined effluent, was 0.80 ppt on October, 9, 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**.

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 PFOS/PFOA from the primary and then secondary GAC vessels followed by excellent PFOS/PFOA 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 279, 102, and 2.6 ppt respectively.

In late September 2023, and prior to a planned media exchange in October 2023, BES collected additional intra-process voluntary samples to measure the effects of bypassing primary GAC treatment, to understand the impacts to the secondary GAC and IX resin performance. Short duration performance tests were performed on Train C to determine if system operating capacity and the total gallons treated could be increased while meeting effluent requirements. This testing 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. Additionally, the ISWTS was more capable of increasing gallons per minute treatment because the overall back pressure

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was reduced. Additional testing will be performed at the end of the next media cycle to evaluate higher run capacity while maintaining PFOS/PFOA effluent objectives.

5.3 OTHER WATER QUALITY MONITORING

During the performance period additional monitoring was performed for total organic carbon, and glycols on the influent, and final effluent on November 20, 2023. These results are shown in **Table 2**. No glycols were detected in any of the samples. 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 influent TOC was 3.20 mg/L, and the GAC-2 effluent (influent to the resin) was 1.50 mg/L indicating that the influent TOC level was close but not over the threshold. Effluent TOC concentration was 1.00 mg/L. These results are within the manufacturer's recommend values and likely did not 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 onsite test that is helpful to measure in real time, the influent water quality and intraprocess performance to confirm the effectiveness of the pretreatment and filtration systems in removing solids. During the performance period, influent and effluent turbidity averaged 6.27 nephelometric turbidity units (NTUs) and 0.70 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 continued to see how effective it was in reducing algae growth and mitigation of biofouling and ISWTS

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

The coarse and fine sand media was replaced with new media on October 3 and 4, 2023, coarse and fine filters were each backwashed 632 and 631 times, respectively and a total of seven cleaning events were completed. The primary and secondary bag filters were changed 20 and 25 times, respectively, during the performance period. To maintain acceptable PFAS treatment media pressure, the primary, and secondary GAC vessels were backwashed 16 times during the quarter. The resin was inspected once during the quarter, on November 16, 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, waste sand media, spent ion exchange resin as well as spent GAC were generated during this quarter. Spent GAC materials were shipped to Calgon Corporation facility in Catlettsburg, Kentucky, for thermal reactivation on October 26, 2023. Waste bag filters, waste sand media and spent resin waste were shipped to US Ecology for disposal in a Subtitle C Landfill in Belleville, Michigan, on October 26, 2023. Spent media disposal activities are scheduled immediately following each media changeout to eliminate any onsite storage of solid waste at SANGB. Material disposal documents are provided in **Attachment 1**.

8.0 PROJECTED ACTIVITIES FOR NEXT PERFORMANCE PERIOD

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

A PFOS/PFOA treatment media exchange is planned during the first quarter of 2024. At the end of this reporting period, the IX resin continued to provide excellent PFOS/PFOA removal, and media fouling remained acceptable for operations at flows up to 500 GPM.

As discussed earlier, BES collected additional intra-process voluntary samples at the beginning of Quarter 4 (October) 2023, with the primary GAC offline to understand the impacts to the secondary GAC and IX resin performance. This testing 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 in January 2024, towards the end of the current media run to provide additional data on the performance impacts. If these future sample results also support that the IX performance is not impacted, future consideration to take the primary GAC offline, when it is fouled and restricting throughput at the end of media cycle could be considered to maintain ISWTS capacity and improve stormwater capture while still maintaining PFOS/PFOA removal objectives.

The effectiveness of the Peracetic acid has been uncertain. Bristol turned off the Peracetic acid in the fourth quarter 2022, and all four quarters of 2023, to see if increased biofouling impacts can be detected and no increased biofouling could be identified. Since no increased biofouling effects were observed during these test periods the addition of peracetic acid will remain off through the second quarter of 2024, to continue monitoring biofouling impacts during each seasonal influence at Recreation Pond.

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BES evaluated alternative ultrasonic algae controls installed directly in the Recreation pond during the 2023 warm weather season. 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 technology was deployed in April 2023, and was successful in mitigating visible seasonal algae through October 2023. BES plans to resume operations of the ultrasonic equipment during the 2024 warm weather season 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

C3U5368V2 - 10/02/2023

RESULTS OF ANALYSES OF WATER							VALIDATED DATA							
	Bureau Ve	ritas ID	XED689	XED694	XED695	XED691	XED686	XED693	XED692	XED688	XED690			
	Sampli	ng Date	2023/10/02 09:55	2023/10/02 10:35	2023/10/02 10:35	2023/10/02 10:10	2023/10/02 07:35	2023/10/02 10:25	2023/10/02 10:17	2023/10/02 07:45	2023/10/02 10:00			
	Sar	mple ID	SANG-FB-10022023	SANG-INF-10022023	SANG-INF-10022023D	SANG-PECR1-10022023	SANG-PECR1-10022023-TEST	SANG-PECG1-10022023	SANG-PECG2-10022023	SANG-PECG2-10022023-TEST	SANG-EFF-10022023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS												-
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	28	21	1.5 U	1.5 U	24	21	19	1.5 U	0.65	1.5	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	82	62	0.77 U	0.77 U	54	41	47	0.77 U	0.24	0.77	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	63	48	0.77 U	0.77 U	36	25	33	0.77 U	0.22	0.77	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	42	32	1.1 U	1.1 U	20	13	19	1.1 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	37	28	1.1 U	1.1 U	14	8.1	16	1.1 U	0.45	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	12	8.7	1.1 U	1.1 U	1.9 J	1.8 J	4.5	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	6.1	4.2	1.1 U	1.1 U	1.5 J	2.0 J	2.1 J	1.1 U	0.32	1.1	2.2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.55 J	1.1 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	1.0 U	1.1 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	0.70 U	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	1.0 U	1.0 U	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	1.0 U	13	9.8	1.1 U	1.1 U	6.7	4.3	5.6	1.1 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	15	10	1.1 U	1.1 U	6.2	3	5.1	1.1 U	0.37	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	86 (1)	78	1.1 U	1.1 U	46	24	41	1.1 U	0.31	1.1	2.2
Perfluoroheptanesulfonic acid PFHpS	EPA 537.1 M	ng/L	1.0 U	4.8	3.5	1.1 U	1.1 U	1.5 J	0.74 J	1.4 J	1.1 U	0.47	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	280 (1)	270 (1)	0.61 J	0.94 J	85	77	130 (1)	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.4 U	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	1.4 U	1.4 U	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	1.4 U	0.44 J	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	1.4 U	1.4 U	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	1.4 U	1.4 U	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	1.4 U	1.1 J	1.5 U	1.5 U	1.5 U	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	1.4 U	78	65	1.5 U	1.5 U	24	13	28	1.5 U	0.69	1.5	4.4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	24	20	1.5 U	1.5 U	5.9	6.4	7.1	1.5 U	0.58	1.5	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	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	0.40 U	0.40 U	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
9CI-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	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	1.0 U	1.0 U	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) Result exceeds the upper limit of quantitation (ULQ) and is considered estimated.

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-10022023 is a field blank.

Sample SANG-INF-10022023D is a field duplicate of SANG-INF-10022023.

Sample ports located in each of the 4 trains; A, B, C, D. such as: PBG1= post B train GAC unit 1. PEG51 = post E port C train GAC Unit 1 PEG52 = post E port C train GAC Unit 2 PEGR1 = 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

C3V2948V1 - 10/09/2023

RESULTS OF ANALYSES OF WATER				VALIDATED DATA				
	Bureau Ve	ritas ID	XFT183	XFT185	XFT184			
	Sampli	ng Date	2023/10/09 13:00	2023/10/09 13:10	2023/10/09 13:05			
	Sa	mple ID	SANG-FB-10092023	SANG-INF-10092023	SANG-EFF-10092023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS						
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	23	1.4 U	0.62	1.5	2.1
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	70	0.70 U	0.23	0.74	2.1
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	55	0.70 U	0.21	0.74	2.1
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	32	1.0 U	0.29	1.1	2.1
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	30	1.0 U	0.43	1.1	2.1
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	9	1.0 U	0.37	1.1	2.1
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	4.7	1.0 U	0.3	1.1	2.1
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.62 J	1.0 U	0.39	1.1	2.1
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.69 J	1.0 U	0.5	1.1	2.1
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.41 J	0.70 U	0.25	0.74	2.1
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.0 U	0.41	1.1	2.1
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	13	1.0 U	0.28	1.1	2.1
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	11	1.0 U	0.36	1.1	2.1
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	90	1.0 U	0.29	1.1	2.1
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	4.2	1.0 U	0.45	1.1	2.1
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	270 (1)	0.80 J	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.4 U	0.67	1.5	2.1
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.4 U	0.63	1.5	2.1
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	0.76 J	1.4 U	0.42	1.5	4.2
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.4 U	0.74	1.5	4.2
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.0 J	1.4 U	0.57	1.5	4.2
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	0.76 J	1.4 U	0.49	1.5	4.2
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	67	1.4 U	0.66	1.5	4.2
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	18	1.4 U	0.56	1.5	4.2
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.4 U	0.43	1.5	4.2
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.42 U	0.40 U	0.13	0.42	4.2
9CI-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.0 U	0.44	1.1	4.2
11CI-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.1 U	1.0 U	0.34	1.1	4.2

Notes:

(1) 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-10092023 is a field blank.

Sample SANG-INF-10092023D is a field duplicate of SANG-INF-10092023.

C3W3996V1 - 10/17/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XIC592	XIC597	XIC598	XIC594	XIC596	XIC595	XIC593			1
	Sampli	ng Date	2023/10/17 08:30	2023/10/17 09:10	2023/10/17 09:10	2023/10/17 08:47	2023/10/17 09:00	2023/10/17 08:55	2023/10/17 08:40			1
	Sai	mple ID	SANG-FB-10172023	SANG-INF-10172023	SANG-INF-10172023D	SANG-PEAR1-10172023	SANG-PEAG1-10172023	SANG-PEAG2-10172023	SANG-EFF-10172023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	24	25	1.4 U	13	3.3	1.4 U	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	77	82	0.70 U	29	3.1	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	61	62	0.70 U	17	1.0 J	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	34	36	1.0 U	7.7	1.0 U	1.0 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	31	32	1.0 U	6	1.0 U	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	8.3	8.6	1.0 U	1.3 J	1.0 U	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	6.3	6.4	1.0 U	0.73 J	1.0 U	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.37 J	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	12	12	1.0 U	2.6	1.0 U	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	12	13	1.0 U	1.7 J	1.0 U	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	93	98	1.0 U	13	1.0 U	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	3.6	4.1	1.0 U	0.53 J	1.0 U	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	270 (1)	250 (1)	1.0 U	36	0.73 J	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	0.79 J	0.85 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	77	82	1.4 U	11	1.4 U	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	20	21	1.4 U	2.5 J	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	0.15 J	0.19 J	0.18 J	0.20 J	0.18 J	0.18 J	0.17 J	0.12	0.4	4
9CI-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
11CI-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).

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-10172023 is a field blank.

Sample SANG-INF-10172023D is a field duplicate of SANG-INF-10172023.

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 C train GAC Unit 1 PEAG2 = post E port C train GAC Unit 2 PEAR1 = 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

C3X2563V1 - 10/24/2023

RESULTS OF ANALYSES OF WATER	Bureau Ve	uites TD	X1Z080	X1Z085	¥1700¢	VALIDATED DATA	X1Z084	¥17000	X1Z081		<u> </u>	
					XJZ086	XJZ082		XJZ083			L	<u> </u>
	Sampli		2023/10/24 08:15	2023/10/24 08:40	2023/10/24 08:40	2023/10/24 08:25	2023/10/24 08:35	2023/10/24 08:30	2023/10/24 08:20			
		nple ID	SANG-FB-10242023	SANG-INF-10242023	SANG-INF-10242023D	SANG-PEBR1-10242023	SANG-PEBG1-10242023	SANG-PEBG2-10242023	SANG-EFF-10242023	DL	LOD	LOQ
Perfluorinated Compounds		UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	29	26	1.4 U	15	4.1	1.4 U	0.71	1.7	2.4
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	91	87	0.70 U	32	3.7	0.70 U	0.26	0.84	2.4
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	72	67	0.70 U	21	1.0 J	0.70 U	0.24	0.84	2.4
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	41	38	1.0 U	9.4	1.0 U	1.0 U	0.34	1.2	2.4
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	38	35	1.0 U	7.8	1.0 U	1.0 U	0.49	1.2	2.4
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	11	9.9	1.0 U	1.8 J	1.0 U	1.0 U	0.42	1.2	2.4
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	6.5	6	1.0 U	0.97 J	1.0 U	1.0 U	0.35	1.2	2.4
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	1.2 U	1.2 U	1.0 U	1.0 U	1.0 U	1.0 U	0.44	1.2	2.4
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	1.2 U	1.2 U	1.0 U	1.0 U	1.0 U	1.0 U	0.58	1.2	2.4
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.84 U	0.84 U	0.70 U	0.70 U	0.70 U	0.70 U	0.29	0.84	2.4
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.2 U	1.2 U	1.0 U	1.0 U	1.0 U	1.0 U	0.47	1.2	2.4
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	15	16	1.0 U	3.4	1.0 U	1.0 U	0.32	1.2	2.4
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	19	16	1.0 U	2.5	1.0 U	1.0 U	0.41	1.2	2.4
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	110	100	1.0 U	18	0.29 J	1.0 U	0.34	1.2	2.4
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	4.7	4.1	1.0 U	0.54 J	1.0 U	1.0 U	0.52	1.2	2.4
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	300 (2)	310 (2)	1.0 U	54	1.2 J	1.0 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.7 U	1.7 U	1.4 U	1.4 U	1.4 U	1.4 U	0.77	1.7	2.4
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.4 U	1.7 U	1.7 U	1.4 U	1.4 U	1.4 U	1.4 U	0.72	1.7	2.4
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.7 U	1.7 U	1.4 U	1.4 U	1.4 U	1.4 U	0.48	1.7	4.8
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.7 U	1.7 U	1.4 U	1.4 U	1.4 U	1.4 U	0.84	1.7	4.8
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.7 U	1.7 U	1.4 U	1.4 U	1.4 U	1.4 U	0.65	1.7	4.8
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	0.92 J	0.87 J	1.4 U	1.4 U (1)	1.4 U	1.4 U	0.56	1.7	4.8
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	89	83	1.4 U	14	1.4 U	1.4 U	0.76	1.7	4.8
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	17	16	1.4 U	2.1 J	1.4 U	1.4 U	0.64	1.7	4.8
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.7 U	1.7 U	1.4 U	1.4 U	1.4 U	1.4 U	0.49	1.7	4.8
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.48 U	0.48 U	0.40 U	0.40 U	0.40 U	0.40 U	0.14	0.48	4.8
9CI-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.2 U	1.2 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.2	4.8
11CI-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.0 U	1.2 U	1.2 U	1.0 U	1.0 U	1.0 U	1.0 U	0.38	1.2	4.8

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-10242023 is a field blank.

Sample SANG-INF-10242023D is a field duplicate of SANG-INF-10242023.

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 C train GAC Unit 1 PEBG2 = post E port C train GAC Unit 2 PEBR1 = 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

C3Y1499V1 - 10/31/2023

RESULTS OF ANALYSES OF WATER	Bureau Ve	uites TD	XLX271	XLX276	XLX277	VALIDATED DATA XLX273	XLX275	XLX274	XLX272			
												<u> </u>
	Sampli		2023/10/31 07:55	2023/10/31 08:25	2023/10/31 08:25	2023/10/31 08:05	2023/10/31 08:17	2023/10/31 08:11	2023/10/31 08:00			I
		nple ID	SANG-FB-10312023	SANG-INF-10312023	SANG-INF-10312023D	SANG-PECR1-10312023	SANG-PECG1-10312023	SANG-PECG2-10312023	SANG-EFF-10312023	DL	LOD	LOQ
Perfluorinated Compounds		UNITS										ī
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	17	19	1.6 U	10	6.5	1.6 U	0.67	1.6	2.3
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	47	47	0.80 U	23	9.3	0.80 U	0.25	0.8	2.3
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	36	36	0.80 U	15	4.6	0.80 U	0.23	0.8	2.3
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	23	23	1.1 U	8.3	1.7 J	1.1 U	0.32	1.1	2.3
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	22	22	1.1 U	6.6	1.1 J	1.1 U	0.47	1.1	2.3
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	6.5	6.5	1.1 U	1.8 J	1.1 U	1.1 U	0.4	1.1	2.3
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	4.9	5.1	1.1 U	1.5 J	1.1 U	1.1 U	0.33	1.1	2.3
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.49 J	0.50 J	1.1 U	1.1 U	1.1 U	1.1 U	0.42	1.1	2.3
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.61 J	0.66 J	1.1 U	1.1 U	1.1 U	1.1 U	0.55	1.1	2.3
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.70 U	0.80 U	0.80 U	0.80 U	0.76 U	0.80 U	0.80 U	0.27	0.8	2.3
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	0.44	1.1	2.3
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	7.7	7.8	1.1 U	2.5	0.56 J	1.1 U	0.31	1.1	2.3
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	7.3	7.4	1.1 U	2.0 J	1.1 U	1.1 U	0.39	1.1	2.3
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	56	58	1.1 U	16	2.0 J	1.1 U	0.32	1.1	2.3
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	2.1 J	2.4	1.1 U	1.1 U	1.1 U	1.1 U	0.49	1.1	2.3
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	150 (2)	160 (2)	1.1 U	41	4.7	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	0.73	1.6	2.3
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	0.68	1.6	2.3
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	0.71 J	0.60 J (1)	0.59 J	1.5 U	1.6 U	0.47 J	0.45	1.6	4.5
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	0.8	1.6	4.5
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	0.61	1.6	4.5
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	0.53	1.6	4.5
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	38	39	1.6 U	10	1.4 J	1.6 U	0.72	1.6	4.5
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	11	12	1.6 U	2.9 J	1.6 U	1.6 U	0.6	1.6	4.5
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	0.47	1.6	4.5
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.45 U	0.45 U	0.45 U	0.43 U	0.45 U	0.45 U	0.14	0.45	4.5
9CI-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	0.48	1.1	4.5
11CI-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	0.36	1.1	4.5

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-10312023 is a field blank.

Sample SANG-INF-10312023D is a field duplicate of SANG-INF-10312023.

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

C3Z0094V1 - 11/07/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XNR830	XNR835	XNR836	XNR832	XNR834	XNR833	XNR831			
	Sampli	ng Date	2023/11/07 08:00	2023/11/07 08:30	2023/11/07 08:30	2023/11/07 08:15	2023/11/07 08:25	2023/11/07 08:20	2023/11/07 08:05			
	Sar	nple ID	SANG-FB-11072023	SANG-INF-11072023	SANG-INF-11072023D	SANG-PEDR1-11072023	SANG-PEDG1-11072023	SANG-PEDG2-11072023	SANG-EFF-11072023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	25	26	1.4 U	18	12	0.79 J	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	74	77	0.70 U	44	22	0.70 U	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.67 J (1)	56	60	0.70 U	31	11	0.67 J (1)	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	31	33	1.0 U	15	4.9	0.60 J	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	29	31	1.0 U	13	3.7	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	8.3	8.7	1.0 U	3.8	1.3 J	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	6.4	6.4	1.0 U	2.5	1.0 J	0.58 J	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	1.1 J	1.1 J	1.0 U	0.77 J (2)	1.0 U	0.69 J (2)	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.93 J	0.80 J	1.0 U	1.0 U	1.0 U	0.56 J (2)	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	12	13	1.0 U	5.7	2	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	14	14	1.0 U	5.4	1.4 J	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	85	87	1.0 U	33	7.1	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	4.2	4.6	1.0 U	1.9 J	0.71 J	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	290 (3)	300 (3)	1.0 U	110 (3)	20	0.64 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	0.77 J (1)	1.1 J (4)	1.0 J	1.4 U	0.80 J	0.78 J	0.72 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	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 J (1)	1.3 J (1)	1.4 U	0.89 J	0.65 J (1)	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	70	70	1.4 U	24	5.5	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	16	16	1.4 U	5.5	1.6 J	0.61 J	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
9CI-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
11CI-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) were not met.

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

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

(4) Result is estimated as analyte confirmation criteria (ion ratio and signal to noise) were 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-11072023 is a field blank.

Sample SANG-INF-11072023D is a field duplicate of SANG-INF-11072023.

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 C train GAC Unit 1

PEDG2 = post E port C train GAC Unit 2

PEDR1 = 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

C3Z8143V1 - 11/14/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XPK358	XPK363	XPK364	XPK360	XPK362	XPK361	XPK359			
	Sampli	ng Date	2023/11/14 07:10	2023/11/14 07:40	2023/11/14 07:40	2023/11/14 07:21	2023/11/14 07:34	2023/11/14 07:27	2023/11/14 07:15			
	Sar	mple ID	SANG-FB-11142023	SANG-INF-11142023	SANG-INF-11142023D	SANG-PEAR1-11142023	SANG-PEAG1-11142023	SANG-PEAG2-11142023	SANG-EFF-11142023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	33	34	1.5 J	30	25	0.95 J	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	100	98 (2)	0.78 U	83	56	0.78 U	2.2	7	20
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	80	82	0.78 U	65	35	0.78 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	42	43	1.1 U	30	16	1.1 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	39	41	1.1 U	27	13	1.1 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	10	11	1.1 U	6.4	3.1	1.1 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	2.5 U (1)	5.8	6.2	1.0 U	3.6	1.5 J	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	2.5 U (1)	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	2.5 U (1)	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	1.8 U (1)	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	2.5 U (1)	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	2.5 U (1)	18	20	1.0 U	13	6.3	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	25	26	1.1 U	15	5.1	1.1 U	0.34	1	2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	2.5 U (1)	130 (2)	130 (2)	1.0 U	84	34	1.0 U	2.8	10	20
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	5.2	5.6	1.1 U	3.2	0.98 J	1.1 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	2.5 U (1)	380 (2)	380 (2)	1.0 U	220 (2)	89	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	1.6 U	1.4 U	1.6 U	1.6 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	3.5 U (1)	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	1.6 U	1.4 U	1.6 U	1.6 U	0.4	1.4	4
MeFOSAA	EPA 537.1 M	ng/L	3.5 U (1)	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	3.5 U (1)	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	1.2 J	1.3 J	1.6 U	0.80 J	1.6 U	1.6 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	90	95	1.6 U	63	27	1.6 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	16	17	1.6 U	8.5	2.9 J	1.6 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.4 U	1.6 U	1.4 U	1.6 U	1.6 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	0.44 U	0.40 U	0.44 U	0.44 U	0.12	0.4	4
9CI-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.0 U	1.1 U	1.0 U	1.1 U	1.1 U	0.42	1	4
11CI-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	2.5 U (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) Due to limited amount of sample available for analysis, a smaller than usual portion of sample was used. Detection limits were adjusted accordingly (2.5x).

(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-11142023 is a field blank.

Sample SANG-INF-11142023D is a field duplicate of SANG-INF-11142023.

PEAG1 = post E port C train GAC Unit 1 PEAG2 = post E port C train GAC Unit 2 PEAR1 = 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

C3AF517V1 - 11/20/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XQZ217	XQZ222	XQZ223	XQZ219	XQZ221	XQZ220	XQZ218			
	Sampli	ng Date	2023/11/20 08:50	2023/11/20 09:20	2023/11/20 09:20	2023/11/20 09:00	2023/11/20 09:14	2023/11/20 09:08	2023/11/20 08:55			
	Sai	mple ID	SANG-FB-11202023	SANG-INF-11202023	SANG-INF-11202023D	SANG-PEBR1-11202023	SANG-PEBG1-11202023	SANG-PEBG2-11202023	SANG-EFF-11202023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.6 U	30	30	1.6 U	22	17	1.3 J	0.66	1.6	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.78 U	90	87	0.78 U	48	28	0.78 U	0.24	0.78	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.78 U	74	72	0.78 U	33	15	0.78 U	0.22	0.78	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.1 U	37	36	1.1 U	14	5	1.1 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.1 U	37	34	1.1 U	14	4.3	1.1 U	0.46	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.1 U	9.9	9.3	1.1 U	3.6	1.0 J	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.1 U	5.6	4.4	1.1 U	2.0 J	0.54 J	1.1 U	0.32	1.1	2.2
Perfluoroundecanoic acid (PFUnA)	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	0.41	1.1	2.2
Perfluorododecanoic acid (PFDoA)	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	0.53	1.1	2.2
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.27	0.78	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	17	16	1.1 U	5.7	2.1 J	1.1 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.1 U	20	17	1.1 U	4.5	1.1 J	1.1 U	0.38	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.1 U	120 (1)	110	1.1 U	33	7.9	1.1 U	0.31	1.1	2.2
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.1 U	4.7	4.4	1.1 U	1.6 J	1.1 U	1.1 U	0.48	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.1 U	360 (1)	340 (1)	1.1 U	130 (1)	29	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.71	1.6	2.2
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.67	1.6	2.2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.44	1.6	4.4
MeFOSAA	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.78	1.6	4.4
EtFOSAA	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.6	1.6	4.4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	1.2 J	1.1 J	1.6 U	1.6 U	1.6 U	1.6 U	0.52	1.6	4.4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	80	76	1.6 U	25	6.2	1.6 U	0.7	1.6	4.4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	15	13	1.6 U	4.3 J	1.1 J	1.6 U	0.59	1.6	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.46	1.6	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
9CI-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	0.47	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	0.36	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).

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-11202023 is a field blank.

Sample SANG-INF-11202023D is a field duplicate of SANG-INF-11202023.

PEBG1 = post E port C train GAC Unit 1 PEBG2 = post E port C train GAC Unit 2 PEBR1 = 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

C3AO653V1 - 11/28/2023

	Bureau Ver	itas ID	XSW798	XSW803	XSW804	XSW800	XSW802	XSW801	XSW799			
	Samplin		2023/11/28 07:55	2023/11/28 08:22	2023/11/28 08:22	2023/11/28 08:06	2023/11/28 08:16	2023/11/28 08:12	2023/11/28 08:00			-
		iple ID		SANG-INF-11282023	SANG-INF-11282023D	SANG-PECR1-11282023	SANF-PECG1-11282023	SANG-PECG2-11282023	SANG-EFF-11282023	DL	LOD	10
Perfluorinated Compounds		UNITS	SANG-FB-11282025	SANG-INF-11282025	SANG-INF-11282023D	SANG-PECK1-11282025	SANF-FECGI-11202025	SANG-PECG2-11262025	SANG-EFF-11202025	DL	LOD	10
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	0.59 J	16	15	2.8	15	13	3.2	0.66	1.6	2.
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	46	45	0.78 U	38	29	0.58 J	0.00	0.78	
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	35	34	0.78 U	27	18	0.78 U	0.22	0.78	-
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	na/L	1.0 U	22	21	1.1 U	16	8.9	1.1 U	0.31	1.1	-
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	21	21	1.1 U	14	7.7	0.56 J (1)	0.46	1.1	2.
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	5.5	6.3	1.1 U	3.4	1.6 J	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	3.8	3.8	1.0 U	2.5	0.91 J	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	0.78 U	0.78 U	0.70 U	0.70 U	0.78 U	0.27	0.78	2.
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	0.43	1.1	2
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.0 U	7.4	8	1.1 U	5	2.6	1.1 U	0.3	1.1	2.
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	6.4	6.3	1.1 U	3.5	1.6 J	1.1 U	0.38	1.1	2.
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	54	51	1.1 U	33	17	1.1 U	0.31	1.1	2.
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	1.3 J	2.1 J (1)	1.1 U	0.59 J	1.0 U	1.1 U	0.48	1.1	2.
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	150 (2)	160 (2)	1.1 U	100	51	1.1 U	4.7	10	2
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.6 U	1.6 U	1.4 U	1.4 U	1.6 U	0.71	1.6	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	0.54 J (3)	1.6 U	1.4 U	1.4 U	1.6 U	0.44	1.6	4.
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.6 U	1.6 U	1.4 U	1.4 U	1.6 U	0.78	1.6	4.
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.6 U	1.6 U	1.4 U	1.4 U	1.6 U	0.6	1.6	4.
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.6 U	1.6 U	1.4 U	1.4 U	1.6 U	0.52	1.6	4.
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	32	35	1.6 U	20	10	1.6 U	0.7	1.6	4.
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	8.7	12	1.6 U	4.1	1.5 J	1.6 U	0.59	1.6	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.4 U	1.6 U	1.6 U	1.4 U	1.4 U	1.6 U	0.46	1.6	4
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.40 U	0.40 U	0.44 U	0.44 U	0.40 U	0.40 U	0.44 U	0.13	0.44	4
9CI-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.0 U	1.0 U	1.1 U	1.1 U	1.0 U	1.0 U	1.1 U	0.47	1.1	4
11CI-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

(1) Result is estimated as analyte confirmation criterion (signal to noise) 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).

(3) Result is estimated as analyte confirmation criterion (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-11282023 is a field blank.

Sample SANG-INF-11282023D is a field duplicate of SANG-INF-11282023.

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

C3AW429V1 - 12/05/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XUQ288	XUQ293	XUQ294	XUQ290	XUQ292	XUQ291	XUQ289			
	Sampli	ng Date	2023/12/05 07:55	2023/12/05 08:22	2023/12/05 08:22	2023/12/05 08:06	2023/12/05 08:18	2023/12/05 08:12	2023/12/05 08:00			
	Sar	nple ID	SANG-FB-12052023	SANG-INF-12052023	SANG-INF-12052023D	SANG-PEDR1-12052023	SANG-PEDG1-12052023	SANG-PEDG2-12052023	SANG-EFF-12052023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	20	19	22	17	15	5.4	0.59	1.4	2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	53	51	3	43	31	0.62 J	0.22	0.7	2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	36	35	1.4 J	28	18	0.70 U	0.2	0.7	2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	26	24	1.3 J	18	10	1.0 U	0.28	1	2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	24	23	1.0 J	16	9.3	1.0 U	0.41	1	2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	6.8	6.7	1.0 U	4.5	2.5	1.0 U	0.35	1	2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	5	4.9	1.0 U	3.3	1.7 J	1.0 U	0.29	1	2
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.0 U	0.71 J	0.68 J	1.0 U	0.51 J	0.41 J	1.0 U	0.37	1	2
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.0 U	0.71 J	0.70 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	0.73 U	0.70 U	0.73 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	9.1	8.5	2.7	6.2	3.7	1.0 U	0.27	1	2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	10	9.8	1.7 J	5.9	3.1	1.0 U	0.34	1	2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	64	63	1.0 U	40	19	1.0 U	0.28	1	2
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	2.8	2.6	1.0 U	1.7 J	0.92 J	1.0 U	0.43	1	2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	190 (1)	180 (1)	1.0 U	110 (1)	59	1.0 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.4 U	1.5 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	1.5 U	1.4 U	1.5 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	1.5 U	1.4 U	1.5 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	1.5 U	1.4 U	1.5 U	1.4 U	0.82 J	1.4 U	0.7	1.4	4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.5 U	0.61 J	1.5 U	1.4 U	0.88 J	1.4 U	0.54	1.4	4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	0.86 J	0.89 J	1.8 J	0.71 J	0.59 J	1.4 U	0.47	1.4	4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	41	37	3.7 J	22	12	1.4 U	0.63	1.4	4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	13	13	1.5 U	6	2.7 J	1.4 U	0.53	1.4	4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.5 U	1.4 U	1.5 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	0.42 U	0.40 U	0.85 J	0.40 U	0.40 U	0.40 U	0.12	0.4	4
9CI-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
11CI-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).

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-12052023 is a field blank.

Sample SANG-INF-12052023D is a field duplicate of SANG-INF-12052023.

PEDG1 = post E port C train GAC Unit 1 PEDG2 = post E port C train GAC Unit 2 PEDR1 = 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

C3BE958V1 - 12/12/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XWK268	XWK273	XWK274	XWK270	XWK272	XWK271	XWK269			
	Sampli	ng Date	2023/12/12 08:00	2023/12/12 08:30	2023/12/12 08:30	2023/12/12 08:12	2023/12/12 08:25	2023/12/12 08:16	2023/12/12 08:05			
	Sar	nple ID	SANG-FB-12122023	SANG-INF-12122023	SANG-INF-12122023D	SANG-PEAR1-12122023	SANG-PEAG1-12122023	SANG-PEAG2-12122023	SANG-EFF-12122023	DL	LOD	LOQ
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.6 U	13	12	7.1	13	13	5.1	0.61	1.5	2.1
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.80 U	35	34	0.89 J	34	29	0.67 J	0.23	0.73	2.1
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.80 U	25	24	0.76 U	23	17	0.76 U	0.21	0.73	2.1
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.1 U	19	18	1.1 U	16	10	1.1 U	0.29	1	2.1
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.1 U	18	18	1.1 U	14	8.4	1.1 U	0.43	1	2.1
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.1 U	5.7	5.4	1.1 U	4.2	2.4	1.1 U	0.36	1	2.1
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.1 U	4.6	4.4	1.1 U	2.8	1.6 J	1.1 U	0.3	1	2.1
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.1 U	0.78 J	0.79 J	1.1 U	0.61 J	0.51 J	1.1 U	0.39	1	2.1
Perfluorododecanoic acid (PFDoA)	EPA 537.1 M	ng/L	1.1 U	0.68 J	0.68 J	1.1 U	1.0 U	1.0 U	1.1 U	0.5	1	2.1
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.80 U	0.76 U	0.44 J (1)	0.51 J (1)	0.73 U	0.47 J (1)	0.76 U	0.25	0.73	2.1
Perfluorotetradecanoic acid (PFTEDA)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.1 U	0.41	1	2.1
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.1 U	6.4	6.4	1.1 U	5.3	3.5	1.1 U	0.28	1	2.1
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.1 U	6.1	6.2	1.1 U	4.6	2.6	1.1 U	0.35	1	2.1
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.1 U	45	46	1.1 U	32	18	1.1 U	0.29	1	2.1
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.1 U	2.0 J	1.8 J	1.1 U	1.4 J	0.62 J	1.1 U	0.45	1	2.1
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.1 U	170 (3)	160 (3)	1.1 U	100	49	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.67	1.5	2.1
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.63	1.5	2.1
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.42	1.5	4.2
MeFOSAA	EPA 537.1 M	ng/L	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.73	1.5	4.2
EtFOSAA	EPA 537.1 M	ng/L	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.56	1.5	4.2
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	0.62 J (1)	0.63 J (2)	1.5 U	0.56 J (2)	1.5 U (2)	1.5 U	0.49	1.5	4.2
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	27	27	1.5 U	17	8.6	1.5 U	0.66	1.5	4.2
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	13	12	1.5 U	5.8	3.0 J	1.5 U	0.55	1.5	4.2
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.43	1.5	4.2
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.45 U	0.43 U	0.42 U	0.43 U	0.42 U	0.42 U	0.43 U	0.13	0.42	4.2
9CI-PF3ONS (F-53B Major)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.1 U	0.44	1	4.2
11CI-PF3OUdS (F-53B Minor)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.0 U	1.1 U	1.0 U	1.0 U	1.1 U	0.33	1	4.2

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, 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-12122023 is a field blank.

Sample SANG-INF-12122023D is a field duplicate of SANG-INF-12122023.

$$\begin{split} & \mathsf{PEAG1} = \mathsf{post} \; \mathsf{E} \; \mathsf{port} \; \mathsf{C} \; \mathsf{train} \; \mathsf{GAC} \; \mathsf{Unit} \; 1 \\ & \mathsf{PEAG2} = \mathsf{post} \; \mathsf{E} \; \mathsf{port} \; \mathsf{C} \; \mathsf{train} \; \mathsf{GAC} \; \mathsf{Unit} \; 2 \\ & \mathsf{PEAR1} = \mathsf{post} \; \mathsf{E} \; \mathsf{port} \; \mathsf{C} \; \mathsf{train} \; \mathsf{Resin} \; 1 \\ & \mathsf{Effluent} \; (\mathsf{EFF}) = \mathsf{Treated} \; \mathsf{water} \; \mathsf{that} \; \mathsf{has} \; \mathsf{passed} \; \mathsf{through} \; \mathsf{the} \; \mathsf{ISWTS} \\ & \mathsf{Influent} \; (\mathsf{INF}) = \; \mathsf{Untreated} \; \mathsf{water} \; \mathsf{from} \; \mathsf{Recreational} \; \mathsf{Pond} \\ & \mathsf{ISWTS} = \; \mathsf{Interim} \; \mathsf{Storm} \; \mathsf{Water} \; \mathsf{Treatment} \; \mathsf{System} \end{split}$$

C3BN855V1 - 12/19/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DA	ТА						
	Bureau Ve	eritas ID	XYH568	XYH573	XYH574	XYH570	XYH572	XYH571	XYH569				
	Sampli	ing Date	2023/12/19 07:15	2023/12/19 07:40	2023/12/19 07:40	2023/12/19 07:25	2023/12/19 07:35	2023/12/19 07:30	2023/12/19 07:20				
	Sa	mple ID	SANG-FB-12192023	SANG-INF-12192023	SANG-INF-12192023D	SANG-PEBR1-12192023	SANG-PEBG1-12192023	SANG-PEBG2-12192023	SANG-EFF-12192023	DL	LOD	LOQ	QC Batch
Perfluorinated Compounds	Method	UNITS											
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.6 U	8.4	6.7	1.2 J	9.3	10	4.8	0.66	1.6	2.2	9131405
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.78 U	17	17	0.78 U	21	21	0.61 J	0.24	0.78	2.2	9131405
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.78 U	13	13	0.53 J	14	13	0.78 U	0.22	0.78	2.2	9131405
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.1 U	10	9.9	0.34 J	8.8	6.8	1.1 U	0.31	1.1	2.2	9131405
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.1 U	12	12	1.1 U	8.5	5.5	1.1 U	0.46	1.1	2.2	9131405
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.1 U	3.8	3.8	1.1 U	2.5	1.3 J	1.1 U	0.39	1.1	2.2	9131405
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.1 U	1.5 J	1.5 J	1.1 U	2.0 J	1.4 J	1.1 U	0.32	1.1	2.2	9131405
Perfluoroundecanoic acid (PFUnA)	EPA 537.1 M	ng/L	1.1 U	1.1 U	1.1 U	0.49 J	1.1 U	0.45 J	1.1 U	0.41	1.1	2.2	9131405
Perfluorododecanoic acid (PFDoA)	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	0.53	1.1	2.2	9131405
Perfluorotridecanoic acid (PFTRDA)	EPA 537.1 M	ng/L	0.78 U	0.78 U	0.78 U	0.50 J	0.78 U	0.48 J	0.33 J	0.27	0.78	2.2	9131405
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	9131405
Perfluorobutanesulfonic acid (PFBS)	EPA 537.1 M	ng/L	1.1 U	3.7	3.3	0.32 J	3.2	2.4	1.1 U	0.3	1.1	2.2	9131405
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.1 U	3.3	2.7	1.1 U	2.5	1.9 J	1.1 U	0.38	1.1	2.2	9131405
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.1 U	25	24	1.2 J	19	11	1.1 U	0.31	1.1	2.2	9131405
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.1 U	1.0 J	1.4 J	1.1 U	1.1 U	0.50 J	1.1 U	0.48	1.1	2.2	9131405
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.1 U	110	110	2.6	61	32	1.1 U	0.52	1.1	2.2	9131405
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.71	1.6	2.2	9131405
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.67	1.6	2.2	9131405
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.44	1.6	4.4	9131405
MeFOSAA	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.91 J	1.3 J	0.78	1.6	4.4	9131405
EtFOSAA	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.1 J	1.7 J	0.6	1.6	4.4	9131405
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.52	1.6	4.4	9131405
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	18	18	4.6	8.7	5.4	1.6 U	0.7	1.6	4.4	9131405
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.6 U	10	11	1.1 J	7.7	4.1 J	1.6 U	0.59	1.6	4.4	9131405
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.46	1.6	4.4	9131405
4,8-Dioxa-3H-perfluorononanoic acid	EPA 537.1 M	ng/L	0.44 U	0.44 U	0.44 U	0.24 J	0.44 U	0.44 U	0.44 U	0.13	0.44	4.4	9131405
9CI-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	0.47	1.1	4.4	9131405
11CI-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	0.36	1.1	4.4	9131405

Notes:

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

 $\ensuremath{\mathsf{U}}$ - Undetected. Compound was analyzed for, but not detected.

Sample SANG-FB-12192023 is a field blank.

Sample SANG-INF-12192023D is a field duplicate of SANG-INF-12192023.

PEBG1 = post E port C train GAC Unit 1 PEBG2 = post E port C train GAC Unit 2 PEBR1 = 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

C3BS086V1 - 12/26/2023

RESULTS OF ANALYSES OF WATER						VALIDATED DATA						
	Bureau Ve	ritas ID	XZG643	XZG648	XZG649	XZG645	XZG647	XZG646	XZG644			
	Sampli	ng Date	2023/12/26 07:25	2023/12/26 08:00	2023/12/26 08:00	2023/12/26 07:38	2023/12/26 07:51	2023/12/26 07:45	2023/12/26 07:30			
	Sai	nple ID	SANG-FB-12262023	SANG-INF-12262023	SANG-INF-12262023D	SANG-PECR1-12262023	SANG-PECG1-12262023	SANG-PECG2-12262023	SANG-EFF-12262023	DL	LOD	LOC
Perfluorinated Compounds	Method	UNITS										
Perfluorobutanoic acid (PFBA)	EPA 537.1 M	ng/L	1.4 U	30	30	11	27	6.1	13	0.66	1.6	2.2
Perfluoropentanoic acid (PFPeA)	EPA 537.1 M	ng/L	0.70 U	90	90	0.50 J	71	2.3	1.6 J	0.24	0.78	2.2
Perfluorohexanoic acid (PFHxA)	EPA 537.1 M	ng/L	0.70 U	62	62	0.78 U	49	1.2 J	0.78 U	0.22	0.78	2.2
Perfluoroheptanoic acid (PFHpA)	EPA 537.1 M	ng/L	1.0 U	42	42	1.1 U	30	0.70 J	1.1 U	0.31	1.1	2.2
Perfluorooctanoic acid (PFOA)	EPA 537.1 M	ng/L	1.0 U	41	40	1.1 U	29	0.68 J	1.1 U	0.46	1.1	2.2
Perfluorononanoic acid (PFNA)	EPA 537.1 M	ng/L	1.0 U	12	13	1.1 U	9.2	1.1 U	1.1 U	0.39	1.1	2.2
Perfluorodecanoic acid (PFDA)	EPA 537.1 M	ng/L	1.0 U	6.6	6.8	1.1 U	4	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	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	0.27	0.78	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	14	14	1.1 U	16	1.2 J	1.1 U	0.3	1.1	2.2
Perfluoropentanesulfonic acid (PFPes)	EPA 537.1 M	ng/L	1.0 U	14	14	1.1 U	8.8	1.1 U	1.1 U	0.38	1.1	2.2
Perfluorohexanesulfonic acid (PFHxS)	EPA 537.1 M	ng/L	1.0 U	120 (1)	120 (1)	1.1 U	73	1.6 J	1.1 U	2.8	10	20
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537.1 M	ng/L	1.0 U	5.3	4.9	1.1 U	3.3	1.1 U	1.1 U	0.48	1.1	2.2
Perfluorooctanesulfonic acid (PFOS)	EPA 537.1 M	ng/L	1.0 U	410 (1)	380 (1)	1.1 U	250 (1)	6	1.1 U	4.7	10	20
Perfluorononanesulfonic acid (PFNS)	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.71	1.6	2.2
Perfluorodecanesulfonic acid (PFDS)	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.67	1.6	2.2
Perfluorooctane Sulfonamide (PFOSA)	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.44	1.6	4.4
MeFOSAA	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.78	1.6	4.4
EtFOSAA	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.6	1.6	4.4
4:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	0.92 J	0.94 J	1.6 U	0.74 J	1.6 U	1.6 U	0.52	1.6	4.4
6:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	99	97	1.6 U	57	1.2 J	1.6 U	0.7	1.6	4.4
8:2 Fluorotelomer sulfonic acid	EPA 537.1 M	ng/L	1.4 U	33	34	1.6 U	11	1.6 U	1.6 U	0.59	1.6	4.4
Hexafluoropropyleneoxide dimer acid	EPA 537.1 M	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.46	1.6	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
9CI-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	0.47	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	0.36	1.1	4.4

Notes:

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-12262023 is a field blank.

Sample SANG-INF-12262023D is a field duplicate of SANG-INF-12262023.

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

TABLE 2 - OTHER WATER QUALITY MONITORING RESULTS



		Glyc	cols	
Sample Parameter/Sample ID	Sampling Date	Influent (SANG-INF-11202023 mg/L)	PBG2 Effluent (SANG-PEBG2-11202023 mg/L)	Effluent (SANG-EFF-11202023 mg/L)
Diethylene glycol	11/20/2023	<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)	PDG2 Effluent (mg/L)	Effluent (mg/L)
тос	11/20/2023	3.20	1.50	1.00

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Cleaning or Changeout	Media Change Out	Resin Vessel Skimming
10/3/2023				Coarse Sand 1A/1B and 2A/2B media change out (Loaded 2.5 ft ³ of gravel and 8 ft ³ of coarse sand)		
10/4/2023				Fine Sand 3A/3B, 4A/4B, and 5A/5B media change out (Loaded 2.5 ft ³ of gravel and 8 ft ³ of fine sand)		
10/5/2023					Remove all media from Train B. Both Train B1 & B2 GAC vessels loaded with (≈2,500 lbs.) of new F-400 carbon, each. Train B Resin loaded with (8 ft ³) of new anthracite and (63 ft ³) of new resin. GAC filled with water to degas overnight.	
10/6/2023		10 Micron Pleated	Primary and Secondary Carbon vessels Train B. Placed new media in service following backwash.		Remove al media from Train A. Both Train A1 & A2 GAC vessels loaded with (≈2,500 lbs.) of new F-400 carbon, each. Train A Resin loaded with (8 ft ³) of new anthracite and (63 ft ³) of new resin. GAC filled with water to degas overnight.	
10/9/2023	25 Micron Regular		Primary and Secondary Carbon vessels Train A. Placed new media in service following backwash.		Remove all media from Train C. Both Train C1 & C2 GAC vessels loaded with (≈2,500 lbs.) of new F-400 carbon, each. Train C Resin loaded with (8 ft ³) of new anthracite and (63 ft ³) of new resin. GAC filled with water to degas overnight.	

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
10/10/2023			Primary and Secondary Carbon vessels Train C. Placed new media in service following backwash.		Remove all media from Train D. Both Train D1 & D2 GAC vessels loaded with (≈2,500 lbs.) of new F-400 carbon, each. Train D Resin loaded with (8 ft ³) of new anthracite and (63 ft ³) of new resin. GAC filled with water to degas overnight.	
10/11/2023		10 Micron Regular	Primary and Secondary Carbon vessels Train D. Placed new media in service following backwash.			
10/13/2023	25 Micron Pleated	10 Micron Pleated				
10/16/2023		10 Micron Regular				
10/17/2023	25 Micron Regular					
10/18/2023		10 Micron Regular				
10/19/2023	25 Micron Regular	10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			
10/20/2023	25 Micron Pleated	10 Micron Pleated				
10/24/2023			Primary Carbon vessels A1, B1, C1, & D1			

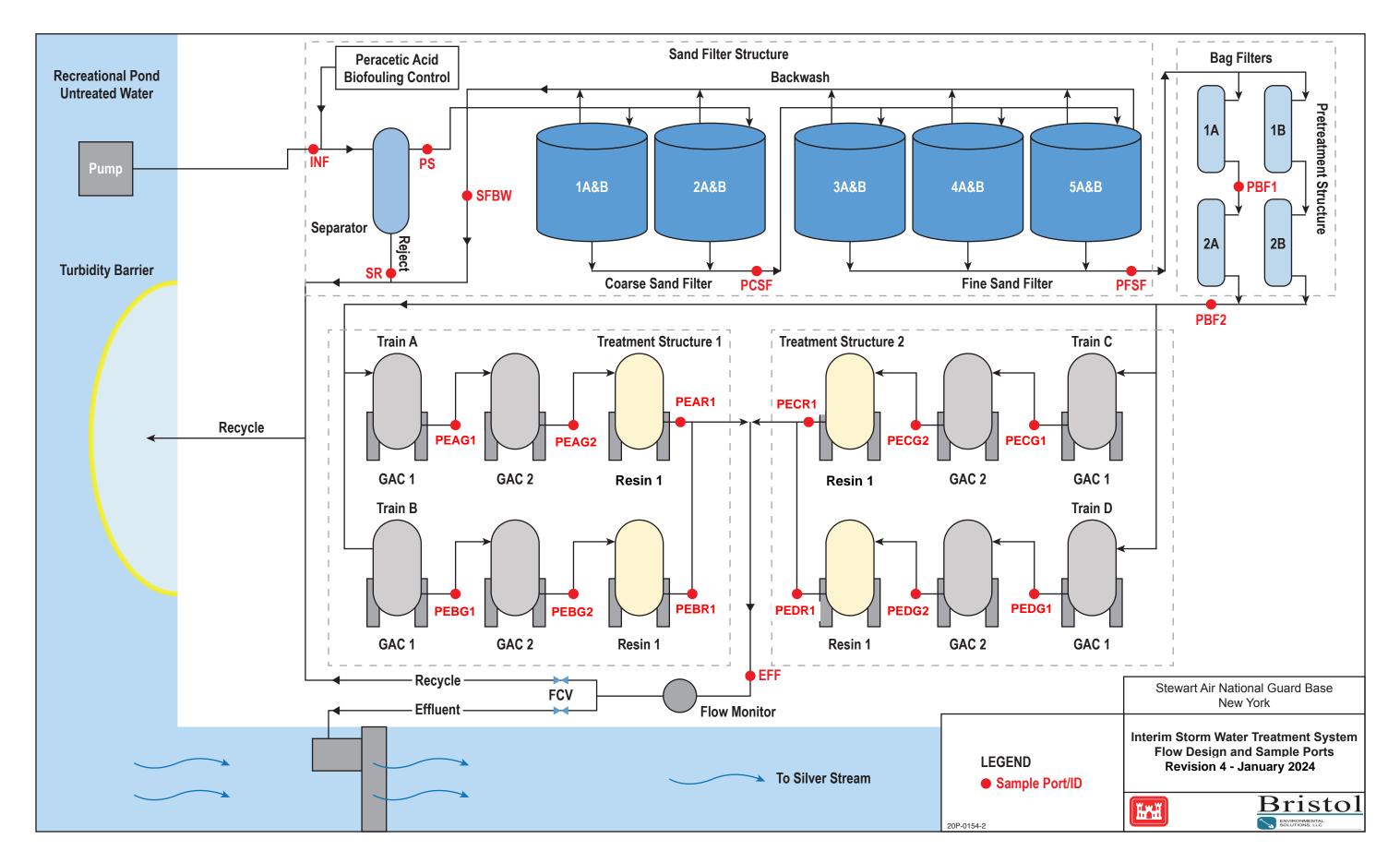
Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning or Changeout	Media Change Out	Resin Vessel Skimming
10/26/2023					Ship all Spent GAC media back to Calgon for regeneration and spent resin, sand and bag filters to landfill for disposal.	
10/27/2023	25 Micron Pleated	10 Micron Pleated				
10/30/2023	25 Micron Regular	10 Micron Regular				
11/2/2023			Primary Carbon vessels A1, B1, C1, & D1			
11/3/2023	25 Micron Pleated	10 Micron Pleated				
11/8/2023	25 Micron Regular	10 Micron Regular		Coarse Sand Filters (1A/1B)		
11/9/2023			Primary Carbon vessels A1, B1, C1, & D1			
11/10/2023	25 Micron Pleated	10 Micron Pleated				
11/13/2023		10 Micron Regular				
11/14/2023	25 Micron Regular	10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			

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
11/15/2023			Secondary Carbon vessels A2, B2, C2, & D2			
11/16/2023		10 Micron Regular				Inpsected Resin vessels. Leveled resin in Train A Resin.
11/17/2023	25 Micron Pleated	10 Micron Pleated				
11/20/2023	25 Micron Regular	10 Micron Regular				
11/21/2023		10 Micron Regular	Primary Carbon vessels A1, B1, C1, & D1			
11/22/2023	25 Micron Pleated	10 Micron Pleated				
11/27/2023	25 Micron Pleated	10 Micron Pleated				
11/29/2023				Fine Sand Filters (3A/3B)		
11/30/2023			Primary Carbon vessels A1, B1, C1, & D1			
12/1/2023	25 Micron Pleated	10 Micron Pleated				
12/6/2023				Coarse Sand Filters (2A/2B)		
12/7/2023				Fine Sand Filters (4A/4B)		
12/8/2023	25 Micron Pleated	10 Micron Pleated				
12/12/2023			Primary Carbon vessels A1, B1, C1, & D1			

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
12/13/2023				Fine Sand Filters (5A/5B)		
12/14/2023			Secondary Carbon vessels A2, B2, C2, & D2			
12/15/2023	25 Micron Pleated	10 Micron Pleated				
12/20/2023			Primary Carbon vessels A1, B1, C1, & D1			
12/21/2023				Coarse Sand Filters (1A/1B)		
12/22/2023	25 Micron Pleated	10 Micron Pleated				
12/27/2023			Primary Carbon vessels A1, B1, C1, & D1			
12/28/2023				Coarse Sand Filters (2A/2B)		
12/29/2023	25 Micron Pleated	10 Micron Pleated				

FIGURES

FIGURE 1



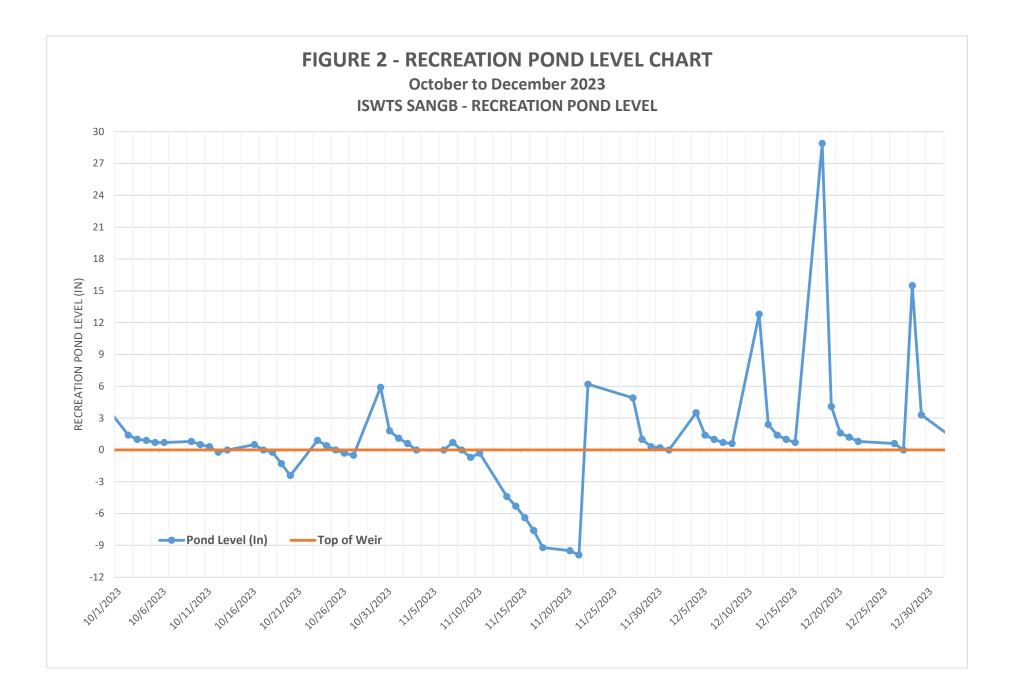
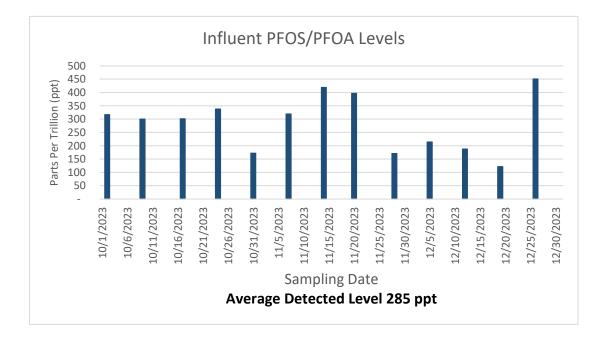
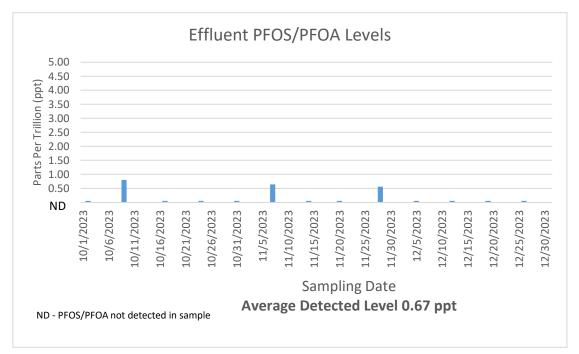
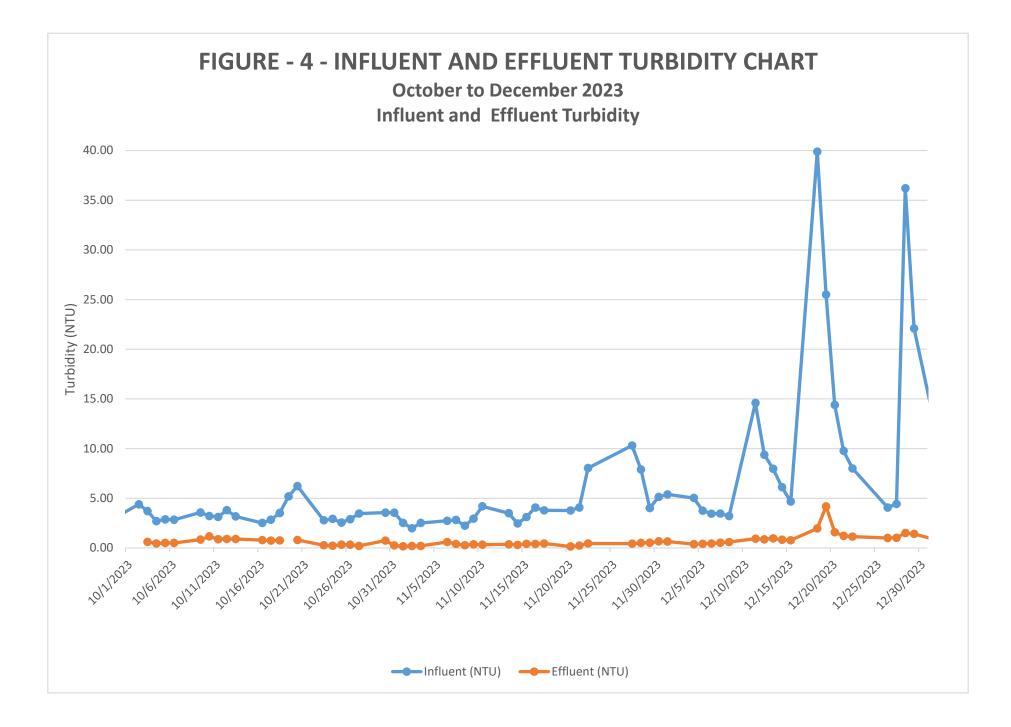


FIGURE 3 - INFLUENT AND EFFLUENT PFOS AND PFOA CHARTS







ATTACHMENT 1

Material Disposal Documents



5705 W 73rd Street Indianapolis, IN 46278 Phone: (317) 762-6007

December 27, 2023

Re: Stewart ANG October 2023 Media Exchange Event

To whom it may concern,

Attached are the manifests and disposal certificates for the waste generated on the service event which occurred on and after October 8, 2023

Thank you,

Eric Patterson



CERTIFICATE OF DESTRUCTION AND ACTIVATED CARBON REACTIVATION

CAN Number: 6973N

Company:

Onion Equipment Company 5705 West 73rd St. Indianapolis, IN 46278-1741

Issue Date: December 20, 2023

Service Order # 60017712

CCC CAN Number: 6973N

Waste Classification: RCRA non-hazardous

Treatment Method: Thermal Reactivation

Calgon Carbon hereby certifies on the above date 20,000 pounds of spent carbon received under the indicated carbon profile application number and manifest # 19-03M-1 was reactivated in accordance with the state and federal regulations by thermal processing that removes and destroys the volatile and semi-volatile contaminants adsorbed on the spent carbon.

Calgon Carbon Corporation

Robert Natili

Quality Assurance Supervisor

Calgon Carbon Corporation 200 Neville Road Pittsburgh, PA 15225

Phone 412-771-4050

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			GENERAI	ORSECTION		と書き この 人口の き	
Non-Hazardous Waste Manifest	Generator ID Number NYD 981 183 338			Waste Profile Number F220121WDI-OTS		Weste Tracking (Manifes 19-03M-1	a) Number
Customer Billing Name and Malli Dnion Equipment Compa 5705 W 73rd Street - Indi	ny	er a skal a skelet		Generator's Site Address Stewart ANG Base 1 Maquire Way, Ne	ewburgh, NY 12550)	1.50
ustomer Billing Phone: (317)	694-7576	a Balandar		Generator's	s Phone:		
ransporter I Company Name puble D Trucking	51 e.M.			Paint 1	- 	US EPA ID Number	en la second
ansporter 2 Company Name				and the second se		US EPA ID Number	a series d
esignated Facility Name and Site AYNE DISPOSAL, INC. 9350 N I-94 SERVICE DI	SITE #2 LANDFILL RIVE- BELLEVILLE,	MI 48111	Truck 641000	777		US EPA ID Number MID 048 090 633	
acility's Phone: 412-771-405	0, X4116		I SALE ADDITE	and the second second	- Section		
Waste Shippin	g Name and Description		nu aproninaziona. Intellaziona entre	ontainers	Total Quantity	Unit Wt / Vol	Disposal Method
			No.		24.000	LB	Landfill
F220121WDI / Spent P	FAS Filtration Media	s Richard data d	17	1 CYD BAG	34,000	В	Lanoini
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pecial Handling Instructions and J Bags Resin, (4) Bags F		and Gravel				24 Hour Emergency Res 317-694-7576	porse Phone
pecial Handling Instructions and a) Bags Resin, (4) Bags F	filter Bags, (5) Sand a					The second s	
peckal Handling Instructions and / b) Bags Resin, (4) Bags F elivery Appointment Mon	Tilter Bags, (5) Sand a . 10/30 at 8am. Con IFICATION: I hereby cortify 1	f.# 1230615	cribed materials are non are in proper condition fo	-hazardous wastes as defined or transportation according to	by 40 CFR 261 or any ap the applicable regulations	317-694-7576 Emergency Rosponse G plicable state law. Further, ti	uide Number
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This certificate is to verify the wastes specified on Manifest # 19 - 03M -CERTIFICATE OF DISPOSAL have been properly disposed of in accordance with all local, state and federal regulation. "Disposed of" means either: 1) Burial or 2) Processed as specified in 40CFR et sea. Michigan Disposal Waste Treatment Plant (EPA LD. # MID000724831) FACILITY NAME: Wayne Disposal, Inc. (EPA LD. # MID048090633) (Please check one) ADDRESS: 49350 N. I-94 Service Drive Bellville, Michigan 48111 PHONE NUMBER: 1-800-592-5489 FAX NUMBER: 1-800-593-5329 **US ecology** Authorized Signature: The electronic version of this document is the controlled version. Each user is responsible for ensuring that any document being used is the current version 6/12/17 IREC-FM-029-BEL