STEWART AIR NATIONAL GUARD BASE
PFOS/PFOA – INTERIM MITIGATION PROJECT

INTERIM STORM WATER TREATMENT SYSTEM
OPERATIONS, MAINTENANCE & MONITORING REPORT

QUARTERLY OM&M REPORT NO. 3
JANUARY TO MARCH 2021

Immediate Response Action, Rapid Response Program
Contract No. W9128F-14-D-0009
Delivery Order No.: W9128F19F0079

Prepared for:

U.S ARMY CORPS OF ENGINEERS
OMAHA DISTRICT
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June 2021

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ACRONYMS AND ABBREVIATIONS

AFFF	Aqueous Film Forming Foam
ANG	Air National Guard
BERS Weston	BERS-Weston Services JVA, LLC
GAC	Granular Activated Carbon
GPM	gallons per minute
HA	Health Advisory
ISWTS	Interim Storm Water Treatment System
mg/L	milligrams per liter
NTU	Nephelometric Turbidity Units
NY	New York
OM&M	Operations, Maintenance and Monitoring
PFAS	polyfluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid
ppt	parts per trillion
SANGB	Stewart Air National Guard Base
TOC	Total Organic Carbon
USACE	United States Army Corps of Engineers
VOC	Volatile Organic Compounds

1. INTRODUCTION

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

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

This is the third quarterly report that summarizes Operations, Maintenance and Monitoring (OM&M) activities conducted by BERS Weston at SANGB. This report summarizes ISWTS operations between 01 January and 31 March 2021 at SANGB.

2. GENERAL COMPLIANCE SUMMARY

The ISWTS operations began treatment of water on 13 July 2020, following installation and commissioning of pretreatment system improvements in June and early July 2020. This report summarizes OM&M between 01 January and 31 March 2021. During ISWTS operations the effluent discharge was monitored for PFOS and PFOA as well as other per and polyfluoroalkyl substances (PFAS) twice per week. During the performance period the system influent and effluent was monitored a total of 26 days for PFAS. Intra-process samples were also collected twice per week except during the media change and were sampled on 23 of the 26 sampling events. Final PFAS results are provided in Table 1. Based on validated analytical data, all effluent sample results

were well below discharge criteria of 70 ppt with exception of three exceedances on 9, 11, and 15 February during the media exchange. These exceedances during the media exchange are further discussed in Section 5.1.

3. ISWTS CONFIGURATION DURING PERFORMANCE PERIOD

The ISWTS maintained the following unit processes; Centrifugal Separator, Coarse Sand Filtration, Fine Sand Filtration, Primary and Secondary Bag filtration, Primary and Secondary Granular Activated Carbon (GAC), and Ion Exchange resin serving as a polish media. Peracetic Acid continued to be introduced prior to the Centrifugal Separator at a low concentration to reduce biological growth in the system. **Figure 1** shows the system configuration during the performance period. The only time system operations were modified was during the media exchange between 8 and 17 February when the Ion Exchange Resin was taken off line as further discussed in Section 5.1.

4. GENERAL FACILITY OPERATIONS SUMMARY

During the performance period, a total of 40,170,735 gallons of storm water was treated and discharged over the outfall weir by the ISWTS. A total of 2,277,635 gallons of storm water was treated and recirculated to the Recreation Pond. The following table 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 represents the sum of water discharged over the weir and recycled to the pond. As noted in the below summary, the ISWTS and Influent Pump does not run all the time. It is turned off when system maintenance is being performed and during periods when Recreation Pond drawdown objectives were achieved.

Month	Volume Treated (Gallons)	Operational Time [1] (Hours)	Run Time [2] (Percent)	Average Treatment Flow [3] (GPM)
January 2021	15,810,070	693	99%	380
February 2021	12,264,300	667	99%	306
March 2021	14,374,000	784	99%	306
Total	42,448,370	2,144		

1. Operation Time – Hours influent pump in operation during month
2. Run Time – Hours pump running divided by the total period time
3. Average GPM – Average flow total gallons divided by operational hours

There were 90 days of operation between 01 January and 31 March 2021. During this period of performance, the recreation pond was drawn down for 38 of the 90 days or 42% of the time. During the performance period airfield operations and snow melt staging created higher than normal stormwater inflow (volumes in excess of 500 GPM). The Recreation Pond level during the performance period is shown on **Figure 2**.

5. FACILITY PERFORMANCE MONITORING

5.1 INFLUENT AND EFFLUENT PFOS AND PFOA MONITORING

As previously noted, PFOS and PFOA samples were collected 26 times on the influent and effluent during the performance period. **Figure 3** shows the combined influent and effluent PFOS and PFOA concentrations based on the validated results. As shown in **Figure 3**, the combined PFOS and PFOA influent and effluent concentrations during the performance period were 324 ppt and 18.8 ppt respectively.

As previously discussed in Section 2 and shown on Figure 3, there were three (3) effluent exceedances during the performance period where PFOS and PFOA exceeded the HA. These exceedances occurred during the media exchange. The media exchange process began on 8 February 2021. During media exchange activities, influent and effluent samples were collected on 9, 11, and 15 February to document performance and effluent compliance. Intra-process samples were not collected during this period. On 17 February 2021, the results from 9 February were received indicating that a combined concentration of PFOS and PFOA was detected in the

effluent at 139 ppt. Upon receipt of this information, BERS Weston notified USACE and ANG/NGB of the HA exceedance and subsequently diverted treated effluent back to Recreation Pond and not over the outfall weir. In response to the exceedances, an evaluation of potential causes was initiated. All PFOS and PFOA results that were collected during the media exchange are summarized below.

Combined PFOS and PFOA Summary (During Media Exchange) ppt		
Date	Influent	Effluent
2/9/21	295	139
2/11/21	337	195
2/15/21	305	55

The media exchange work was completed on 17 February 2021. On 18 February 2021 after all media trains were placed back in service with new media, normal compliance and intra-process monitoring resumed. The effluent continued to be diverted to the Recreation Pond until sampling results confirmed acceptable performance. On 24 February 2021, the 18 February 2021 PFAS results were received that demonstrated acceptable system performance. These results are summarized below. On 24 February 2021, normal operations resumed and treated effluent was discharged over the outfall weir.

Combined PFOS and PFOA Summary (After Exceedance) ppt					
Date	Influent	Primary GAC	Secondary GAC	Resin Effluent	Overall Effluent
2/18/21	229	ND	ND	ND	ND

During the media exchange period, the Ion Exchange resin was taken off-line because the intra-process sample results demonstrated that the resin performance was poor and the Secondary GAC performance was adequate. Following notification of the effluent exceedance, an evaluation was performed to confirm probable cause(s). Based on the evaluation, it is believed that preferential flow and possibly short circuiting resulted in reduced GAC contact time and high PFOS/PFOA in the effluent when the resin was taken off-line. To prevent this from happening in the future, all three media columns will remain in service during future media exchanges.

5.2 INTRA-PROCESS PFOS AND PFOA MONITORING

With exception to the media exchange period, intra-process monitoring for PFOS and PFOA was performed after the Primary and Secondary GAC and Primary Resin to confirm media effectiveness. Based on intra-process sample results the maximum detection of PFOS/PFOA in the Primary GAC was 54 ppt. Prior to the media change, the highest PFOS/PFOA concentration detected the Secondary GAC was 1.1 ppt. The Ion exchange resin performance was observed to be steadily declining in January 2021. Prior to the media exchange 35 ppt of PFOS/PFOA was the highest resin effluent detection on 4 February 2021. The results indicated that the resin was saturated and now desorbing PFAS compounds. Based on the declining performance, a complete media replacement was recommended and approved with a target date set for 1 February 2021; however, weather conditions delayed the work until 8 February 2021. Following the media changeout, intra-process sampling for PFOS and PFOA were continued after the Primary and Secondary GAC and Resin to further confirm their effectiveness.

5.3 OTHER WATER QUALITY MONITORING

During the performance period additional monitoring was performed for Total Organic Carbon (TOC), and Glycols on the influent, Secondary GAC Effluent and final Effluent on a monthly basis. These results are shown in **Table 2**. TOC is known to impact treatment media life. The Ion Exchange Resin manufacturer recommends that TOC not be more than 2 milligrams per liter (mg/L). The average influent TOC was 2.96 mg/L and the GAC Effluent (influent to the resin) was 0.74 mg/L indicating that the influent TOC level to the Ion Exchange resin was acceptable. Glycol was not detected in any of the samples. The sample on 12 January 2021 was collected the day after glycol was used by SANGB. No detections were cause for concern or believed to negatively impact the ISWTS performance.

5.4 TURBIDITY MONITORING

Turbidity is a measurement that can quantify the level of solids present in the water. It is an onsite test that is helpful to measure the influent water quality and intra-process samples help confirm the effectiveness of the treatment system in removing solids. During the performance period, influent and effluent turbidity averaged 4.49 Nephelometric Turbidity Units (NTU) and 0.81 NTU,

respectively. A graph of the Influent and Effluent Turbidity during the performance period is included in **Figure 4**.

5.5 PERACETIC ACID ADDITION

As discussed, Peracetic Acid was added to the process influent to help reduce biological growth in the system. During the performance period 20.0 gallons of Peracetic Acid was introduced and the average dose was 0.49 gallons of Peracetic Acid per million gallons of water treated.

6. 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
- Ion Exchange Resin Backwashing
- Media Exchanges

During the performance period the Coarse and Fine Sand Filters were backwashed 438 and 443 times, respectively. The number of bag filter changes and backwash events are summarized in **Table 3**. As discussed previously, one media exchange was completed between 09 and 17 February 2021. At that time the sand filter media was not replaced.

7. MATERIAL DISPOSAL

During the February 2021 media exchange, the following waste streams were generated. Copies of all signed manifests and all disposal certifications are included in **Attachment 1.**

- Spent Bag Filters
- GAC and Ion Exchange Media.

All waste was disposed of by incineration at Covanta Environmental Solutions of Indianapolis, Indiana. The table below summarizes the quantity of all wastes disposed of during the performance period.

Date Transported	Spent Treatment Media	Weight (pounds)	Date Disposed
02/19/21	non RCRA Spent Activated Carbon	14,544	02/22/21
02/19/21	non RCRA Spent Ion Exchange Resin	9,699	02/22/21
02/19/21	non RCRA Spent Bag Filters	466	2/22/21
02/19/21	non RCRA Spent Activated Carbon	14,680	02/22/21
02/19/21	non RCRA Spent Ion Exchange Resin	9,788	02/22/21
02/19/21	non RCRA Spent Bag Filters	932	02/22/21
	Total non-RCRA Spent Activated Carbon	**29,224**	
	Total non-RCRA Spent Ion Exchange Resin	**19,487**	
	Total non-RCRA Spent Bag Filters	**1,398**	
	TOTAL	**50,109**	

8. PROJECTED ACTIVITIES FOR NEXT PERFORMANCE PERIOD

During the next performance period additional media changes are anticipated in order to meet performance objectives. No other capital improvements are expected.

ATTACHMENT 1

WASTE MANIFESTS & DISPOSAL CERTIFICATES

ONION EQUIPMENT COMPANY

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

June 24, 2021

Re: Stewart ANG February 19th 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 February 19, 2021.

Our profile with Covanta required that the waste be manifested from Onion Equipment, therefore you will find the associated manifests and disposal certificates from OEC and the associated manifests from SANG.

Thank you,

Eric Patterson

Non-Hazardous Waste Manifest

GENERATOR SECTION

Non-Hazardous Waste Manifest	Generator ID Number	Waste Profile Number	Waste Tracking (Manifest) Number
		5001074	PO-00340-7

Customer Billing Name and Mailing
Onion Equipment Company
5705 W 73rd Street - Indianapolis, IN 46278

Customer Billing Phone: (317) 694-7576

Generator's Site Address
Onion Equipment Company
5705 W 73rd Street, Indianapolis, IN 46278

Generator's Phone:

Transporter 1 Company Name
Onion Equipment Company

US EPA ID Number

Transporter 2 Company Name

US EPA ID Number

Designated Facility Name and Site Address
Covanta Environmental Solutions
~~2330 South Harding Street Indianapolis, IN 46221~~
25 S Holt Indianapolis, IN 46221

Facility's Phone: (317) 378-8173

US EPA ID Number

	Waste Shipping Name and Description	Containers No.	Containers Type	Total Quantity	Unit Wt / Vol.	Disposal Method
1	non RCRA Spent Bag Filters (OEC128C-3)	1	BB	~~500~~	LB	Fuel
2				OST 464		
3						
4						

Special Handling Instructions and Additional Information
Weights are estimated, actual weights to be scaled on disposal

5001074 SO 181849

24 Hour Emergency Response Phone
317-694-7576

Emergency Response Guide Number

GENERATOR'S / OFFEROR'S CERTIFICATION: I hereby certify that the above-described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator's Offeror's Printed / Typed Name	Signature	Month	Day	Year
Eric Patterson				

TRANSPORTER SECTION

Transporter's Acknowledgement of Receipt of Materials

Transporter 1 Printed / Typed Name	Signature	Month	Day	Year
Onion Equipment Company		December	11	2020
Transporter 2 Printed / Typed Name: Zach Patterson	Signature	Month	Day	Year

DESIGNATED FACILITY SECTION

Discrepancy

Discrepancy Indication Space	☐ Quantity	☐ Type	☐ Residue	☐ Partial Rejection	☐ Full Rejection

Alternate Facility (or Generator)

US EPA ID Number

Facility's Phone:

Signature of Alternate Facility (or Generator)	Month	Day	Year

Designated Facility Owner or Operator: Certification of Receipt of materials covered by the manifest except as noted in Discrepancy section

Printed / Typed Name	Signature	Month	Day	Year
J Stumpf		2	22	21

COVANTA
Environmental
Solutions

Certificate of Materials Management

Generator

Onion Equipment Company LLC

5705 W 73rd Street

Indianapolis Indiana 46278

Shipping Document # PO-00340-7

SO #: Sales Order #SO181849

Service Date: 2/22/2021

Line #	Profile ID	Waste Description	Cont. No.	Container Type	Total Quantity	Unit Wt./Vol.	Management Method	Disposal Site
1	5001074	Spent Irrigation Mix Treatment Material	1	BA - Burlap, cloth, paper or plastic bags	466	Pounds	Energy-From-Waste	CES - Indianapolis | 2515 Holt Rd, Indianapolis, IN

This document hereby certifies that the above-described materials were managed in accordance with all required and applicable local, state and federal regulations.

Non-Hazardous Waste Manifest

GENERATOR SECTION

Non-Hazardous Waste Manifest	Generator ID Number	Waste Profile Number	Waste Tracking (Manifest) Number
		5001074	~~PO-00340-9~~ PO-00340-8

Customer Billing Name and Mailing
Onion Equipment Company
5705 W 73rd Street - Indianapolis, IN 46278

Customer Billing Phone: (317) 694-7576

Generator's Site Address
Onion Equipment Company
5705 W 73rd Street - Indianapolis, IN 46278

Generator's Phone:

Transporter 1 Company Name: Onion Equipment Company — US EPA ID Number:

Transporter 2 Company Name — US EPA ID Number:

Designated Facility Name and Site Address
Covanta Environmental Solutions
~~2330 South Harding Street - Indianapolis, IN 46221~~
2515 S Holt Rd 46221

Facility's Phone: (317) 559-5694

US EPA ID Number:

	Waste Shipping Name and Description	Containers No.	Containers Type	Total Quantity	Unit Wt / Vol.	Disposal Method
1	non ~~RCRA Spent Irrigation Mix; Non DOT Regulated~~	~~4~~	~~1 CYD BAG~~	10,000	LB	~~Fuel~~
2	non ~~RCRA Spent Irrigation Mix; Non DOT Regulated~~	~~8~~	~~1 CYD BAG~~	~~24,000~~	~~LB~~	~~Fuel~~
3	non ~~RCRA Spent Irrigation Mix; Non DOT Regulated~~	~~2~~	~~1 CYD BAG~~	~~1000~~	~~LB~~	~~Fuel~~
4	non RCRA Spent Irrigation Mix; Non DOT regulated	12	1 CYD Bag	30,000	lb	Fuel

Special Handling Instructions and Additional Information
Profile 5001074, Line 1 - GAC, Line 2 - Resin, Line 3 - Filter Bags
SO 181854

24 Hour Emergency Response Phone:

Emergency Response Guide Number:

GENERATOR'S / OFFEROR'S CERTIFICATION: I hereby certify that the above-described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator's Offeror's Printed / Typed Name	Signature	Month	Day	Year
Eric Patterson		February	19	2021

TRANSPORTER SECTION

Transporter's Acknowledgement of Receipt of Materials

		Month	Day	Year
Transporter 1 Printed / Typed Name: Keenan Bu	Signature: Keenan Bu	February	19	2021
Transporter 2 Printed / Typed Name	Signature			

DESIGNATED FACILITY SECTION

Discrepancy

Discrepancy Indication Space	☐ Quantity	☐ Type	☐ Residue	☐ Partial Rejection	☐ Full Rejection

Alternate Facility (or Generator) — US EPA ID Number:

Facility's Phone:

Signature of Alternate Facility (or Generator)	Month	Day	Year

Designated Facility Owner or Operator: Certification of Receipt of materials covered by the manifest except as noted in Discrepancy section

Printed / Typed Name	Signature	Month	Day	Year
J Stumpf		2	22	21

Ticket

Ticket Number:	8,256	In Date:	2/22/2021
Truck ID:	196	Tons:	12.12
Customer:	COVANTA		Is Active
Product:	INBOUND NON BULK		
Hauler:	N/A		
Out Date:	2/22/2021		
In Weight:	55,500		
Out Weight:	31,260		
Tare:	31,260		
Gross:	55,500		
Net:	24,240		

COVANTA
Environmental
Solutions

Certificate of Materials Management

Generator

Onion Equipment Company LLC

5705 W 73rd Street

Indianapolis Indiana 46278

Shipping Document #

SO #: Sales Order #SO181856

Service Date: 2/22/2021

Line #	Profile ID	Waste Description	Cont. No.	Container Type	Total Quantity	Unit Wt./Vol.	Management Method	Disposal Site
1	5001074	Spent Irrigation Mix Treatment Material	12	BA - Burlap, cloth, paper or plastic bags	24,240	Pounds	Energy-From-Waste	CES - Indianapolis | 2515 Holt Rd, Indianapolis, IN

This document hereby certifies that the above-described materials were managed in accordance with all required and applicable local, state and federal regulations.

Non-Hazardous Waste Manifest

GENERATOR SECTION

Non-Hazardous Waste Manifest	Generator ID Number	Waste Profile Number	Waste Tracking (Manifest) Number
		5001074	PO-00340-9

Customer Billing Name and Mailing
Onion Equipment Company
5705 W 73rd Street - Indianapolis, IN 46278

Customer Billing Phone: (317) 694-7576

Generator's Site Address
Onion Equipment Company
5705 W 73rd Street - Indianapolis, IN 46278

Generator's Phone:

Transporter 1 Company Name
Onion Equipment Company

US EPA ID Number

Transporter 2 Company Name

US EPA ID Number

Designated Facility Name and Site Address 2525 S. Holt
Covanta Environmental Solutions
~~2330 South Harding Street~~ - Indianapolis, IN 46221

Facility's Phone: (317) 559-5694

US EPA ID Number

Waste Shipping Name and Description	Containers No.	Containers Type	Total Quantity	Unit Wt / Vol.	Disposal Method
1 non RCRA Spent Irrigation Mix; Non DOT Regulated	4	1 CYD BAG	10,000	LB	Fuel
2 non RCRA Spent Irrigation Mix; Non DOT Regulated	8	1 CYD BAG	24,000	LB	Fuel
3 non RCRA Spent Irrigation Mix; Non DOT Regulated	2	1 CYD BAG	1000	LB	Fuel
4					

Special Handling Instructions and Additional Information
Profile 5001074, Line 1 - GAC, Line 2 - Resin, Line 3 - Filter Bags
SO181852

24 Hour Emergency Response Phone

Emergency Response Guide Number

GENERATOR'S / OFFEROR'S CERTIFICATION: I hereby certify that the above-described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator's Offeror's Printed / Typed Name	Signature	Month	Day	Year
Eric Patterson		February	19	2021

TRANSPORTER SECTION

Transporter's Acknowledgement of Receipt of Materials

Transporter 1 Printed / Typed Name	Signature	Month	Day	Year
[illegible]		February	19	2021
Transporter 2 Printed / Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY SECTION

Discrepancy

Discrepancy Indication Space	☐ Quantity	☐ Type	☐ Residue	☐ Partial Rejection	☐ Full Rejection

Alternate Facility (or Generator)

US EPA ID Number

Facility's Phone:

Signature of Alternate Facility (or Generator)	Month	Day	Year

Designated Facility Owner or Operator: Certification of Receipt of materials covered by the manifest except as noted in Discrepancy section

Printed / Typed Name	Signature	Month	Day	Year
J Stumpf		2	22	21

Ticket

Ticket Number:	8,246	In Date:	2/22/2021
Truck ID:	PO-00340-9	Tons:	12.7
Customer:	COVANTA		Is Active
Product:	INBOUND NON BULK		
Hauler:	N/A		
Out Date:	2/22/2021		
In Weight:	57,820		
Out Weight:	32,420		
Tare:	32,420		
Gross:	57,820		
Net:	25,400		

COVANTA
Environmental
Solutions

Certificate of Materials Management

Generator

Onion Equipment Company LLC

5705 W 73rd Street

Indianapolis Indiana 46278

Shipping Document # PO-00340-9

SO #: Sales Order #SO181852

Service Date: 2/22/2021

Line #	Profile ID	Waste Description	Cont. No.	Container Type	Total Quantity	Unit Wt./Vol.	Management Method	Disposal Site
1	5001074	Spent Irrigation Mix Treatment Material	14	BA - Burlap, cloth, paper or plastic bags	25,400	Pounds	Energy-From-Waste	CES - Indianapolis | 2515 Holt Rd, Indianapolis, IN

This document hereby certifies that the above-described materials were managed in accordance with all required and applicable local, state and federal regulations.

FIGURES

FIGURE 1

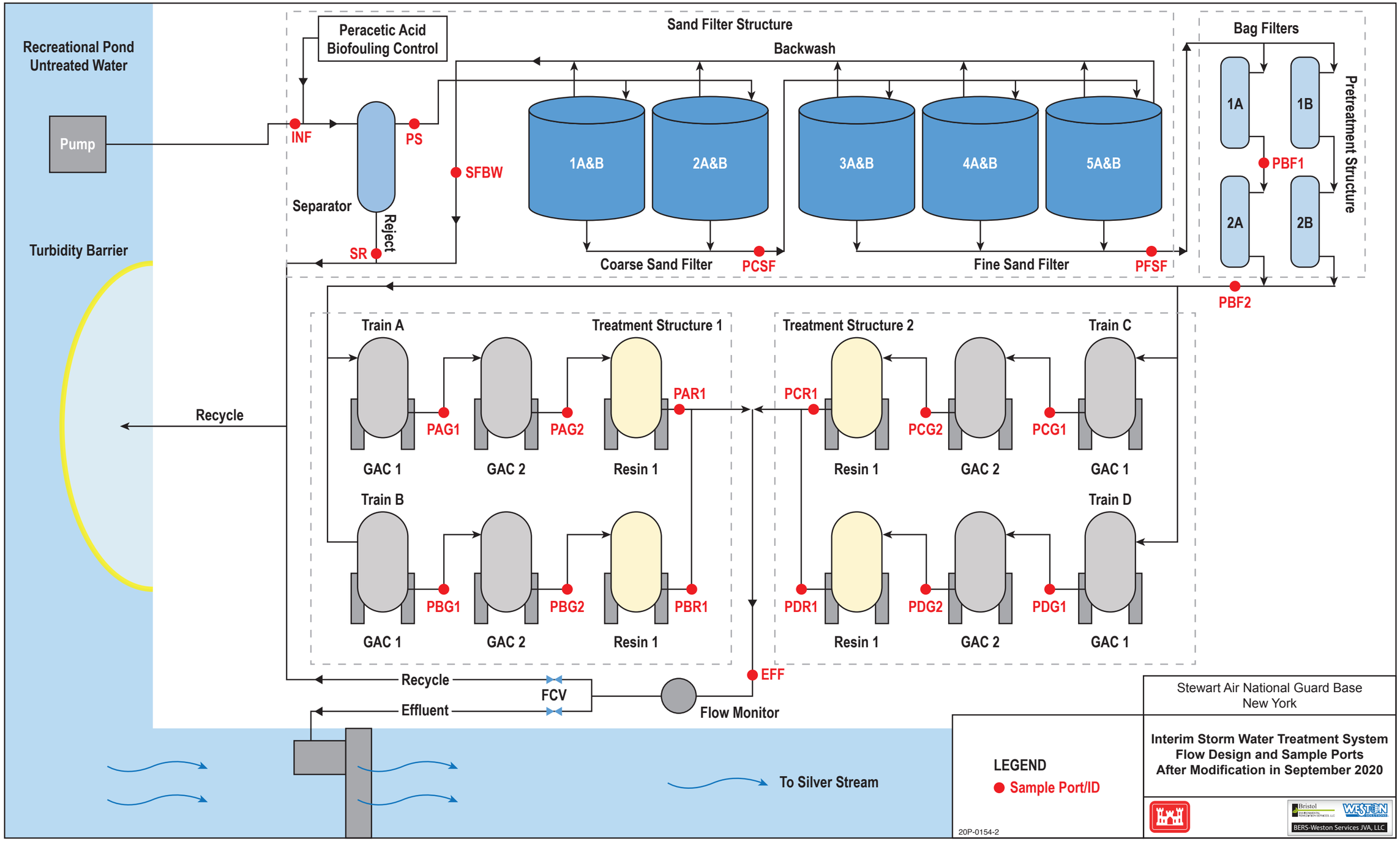

Recreational Pond
Untreated Water
Pump
Turbidity Barrier
Peracetic Acid
Biofouling Control
Sand Filter Structure
Backwash
INF
PS
SFBW
Separator
Reject
SR
1A&B
2A&B
3A&B
4A&B
5A&B
Coarse Sand Filter
PCSF
Fine Sand Filter
PFSF
Bag Filters
1A
1B
2A
2B
PBF1
PBF2
Pretreatment Structure
Train A
Treatment Structure 1
PAG1
PAG2
PAR1
GAC 1
GAC 2
Resin 1
Treatment Structure 2
Train C
PCR1
PCG2
PCG1
Resin 1
GAC 2
GAC 1
Train B
PBG1
PBG2
PBR1
GAC 1
GAC 2
Resin 1
Train D
PDR1
PDG2
PDG1
Resin 1
GAC 2
GAC 1
Recycle
EFF
Recycle
FCV
Effluent
Flow Monitor
To Silver Stream
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 September 2020
BERS-Weston Services JVA, LLC

FIGURE 2 - RECREATION POND LEVEL

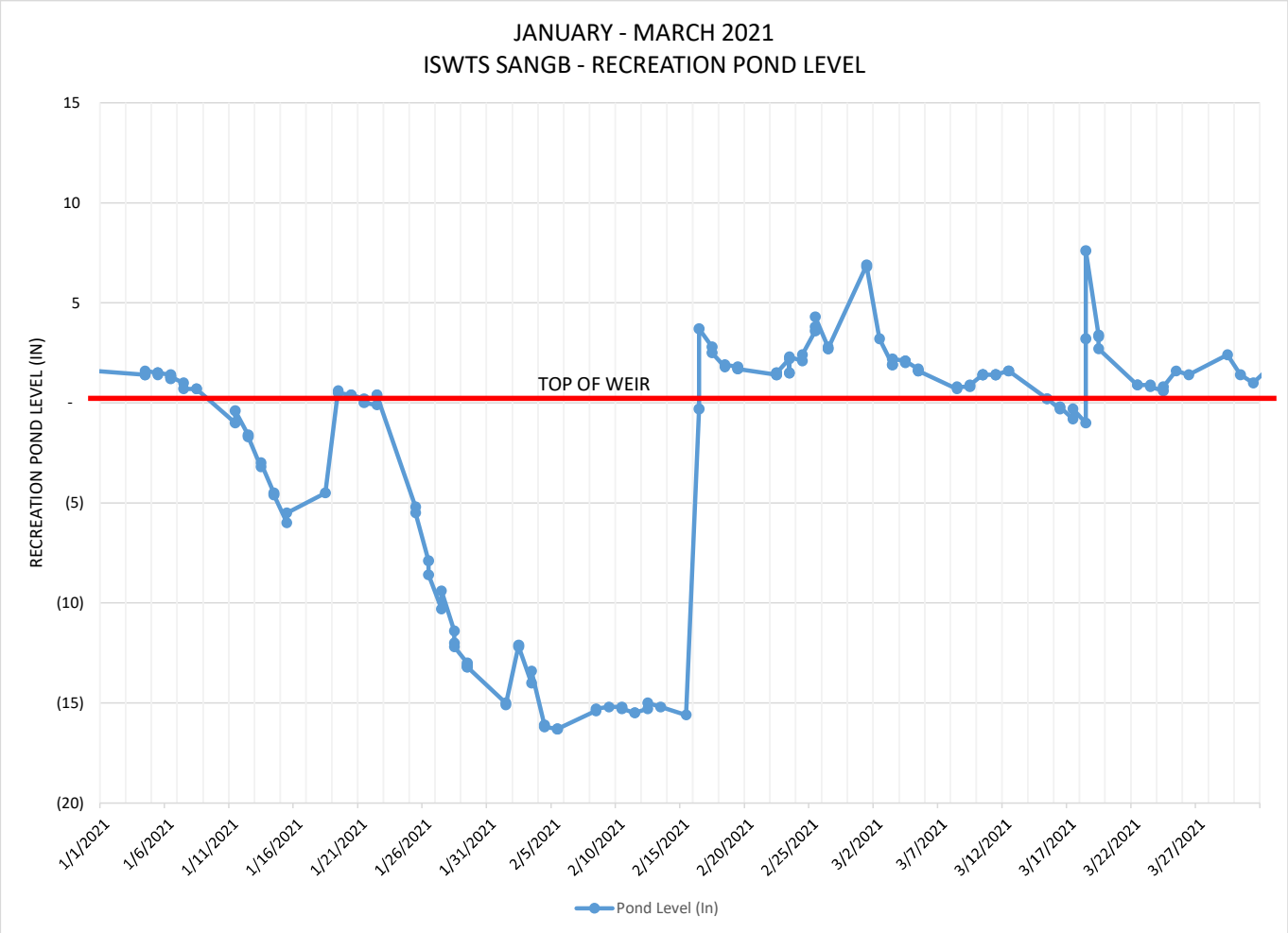
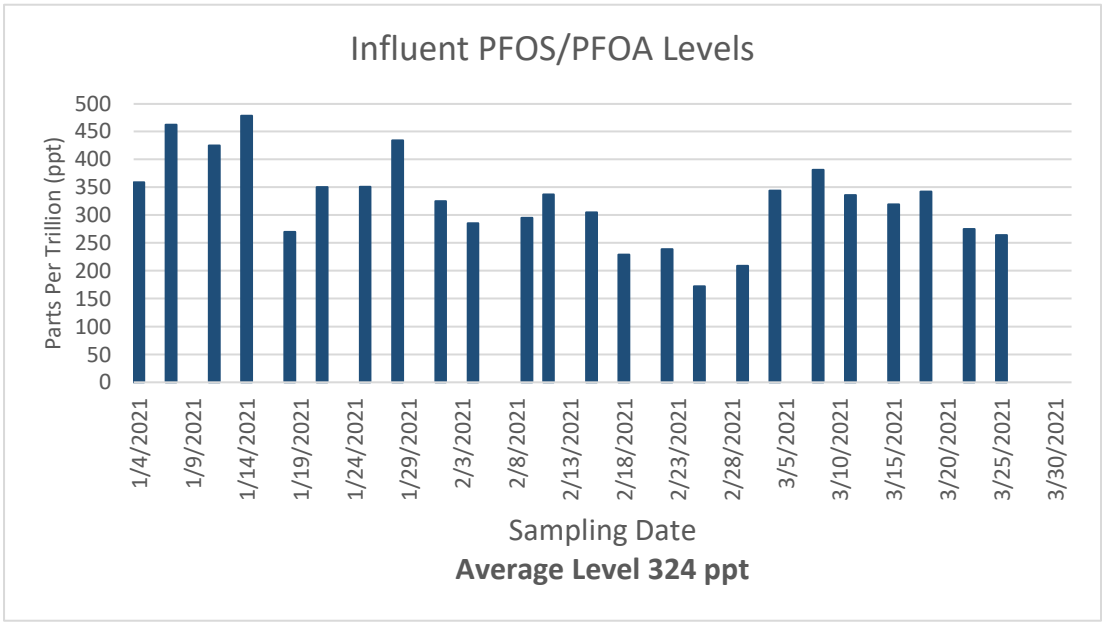


FIGURE 3 - INFLUENT AND EFFLUENT PFOS PFOA CHARTS



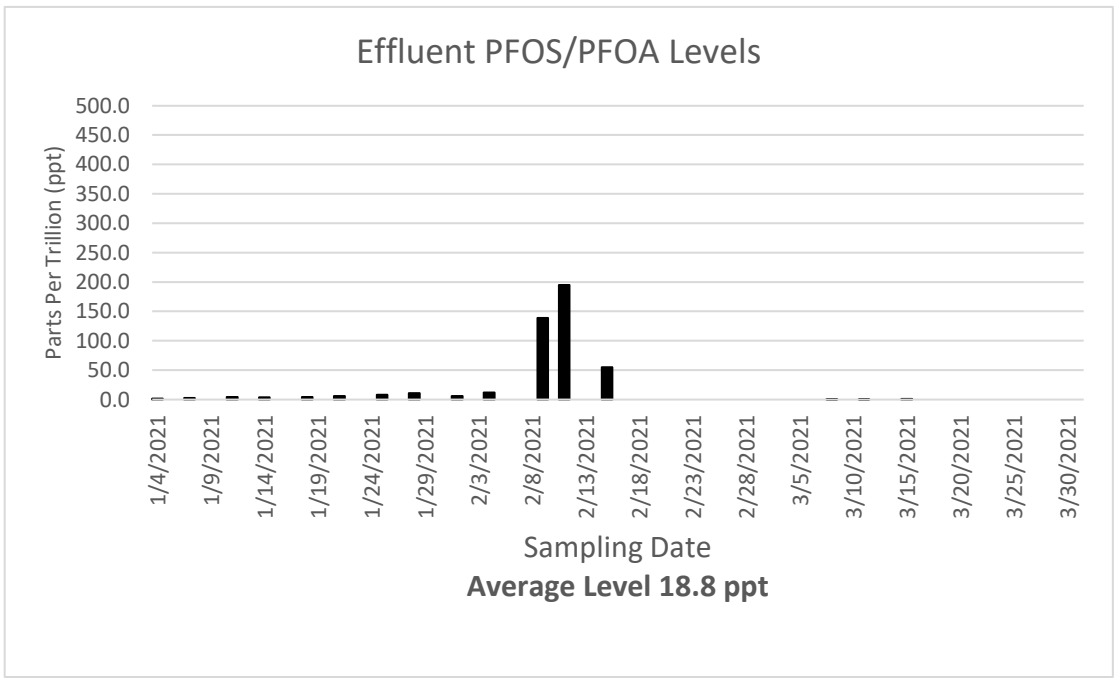
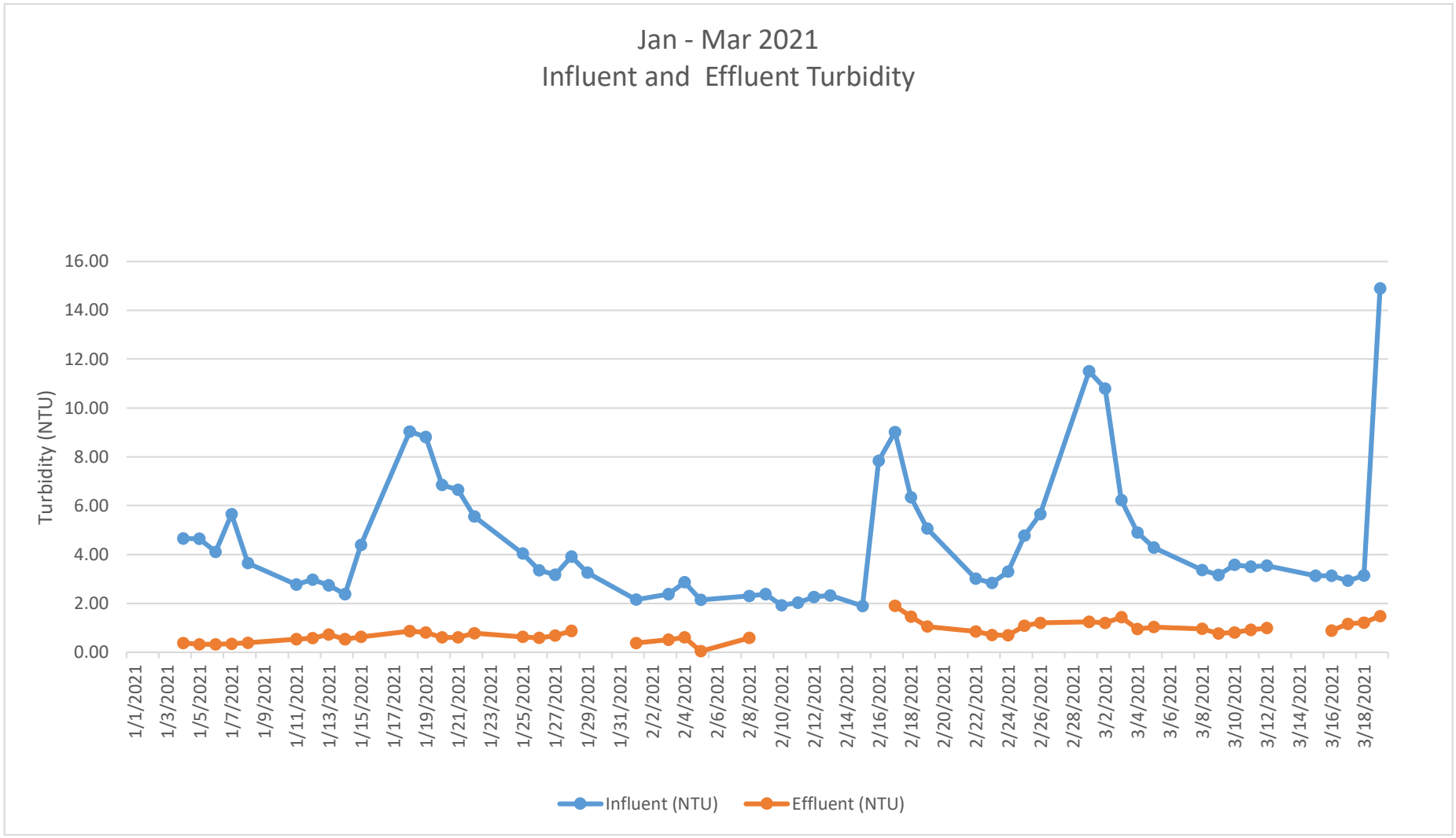


FIGURE 4 - INFLUENT AND EFFLUENT TURBIDITY CHART



TABLES

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		ONO274	ONO279	ONO280	ONO278	ONO277	ONO276	ONO275			
Sampling Date		2021/01/04 11:45	2021/01/04 12:20	2021/01/04 12:20	2021/01/04 12:15	2021/01/04 12:07	2021/01/04 12:00	2021/01/04 11:50			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-01042021**	**SANG-INF-01042021**	**SANG-INF-01042021D**	**SANG-PBG1-01042021**	**SANG-PBG2-01042021**	**SANG-PBR1-01042021**	**SANG-EFF-01042021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	26	26	2.1 J	1.5 U	27	26	0.74	1.5	2.3
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	97	98	2.4	1.3 U	71	74	0.57	1.3	2.3
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	78	81	1.2 J	1.5 U	22	25	0.77	1.5	2.3
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	36	38	1.3 U	1.3 U	3.8	3.4	0.56	1.3	2.3
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	39	41	1.3 U	1.3 U	2.5	1.5 J	0.54	1.3	2.3
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.4	9.5	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.3
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	7.9	8.4	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.3
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.3
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.3
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.3
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.41	1.3	2.3
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	12	13	1.3 U	1.3 U	1.3 U	1.3 U	0.52	1.3	2.3
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	15	15	1.8 U	1.8 U	1.8 U	1.8 U	0.80	1.8	2.3
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	100 (1)	97 (1)	1.3 U	1.3 U	1.3 U	1.3 U	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.2	4.3	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.3
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	320 (1)	350 (1)	1.3 U	1.3 U	1.5 J	1.3 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.3
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.3
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.5
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.5
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.5
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.4 J	1.4 J	1.8 U	1.8 U	0.84 J	1.8 U	0.76	1.8	4.5
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	97	99	1.8 U	1.8 U	9.2	8.2	0.65	1.8	4.5
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	28	30	1.8 U	1.8 U	0.96 J	1.8 U	0.83	1.8	4.5
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.5
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.5
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.5
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.5

ng/L - nanograms per liter, or parts per trillion
U - Undetected. Com[pound was analyzed for, but not detected.
J - Estimated. Associated value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Analytes highlightd in gray are the UCMR3 compounds
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).
SANG-FB-01042021 is a field blank.
SANG-INF-01042021 is a field duplicate of SANG-INF-01042021

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OOH515	OOH520	OOH521	OOH519	OOH518	OOH517	OOH516			
Sampling Date		2021/01/07 08:40	2021/01/07 09:05	2021/01/07 09:05	2021/01/07 09:00	2021/01/07 08:55	2021/01/07 08:50	2021/01/07 08:45			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-01072021**	**SANG-INF-01072021**	**SANG-INF-01072021D**	**SANG-PCG1-01072021**	**SANG-PCG2-01072021**	**SANG-PCR1-01072021**	**SANG-EFF-01072021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	27	23	0.82 J	1.4 U	20	22	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	98	87	0.80 J	1.2 U	52	64	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	82	71	1.4 U	1.4 U	19	25	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	39	34	1.2 U	1.2 U	3.9	3.3	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	42	36	1.2 U	1.2 U	2.3	1.9 J	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.1	8.6	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	7.0	6.4	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	14	12	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	13	14	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	120 (1)	96	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.9	4.6	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	**420 J (1)**	**290 J (1)**	0.56 J	1.2 U	1.7 J	0.66 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	**0.78 J**	**1.3 J**	1.6 U	1.6 U	1.6 U	0.71 J	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	99	92	1.6 U	1.6 U	8.3	8.2	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	27	23	1.6 U	1.6 U	0.89 J	0.79 J	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - nanograms per liter, or parts per trillion.

U - Undetected. The compound was analyzed for, but not detected.

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

Results in red text are qualified based on data validation.

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

Compounds highlighted in gray are the UCMR# compounds.

SANG-FB-01072021 is a field blank.

SANG-INF-01072021D is a field duplicate of SANG-INF-01072021.

Results bolded in red text are qualified based on data validation.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OOW231	OOW236	OOW237	OOW235	OOW234	OOW233	OOW232			
Sampling Date		2021/01/11 08:30	2021/01/11 09:00	2021/01/11 09:00	2021/01/11 08:50	2021/01/11 08:45	2021/01/11 08:40	2021/01/11 08:35			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-01112021**	**SANG-INF-01112021**	**SANG-INF-01112021D**	**SANG-PDG1-01112021**	**SANG-PDG2-01112021**	**SANG-PDR1-01112021**	**SANG-EFF-01112021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	36	35	12	1.0 J	26	24	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	110 (1)	110 (1)	23	0.84 J	68	68	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	92	94	14	1.4 U	36	32	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	44	43	4.9	1.2 U	5.2	4.5	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	45	44	4.4	1.2 U	3.8	2.8	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	10	10	1.1 J	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.7	6.6	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	17	17	1.3 J	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	18	18	1.2 J	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	120 (1)	120 (1)	7.2	1.2 U	1.2 U	1.2 U	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	6.4	5.7	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	380 (1)	380 (1)	22	0.63 J	1.8 J	1.7 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.3 J	1.3 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	120 (1)	120 (1)	7.6	1.6 U	14	14	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	28	30	1.4 J	1.6 U	0.90 J	1.2 J	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

U - Undetected. Compound was analyzed for, but not detected.
J - Estimated result. Associated value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-01112021 is a field blank.
Sample-INF-011120222021D is a field duplicate
Compounds highlighted in gray are the UCMR3 PFAS analytes.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OPP605	OPP610	OPP611	OPP609	OPP608	OPP607	OPP606
Sampling Date		2021/01/14 07:40	2021/01/14 08:15	2021/01/14 08:15	2021/01/14 08:08	2021/01/14 08:00	2021/01/14 07:55	2021/01/14 07:45
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a
	UNITS	**SANG-FB-01142021**	**SANG-INF-01142021**	**SANG-INF-01142021D**	**SANG-PAG1-01142021**	**SANG-PAG2-01142021**	**SANG-PAR1-01142021**	**SANG-EFF-01142021**
Miscellaneous Parameters								
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	40	39	9.7	1.5 U	28	27
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	140 (1)	140 (1)	21	1.3 U	83	81
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	100	100	12	1.5 U	43	35
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	52	52	4.7	1.3 U	7.0	5.5
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	48	48	3.3	1.3 U	3.7	2.8
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	12	12	1.8 U	1.8 U	1.8 U	1.8 U
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	7.4	7.4	1.5 U	1.5 U	1.5 U	1.5 U
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	17	17	0.67 J	1.3 U	1.3 U	1.3 U
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	19	20	1.1 J	1.8 U	1.8 U	1.8 U
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	150 (1)	140 (1)	6.7	1.3 U	1.3 U	1.3 U
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	7.1	6.5	1.3 U	1.3 U	1.3 U	1.3 U
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	430 (1)	400 (1)	19	1.3 U	1.6 J	0.81 J
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 J	1.4 J	1.8 U	1.8 U	1.8 U	1.8 U
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	140 (1)	130 (1)	6.2	1.8 U	15	14
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	32	30	1.2 J	1.8 U	1.5 J	0.86 J
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

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

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

Compounds highlighted in gray are the UCMR3 PFAS analytes.

Sample SANG-FB-01142021 is a field blank.

Sample SANG-INF-01142021D is a field duplicate of SANG-INF-01142021

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

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OQF918	OQF939	OQF941	OQF934	OQF928	OQF926	OQF921			
Sampling Date		2021/01/18 10:55	2021/01/18 11:20	2021/01/18 11:20	2021/01/18 11:15	2021/01/18 11:10	2021/01/18 11:05	2021/01/18 11:00			
COC Number		NA	NA	NA	NA	NA	NA	NA			
	UNITS	**SANG-FB-01182021**	**SANG-INF-01182021**	**SANG-INF-01182021D**	**SANG-PBG1-01182021**	**SANG-PBG2-01182021**	**SANG-PBR1-01182021**	**SANG-EFF-01182021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	21	21	3.8	1.4 U	22	24	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	68	68	6.4	1.2 U	66	68	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	53	54	3.3	1.4 U	33	31	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	27	27	1.4 J	1.2 U	8.1	4.9	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	30	30	1.1 J	1.2 U	6.1	2.9	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.4	7.3	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.3	6.2	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	10	9.8	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	10	11	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	76	78	1.8 J	1.2 U	2.6	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.1	3.2	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	240 (1)	240 (1)	5.2	1.2 U	6.8	1.3 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	63	63	1.5 J	1.6 U	20	12	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	17	16	1.6 U	1.6 U	2.2 J	0.82 J	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - nanograms per liter or parts per trillion.
U - Undetected. Compound was analyzed for, but not detected.
J - Estimated Result. Associated value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-01182021 is a field blank.
Sample SANG-INF-01182021D is a field duplicate of SANG-INF-01182021.
Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		ORB946	ORB951	ORB952	ORB950	ORB949	ORB948	ORB947			
Sampling Date		2021/01/21 08:45	2021/01/21 09:20	2021/01/21 09:20	2021/01/21 09:13	2021/01/21 09:05	2021/01/21 08:57	2021/01/21 08:50			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-01212021**	**SANG-INF-01212021**	**SANG-INF-01212021D**	**SANG-PCG1-01212021**	**SANG-PCG2-01212021**	**SANG-PCR1-01212021**	**SANG-EFF-01212021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	28	27	5.3	1.6 U	25	25	0.77	1.6	2.3
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	99	95	6.1	1.4 U	74	73	0.60	1.4	2.3
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	78	76	2.4	1.6 U	39	36	0.81	1.6	2.3
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	38	36	1.4 U	1.4 U	10	5.8	0.59	1.4	2.3
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	40	38	1.4 U	1.4 U	8.0	3.7	0.56	1.4	2.3
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.0	8.4	1.8 U	1.8 U	1.2 J	1.8 U	0.92	1.8	2.3
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.0	5.9	1.6 U	1.6 U	1.6 U	1.6 U	0.74	1.6	2.3
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.89	1.8	2.3
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.68	1.4	2.3
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.55	1.4	2.3
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.43	1.4	2.3
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	14	14	1.4 U	1.4 U	1.4 U	1.4 U	0.54	1.4	2.3
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	15	15	1.8 U	1.8 U	1.8 U	1.8 U	0.84	1.8	2.3
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	110	110	1.4 U	1.4 U	3.9	1.4 U	0.61	1.4	2.3
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.6	4.7	1.4 U	1.4 U	1.4 U	1.4 U	0.66	1.4	2.3
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	310 (1)	340 (1)	1.4 J	1.4 U	12	2.5	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.74	1.6	2.3
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.61	1.4	2.3
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.0 U	2.3 U	2.3 U	0.93	2.3	4.5
MeFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	1.4	3.5	4.5
EtFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	1.6	3.5	4.5
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.1 J	0.97 J	1.8 U	1.8 U	1.8 U	1.8 U	0.79	1.8	4.5
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	99	97	1.8 U	1.8 U	23	16	0.68	1.8	4.5
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	22	21	1.8 U	1.8 U	1.3 J	1.1 J	0.86	1.8	4.5
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.98	2.3	4.5
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.36	1.4	4.5
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.64	2.3	4.5
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.60	2.3	4.5

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

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

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

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-01212021 is a field blank.

Sample SANG-INF-01212021D is a field duplicate of SANG-INF-01212021.

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

Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		ORX719	ORX724	ORX725	ORX723	ORX722	ORX721	ORX720			
Sampling Date		2021/01/25 08:30	2021/01/25 09:05	2021/01/25 09:05	2021/01/25 09:00	2021/01/25 08:50	2021/01/25 08:42	2021/01/25 08:35			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-01252021**	**SANG-INF-01252021**	**SANG-INF-01252021D**	**SANG-PDG1-01252021**	**SANG-PDG2-01252021**	**SANG-PDR1-01252021**	**SANG-EFF-01252021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	33	33	17	3.0	25	24	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	110 (1)	110 (1)	39	3.8	70	70	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	90	89	24	1.5 J	43	37	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	40	41	9.1	1.2 U	9.3	6.4	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	41	43	8.0	1.2 U	7.3	4.6	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.1	9.1	1.5 J	1.6 U	1.0 J	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	5.5	5.6	0.65 J	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	16	16	2.2	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	16	16	2.0 J	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	120 (1)	120 (1)	17	1.2 U	1.9 J	0.95 J	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.5	4.4	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	310 (1)	320 (1)	46	1.1 J	6.9	3.5	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.1 J	1.1 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	110 (1)	110 (1)	17	1.6 U	25	19	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	24	24	2.1 J	1.6 U	1.5 J	1.6 J	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

U - Undetected. Compound was analyzed for but not detected.
J - Estimated result. Assocaited value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
Sample SANG-FB-01252021 is a field blank.
Sample SANG-INF-01252021D is a field duplicate of SANG-BF-01252021.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).
Compunds highlighted in gray represent the UCMR3 PFAS compounds.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OSL730	OSL735	OSL736	OSL734	OSL733	OSL732	OSL731			
Sampling Date		2021/01/28 09:00	2021/01/28 09:35	2021/01/28 09:35	2021/01/28 09:30	2021/01/28 09:22	2021/01/28 09:15	2021/01/28 09:05			
COC Number		NA	NA	NA	NA	NA	NA	NA			
	UNITS	**SANG-FB-01282021**	**SANG-INF-01282021**	**SANG-INF-01282021D**	**SANG-PAG1-01282021**	**SANG-PAG2-01282021**	**SANG-PAR1-01282021**	**SANG-EFF-01282021**	**DL**	**LOD**	**LOQ**
Miscellaneous Parameters											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	37	39	15	1.6 U	35	32	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	130 (1)	130 (1)	28	1.4 U	96	88	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	97	100	16	1.6 U	64	49	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	43	46	5.9	1.4 U	11	9.2	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	44	46	4.6	1.4 U	7.9	5.8	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.8	11	1.1 J	1.8 U	1.3 J	1.1 J	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.3	6.3	1.5 U	1.6 U	0.82 J	1.6 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.4 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.4 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.4 U	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	18	19	1.9 J	1.4 U	1.4 U	1.4 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	19	20	1.3 J	1.8 U	1.8 U	1.8 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	130 (1)	130 (1)	9.4	1.4 U	1.1 J	1.3 J	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	5.4	5.7	1.3 U	1.4 U	1.4 U	1.4 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	390 (1)	380 (1)	23	1.4 U	4.7	5.1	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.6 U	1.6 U	1.6 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.4 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	**2.3 UJ**	2.3 U	2.3 U	0.89	2.2	4.3
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.5 U	1.3	3.3	4.3
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.5 U	1.5	3.3	4.3
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.9 J	1.6 J	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.3
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	130 (1)	130 (1)	9.1	1.8 U	28	24	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	27	29	1.2 J	1.8 U	2.1 J	1.9 J	0.83	1.8	4.3
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	0.94	2.2	4.3
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.4 U	0.34	1.3	4.3
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	0.62	2.2	4.3
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	0.57	2.2	4.3

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

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

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

UJ - Not detected at an estimated Limit Of Detection.

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-01282021 is a field blank.

Sample SANG-INF-01282021D is a field duplicate of SANG-INF-01282021.

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

Compunds highlighted in gray represent the UCMR3 PFAS compounds.

Reuslts bolded in red text are qualified based on validation.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OTI908	OTI913	OTI914	OTI912	OTI911	OTI910	OTI909			
Sampling Date		2021/02/01 10:00	2021/02/01 10:35	2021/02/01 10:35	2021/02/01 10:28	2021/02/01 10:20	2021/02/01 10:13	2021/02/01 10:05			
COC Number		NA	NA	NA	NA	NA	NA	NA			
	UNITS	**SANG-FB-02012021**	**SANG-INF-02012021**	**SANG-INF-02012021D**	**SANG-PBG1-02012021**	**SANG-PBG2-02012021**	**SANG-PBR1-02012021**	**SANG-EFF-02012021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	43	39	4.9	1.7 J	30	32	0.77	1.6	2.3
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	120 (1)	130 (1)	6.2	1.1 J	85	86	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	100 (1)	110 (1)	2.5	1.6 U	46	47	7.0	14	20
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	40	44	1.4 J	1.4 U	13	7.7	0.59	1.4	2.3
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	45	43	0.77 J	1.4 U	10	4.5	0.56	1.4	2.3
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.7	9.7	1.8 U	1.8 U	1.7 J	1.8 U	0.92	1.8	2.3
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	5.5	5.8	1.6 U	1.6 U	1.1 J	1.6 U	0.74	1.6	2.3
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.89	1.8	2.3
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.68	1.4	2.3
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.55	1.4	2.3
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.43	1.4	2.3
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	16	16	1.4 U	1.4 U	1.2 J	1.4 U	0.54	1.4	2.3
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	14	13	1.8 U	1.8 U	1.8 U	1.8 U	0.84	1.8	2.3
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	110 (1)	120 (1)	1.4 U	1.4 U	3.1	0.61 J	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.8	4.9	1.4 U	1.4 U	1.4 U	1.4 U	0.66	1.4	2.3
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	280 (1)	330 (1)	1.5 J	0.52 J	8.2	1.6 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.74	1.6	2.3
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.61	1.4	2.3
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.93	2.3	4.6
MeFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	1.4	3.5	4.6
EtFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	1.6	3.5	4.6
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	2.0 J	1.5 J	1.8 U	1.8 U	1.8 U	1.8 U	0.79	1.8	4.6
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	120 (1)	120 (1)	1.8 U	1.8 U	30	20	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	21	22	1.8 U	1.8 U	2.9 J	1.2 J	0.86	1.8	4.6
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.98	2.3	4.6
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.36	1.4	4.6
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.64	2.3	4.6
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	0.60	2.3	4.6

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

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

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-02012021 is a field blank.

Sample SANG=INF-92912921D is a field duplicate of SANG-INF-02012021.

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

Compounds highlingthed in gray are the UCMR3 PFAS analyties.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OTX946	OTX951	OTX952	OTX950	OTX949	OTX948	OTX947			
Sampling Date		2021/02/04 10:20	2021/02/04 10:53	2021/02/04 10:53	2021/02/04 10:48	2021/02/04 10:40	2021/02/04 10:33	2021/02/04 10:25			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-02042021**	**SANG-INF-02042021**	**SANG-INF-02042021D**	**SANG-PCG1-02042021**	**SANG-PCG2-02042021**	**SANG-PCR1-02042021**	**SANG-EFF-02042021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	0.69 J	32	33	8.5	**2.0 U**	28	30	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	100	100	9.3	1.1 J	74	83	0.57	1.3	2.2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	69	77	4.2	1.5 U	38	46	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	35	32	0.91 J	1.3 U	12	8.7	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	35	38	0.87 J	1.3 U	10	6.4	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.8	7.6	1.8 U	1.8 U	2.2 J	1.2 J	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.3	4.2	1.5 U	1.5 U	1.2 J	1.4 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.6 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	15	15	1.3 U	1.3 U	1.2 J	1.2 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	11	11	1.8 U	1.8 U	1.5 J	1.6 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	100	98	0.97 J	1.3 U	9.5	1.7 J	0.58	1.3	2.2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.4	4.2	1.3 U	1.3 U	0.76 J	1.2 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	250 (1)	250 (1)	2.5	0.53 J	25	5.8	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.4 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.0 U	0.89	2.2	4.5
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.0 U	1.3	3.3	4.5
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.0 U	1.5	3.3	4.5
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.88 J	1.1 J	1.8 U	1.8 U	0.84 J	1.6 U	0.76	1.8	4.5
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	110	110	0.70 J	1.8 U	28	24	0.65	1.8	4.5
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	22	20	1.8 U	1.8 U	2.4 J	1.8 J	0.83	1.8	4.5
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.0 U	0.94	2.2	4.5
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.2 U	0.34	1.3	4.5
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.0 U	0.62	2.2	4.5
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.0 U	0.57	2.2	4.5

U - Undetected. Compound was analyzed for, but not detected.
J - Estimated result. Associated value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-02042021 is a field blank.
Sample SANG-INF-02042021D is a field duplicate
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).
Compounds highlighted in gray are the UCMR3 PFAS analytes.
Results bolded in red are qualified based on data validation.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OUU246	OUU248	OUU249	OUU247			
Sampling Date		2021/02/09 09:10	2021/02/09 09:20	2021/02/09 09:20	2021/02/09 09:15			
	UNITS	**SANG-FB-02092021**	**SANG-INF-02092021**	**SANG-INF-02092021-D**	**SANG-EFF-02092021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds								
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	34	31	28	0.77	1.6	2.3
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	110	99	74	0.60	1.4	2.3
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	85	79	54	0.81	1.6	2.3
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	34	31	19	0.59	1.4	2.3
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	35	32	19	0.56	1.4	2.3
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.5	7.1	4.1	0.92	1.8	2.3
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.5	4.2	2.1 J	0.74	1.6	2.3
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.8 U	0.89	1.8	2.3
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	0.68	1.4	2.3
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	0.55	1.4	2.3
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	0.43	1.4	2.3
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	16	14	8.0	0.54	1.4	2.3
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	15	14	7.1	0.84	1.8	2.3
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	100	94	47	0.61	1.4	2.3
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.7	4.2	2.1 J	0.66	1.4	2.3
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	260 (1)	260 (1)	120 (1)	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.6 U	1.6 U	1.6 U	0.74	1.6	2.3
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	0.61	1.4	2.3
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	0.93	2.3	4.5
MeFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.5 U	1.4	3.5	4.5
EtFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.5 U	1.6	3.5	4.5
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.7 J	1.6 J	0.84 J	0.79	1.8	4.5
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	100	95	46	0.68	1.8	4.5
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	20	18	7.3	0.86	1.8	4.5
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	0.98	2.3	4.5
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.4 U	1.4 U	1.4 U	0.36	1.4	4.5
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	0.64	2.3	4.5
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.3 U	2.3 U	2.3 U	0.60	2.3	4.5

ng/L - nanograms per liter or parts per trillion.
U - Undetected. Compound was analyzed for, but not detected.
J - Estimated result. Assocaited value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-INF-02092021-D is a field duplicate of SANG-INF-02092021.
Sample SANG-FB-02092021 is a field blank.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).
Compunds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OVL079	OVL081	OVL082	OVL080			
Sampling Date		2021/02/11 07:50	2021/02/11 08:00	2021/02/11 08:00	2021/02/11 07:55			
	UNITS	**SANG-FB-02112021**	**SANG-INF-02112021**	**SANG-INF-02112021-D**	**SANG-EFF-02112021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds								
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	34	33	30	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	110 (1)	110 (1)	81	5.2	12	20
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	84	84	62	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	36	36	25	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	37	36	25	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	8.1	7.8	5.1	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.7	4.7	2.6	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	16	16	10	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	16	17	9.6	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	110 (1)	110 (1)	63	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	5.2	5.2	3.1	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	300 (1)	280 (1)	170 (1)	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	2.0 J	1.8 J	1.3 J	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	100 (1)	100 (1)	64	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	20	18	8.2	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	0.40 J	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - nanograms per liter or parts per trillion

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

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

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-02112021 is a field blank.

Sample SANG-INF-02122021-D is a field duplicate of SANG-INF-02112021.

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

Compounds highlighted in gray represent the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OVU049	OVU051	OVU052	OVU050			
Sampling Date		2021/02/15 08:30	2021/02/15 08:44	2021/02/15 08:44	2021/02/15 08:35			
COC Number		na	na	na	na			
	UNITS	**SANG-FB-02152021**	**SANG-INF-02152021**	**SANG-INF-02152021-D**	**SANG-EFF-02152021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds								
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	31	30	8.5	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	99	96	23	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	82	78	17	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	35	34	7.1	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	35	36	7.0	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.8	7.8	1.7 J	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.9	4.7	1.1 J	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	0.60 J	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	16	15	3.1	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	17	16	2.8	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	100 (1)	84 (1)	19	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	5.4	4.9	1.2 J	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	270 (1)	240 (1)	48	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.9 J	1.8 J	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	110 (1)	88 (1)	18	5.9	16	40
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	21	20	2.4 J	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - Nanograms per Liter or parts per trillion.
U - Undetected. Compund was analyzed for, but was not detected.
J - Estimated result. Assocaited value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-02152021 is a field blank.
Sample SANG-INF-02152021-D is a field duplicate of SANG-INF-02152021.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).
Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OWQ403	OWQ404	OWQ412	OWQ413	OWQ411	OWQ410	OWQ409	OWQ405	OWQ406	OWQ407	OWQ408			
Sampling Date		2021/02/18 14:25	2021/02/18 14:30	2021/02/18 15:10	2021/02/18 15:10	2021/02/18 15:03	2021/02/18 15:00	2021/02/18 14:55	2021/02/18 14:37	2021/02/18 14:41	2021/02/18 14:45	2021/02/18 14:49			
COC Number		na	na	na	na	na	na	na	na	na	na	na			
	UNITS	**SANG-FB-02182021**	**SANG-EB-02182021**	**SANG-INF-02182021**	**SANG-INF-02182021D**	**SANG-PAG1-02182021**	**SANG-PAG2-02182021**	**SANG-PAR1-02182021**	**SANG-EFF-02182021**	**SANG-EFF2-02182021**	**SANG-EFF3-02182021**	**SANG-EFF4-02182021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds															
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	1.4 U	19	18	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	1.2 U	64	63	1.2 U	1.2 U	1.8 J	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	1.4 U	49	49	1.4 U	1.4 U	1.3 J	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	1.2 U	27	27	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	1.2 U	29	28	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	1.6 U	7.2	7.0	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	1.4 U	5.2	5.1	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	1.2 U	8.6	8.4	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	1.6 U	9.4	9.5	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	1.2 U	69	67	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	1.2 U	3.2	3.1	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	1.2 U	200 (1)	200 (1)	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	57	60	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	16	15	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

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

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

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

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

SANG-FB-02182021 is a field blank SANG-EB-02182021 is an equipment blank.

Attidional EFF samples are variations on the sampling technique used to evaluate potential contamination of PFAS due to collection methods.

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

Compounds highlighted in gray represent the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OXI301	OXI306	OXI307	OXI305	OXI304	OXI303	OXI302			
Sampling Date		2021/02/22 11:30	2021/02/22 12:05	2021/02/22 12:05	2021/02/22 12:00	2021/02/22 11:53	2021/02/22 11:47	2021/02/22 11:40			
	UNITS	**SANG-FB-02222021**	**SANG-INF-02222021**	**SANG-INF-02222021D**	**SANG-PBG1-02222021**	**SANG-PBG2-02222021**	**SANG-PBR1-02222021**	**SANG-EFF-02222021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	22	22	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	70	69	1.2 U	1.2 U	0.87 J	1.2 U	0.52	1.2	2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	58	57	1.4 U	1.4 U	0.84 J	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	27	27	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	29	29	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	7.4	6.9	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	5	5.2	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	9.9	10	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	10	10	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	73	75	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.4	3.4	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	210 (1)	210 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.3 J	1.3 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	65	65	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	16	17	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4

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

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

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Samplle SANG-FB-02222021 is a field blank.

Sample SANG-INF-02222021D is a field duplicate of SANG-INF-02222021

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

Compounds highlighted in gray, are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OYE467	OYE472	OYE473	OYE471	OYE470	OYE469	OYE468			
Sampling Date		2021/02/25 08:40	2021/02/25 09:16	2021/02/25 09:16	2021/02/25 09:11	2021/02/25 09:04	2021/02/25 08:55	2021/02/25 08:45			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-02252021**	**SANG-INF-02252021**	**SANG-INF-02252021D**	**SANG-PCG1-02252021**	**SANG-PCG2-02252021**	**SANG-PCR1-02252021**	**SANG-EFF-02252021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	**11 J**	**15 J**	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	47	44	1.2 U	1.2 U	0.57 J	1.2 U	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	39	36	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	20	18	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	22	20	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	5.7	5.2	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.4	3.7	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	7.9	7.4	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	7.2	6.1	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	57	50	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	2.6	2.1	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	150 (1)	160 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.69 J	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	45	41	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	12	9.5	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - nanograms per liter
U - Undetected. Compund was analyzed for but not detected.
J - Estimated result. Associated value may not be accurate or precise
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-02252021 is a field blank.
Sample SANG-INF-02252021D is a field duplicate of SANG-INF-02252021.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).
Compounds highlighted in gray are the UCMR3 PAS compounds.
Results bolded in red text are qualified based on validation.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OYU949	OYU954	OYU955	OYU953	OYU952	OYU951	OYU950			
Sampling Date		2021/03/01 07:40	2021/03/01 08:15	2021/03/01 08:15	2021/03/01 08:10	2021/03/01 08:05	2021/03/01 07:57	2021/03/01 07:50			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-03012021**	**SANG-INF-03012021**	**SANG-INF-03012021D**	**SANG-PDG1-03012021**	**SANG-PDG2-03012021**	**SANG-PDR1-03012021**	**SANG-EFF-03012021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	6.1	6.0	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	36	37	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	31	32	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	17	17	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	19	19	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	5.5	5.4	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	4.0	4.0	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	7.2	7.0	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	6.7	7.1	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	59	58	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	2.3	2.5	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	190 (1)	180 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	34	33	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	11	11	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

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

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

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

QC Batch = Quality Control Batch

Sample SANG-FB-03012021 is a field blank.

Sample SANG-INF-03012021D is a field duplicate of SANG-INF-03012021.

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

Compunds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		OZQ672	OZQ677	OZQ678	OZQ676	OZQ675	OZQ674	OZQ673			
Sampling Date		2021/03/04 08:00	2021/03/04 08:40	2021/03/04 08:40	2021/03/04 08:32	2021/03/04 08:25	2021/03/04 08:17	2021/03/04 08:10			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-03042021**	**SANG-INF-03042021**	**SANG-INF-03042021D**	**SANG-PAG1-03042021**	**SANG-PAG2-03042021**	**SANG-PAR1-03042021**	**SANG-EFF-03042021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	23	23	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	72	73	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.2	2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	59	61	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	32	32	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	34	35	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.5	9.8	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	7.6	7.6	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	11	11	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	11	11	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	94	93	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.9	4.1	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	310 (1)	310 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.71 J	0.89 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	74	71	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	22	23	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4

ng/L - nanograms per liter or parts per trillion

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

J - Estimated result. Value may not be accurate or precise.

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-03042021 is a field blank.

Sample SANG-INF-03042021D is a field duplicate of SANG-INF-03042021.

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

Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PAG800	PAG805	PAG806	PAG804	PAG803	PAG802	PAG801			
Sampling Date		2021/03/08 08:30	2021/03/08 09:10	2021/03/08 09:10	2021/03/08 09:00	2021/03/08 08:52	2021/03/08 08:45	2021/03/08 08:35			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-03082021**	**SANG-INF-03082021**	**SANG-INF-03082021D**	**SANG-PBG1-03082021**	**SANG-PBG2-03082021**	**SANG-PBR1-03082021**	**SANG-EFF-03082021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	27	28	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	84	85	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	73	74	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	38	39	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	41	43	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	11	10	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.4	6.7	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	0.62 J	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	14	15	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	14	15	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	120 (1)	110 (1)	1.2 U	1.2 U	1.2 U	1.2 U	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	5.5	5.8	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	340 (1)	340 (1)	1.2 U	1.2 U	1.2 U	0.69 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.2 J	1.3 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	92	91	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	24	25	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - nanograms per liter or parts per trillion

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

J - Estimated result. Value may not be accurate or precise.

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-03082021 is a field blank.

Sample SANG-INF-03082021D is a field duplicate of SANG-INF-03082021.

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

Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PBE262	PBE267	PBE268	PBE266	PBE265	PBE264	PBE263			
Sampling Date		2021/03/11 08:45	2021/03/11 09:27	2021/03/11 09:27	2021/03/11 09:20	2021/03/11 09:14	2021/03/11 09:07	2021/03/11 09:00			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-03112021**	**SANG-INF-03112021**	**SANG-INF-03112021D**	**SANG-PCG1-03112021**	**SANG-PCG2-03112021**	**SANG-PCR1-03112021**	**SANG-EFF-03112021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	31	31	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2.0
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	73	74	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.2	2.0
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	64	63	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.4	2.0
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	34	33	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2.0
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	36	35	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2.0
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	8.8	9.4	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.6	2.0
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.3	6.5	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2.0
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2.0
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2.0
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2.0
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	12	12	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2.0
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	14	14	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2.0
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	92	94	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.2	4.2	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2.0
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	300 (1)	300 (1)	1.2 U	1.2 U	0.87 J	0.76 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2.0
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2.0
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2.0	4.0
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3.0	4.0
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.0	4.0
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.1 J	1.2 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4.0
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	80	79	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4.0
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	21	20	1.6 U	1.6 U	0.85 J	1.6 U	0.75	1.6	4.0
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2.0	4.0
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4.0
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2.0	4.0
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2.0	4.0

ng/L - nanograms per liter or parts per trillion

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

J - Estimated result. Value may not be accurate or precise.

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-03112021 is a field blank.

Sample SANG-INF-03112021D is a field duplicate of SANG-INF-03112021.

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

Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PBU864	PBU869	PBU870	PBU868	PBU867	PBU866	PBU865			
Sampling Date		2021/03/15 08:15	2021/03/15 08:50	2021/03/15 08:50	2021/03/15 08:44	2021/03/15 08:36	2021/03/15 08:28	2021/03/15 08:20			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-03152021**	**SANG-INF-03152021**	**SANG-INF-03152021D**	**SANG-PDG1-03152021**	**SANG-PDG2-03152021**	**SANG-PDR1-03152021**	**SANG-EFF-03152021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	26	26	1.4 U	1.4 U	1.4 U	1.4 U	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	77	78	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.2	2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	62	62	1.4 U	1.4 U	1.4 U	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	33	34	1.2 U	1.2 U	1.2 U	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	39	39	1.2 U	1.2 U	1.2 U	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	12	12	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	10	9.8	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	11	11	1.2 U	1.2 U	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	12	12	1.6 U	1.6 U	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	94	92	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	3.9	4.2	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	280 (1)	280 (1)	1.2 U	1.2 U	1.2 J	1.3 J	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.99 J	0.85 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	75	80	1.6 U	1.6 U	1.6 U	1.6 U	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	18	17	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4

ng/L - nanograms per liter or parts per trillion

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

J - Estimated result. Value may not be accurate or precise.

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

Sample SANG-FB-03152021 is a field blank.

Sample SANG-INF-03152021D is a field duplicate of SANG-INF-03152021.

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

Compounds highlighted in gray are the UCMR3 PFAS analytes.

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PCR018	PCR023	PCR024	PCR022	PCR021	PCR020	PCR019			
Sampling Date		2021/03/18 08:30	2021/03/18 09:05	2021/03/18 09:05	2021/03/18 08:58	2021/03/18 08:50	2021/03/18 08:42	2021/03/18 08:35			
COC Number		n/a	n/a	n/a	n/a	n/a	n/a	n/a			
	UNITS	**SANG-FB-03182021**	**SANG-INF-03182021**	**SANG-INF-03182021D**	**SANG-PAG1-03182021**	**SANG-PAG2-03182021**	**SANG-PAR1-03182021**	**SANG-EFF-03182021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	27	28	1.4 U	11	1.7 J	0.99 J	0.67	1.4	2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	82	84	1.2 U	35	0.56 J	1.2 U	0.52	1.2	2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	71	72	1.4 U	16	1.4 U	1.4 U	0.7	1.4	2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	37	36	1.2 U	8.8	1.2 U	1.2 U	0.51	1.2	2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	42	43	1.2 U	3.1	1.2 U	1.2 U	0.49	1.2	2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	12	12	1.6 U	1.6 U	1.6 U	1.6 U	0.8	1.6	2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	8.7	8.7	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	0.77	1.6	2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.2	2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.48	1.2	2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.37	1.2	2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	13	14	1.2 U	1.4 J	1.2 U	1.2 U	0.47	1.2	2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	14	14	1.6 U	1.7 J	1.6 U	1.6 U	0.73	1.6	2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	100 (1)	110 (1)	1.2 U	13	1.2 U	1.2 U	5.3	12	20
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.9	5	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.2	2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	300 (1)	280 (1)	1.2 U	10	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	0.64	1.4	2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.2	2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.81	2	4
MeFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.2	3	4
EtFOSAA	ng/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3	4
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.1 J	1.2 J	1.6 U	1.6 U	1.6 U	1.6 U	0.69	1.6	4
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	87	91	1.6 U	8.1	1.6 U	1.6 U	0.59	1.6	4
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	21	22	1.6 U	1.6 U	1.6 U	1.6 U	0.75	1.6	4
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.85	2	4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.31	1.2	4
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.56	2	4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.52	2	4

ng/L - nanograms per liter, or parts per trillion (ppt)
U - Compound was analyzed for, but not detected.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-03182021 is a field balnk
SANG-INF-03182021D is a field duplicate of SANG-INF-03182021
Samples highlighted in gray are the UCMR3 PFAS compounds.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PDH821	PDH826	PDH827	PDH825	PDH824	PDH823	PDH822			
Sampling Date		2021/03/22 08:20	2021/03/22 08:50	2021/03/22 08:50	2021/03/22 08:44	2021/03/22 08:37	2021/03/22 08:32	2021/03/22 08:24			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-03222021**	**SANG-INF-03222021**	**SANG-INF-03222021D**	**SANG-PBG1-03222021**	**SANG-PBG2-03222021**	**SANG-PBR1-03222021**	**SANG-EFF-03222021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.5 U	24	24	1.5 U	1.5 U	3.6	1.5 J	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.3 U	70	69	1.3 U	1.3 U	0.67 J	1.3 U	0.57	1.3	2.2
Perfluorohexanoic acid (PFHxA)	ng/L	1.5 U	58	59	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.3 U	31	31	1.3 U	1.3 U	1.3 U	1.3 U	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.3 U	35	36	1.3 U	1.3 U	1.3 U	1.3 U	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.8 U	10	9.9	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.5 U	9.2	9.1	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.3 U	10	10	1.3 U	1.3 U	1.3 U	1.3 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPes	ng/L	1.8 U	11	11	1.8 U	1.8 U	1.8 U	1.8 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.3 U	84	85	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.3 U	4.1	3.9	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.3 U	240 (1)	250 (1)	1.3 U	1.3 U	1.3 U	1.3 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.4
MeFOSAA	ng/L	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.4
EtFOSAA	ng/L	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.4
4:2 Fluorotelomer sulfonic acid	ng/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.4
6:2 Fluorotelomer sulfonic acid	ng/L	1.8 U	69	68	1.8 U	1.8 U	1.8 U	1.8 U	0.65	1.8	4.4
8:2 Fluorotelomer sulfonic acid	ng/L	1.8 U	17	17	1.8 U	1.8 U	1.8 U	1.8 U	0.83	1.8	4.4
Hexafluoropropyleneoxide dimer acid	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.4
9Cl-PF3ONS (F-53B Major)	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.4

ng/L - nanograms per liter, or parts per trillion (ppt)
U - Compound was analyzed for, but not detected.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-03222021 is a field balnk
SANG-INF-03222021D is a field duplicate of SANG-INF-03222021
Samples highlighted in gray are the UCMR3 PFAS compounds.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PED954	PED959	PED960	PED958	PED957	PED956	PED955			
Sampling Date		2021/03/25 09:00	2021/03/25 09:35	2021/03/25 09:35	2021/03/25 09:30	2021/03/25 09:22	2021/03/25 09:15	2021/03/25 09:08			
	UNITS	**SANG-FB-03252021**	**SANG-INF-03252021**	**SANG-INF-03252021D**	**SANG-PCG1-03252021**	**SANG-PCG2-03252021**	**SANG-PCR1-03252021**	**SANG-EFF-03252021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	22	21	1.4 U	1.4 U	1.9 J	1.8 J	0.77	1.6	2.3
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	65	63	1.2 U	1.2 U	1.2 U	1.2 U	0.60	1.4	2.3
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	55	55	1.4 U	1.4 U	1.4 U	1.4 U	0.81	1.6	2.3
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	29	28	1.2 U	1.2 U	1.2 U	1.2 U	0.59	1.4	2.3
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	34	32	1.2 U	1.2 U	1.2 U	1.2 U	0.56	1.4	2.3
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	9.9	9.5	1.6 U	1.6 U	1.6 U	1.6 U	0.92	1.8	2.3
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	9.6	9.1	1.4 U	1.4 U	1.4 U	1.4 U	0.74	1.6	2.3
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.6 U	1.6 U	1.6 U	1.6 U	0.89	1.8	2.3
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	1.4 U	0.68 J	1.2 U	1.2 U	1.2 U	1.2 U	0.68	1.4	2.3
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.4 U	1.4 U	1.2 U	1.2 U	1.2 U	1.2 U	0.55	1.4	2.3
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.4 U	1.4 U	1.2 U	1.2 U	1.2 U	1.2 U	0.43	1.4	2.3
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	11	9.3	1.2 U	1.2 U	1.2 U	1.2 U	0.54	1.4	2.3
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	11	10	1.6 U	1.6 U	1.6 U	1.6 U	0.84	1.8	2.3
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	78	77	1.2 U	1.2 U	1.2 U	1.2 U	0.61	1.4	2.3
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	4.0	3.7	1.2 U	1.2 U	1.2 U	1.2 U	0.66	1.4	2.3
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	230 (1)	230 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.6 U	1.6 U	1.4 U	1.4 U	1.4 U	1.4 U	0.74	1.6	2.3
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.4 U	1.4 U	1.2 U	1.2 U	1.2 U	1.2 U	0.61	1.4	2.3
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.3 U	2.3 U	2.0 U	2.0 U	2.0 U	2.0 U	0.93	2.3	4.5
MeFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4	3.5	4.5
EtFOSAA	ng/L	3.0 U	3.5 U	3.5 U	3.0 U	3.0 U	3.0 U	3.0 U	1.6	3.5	4.5
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	0.86 J	0.98 J	1.6 U	1.6 U	1.6 U	1.6 U	0.79	1.8	4.5
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	67	64	1.6 U	1.6 U	1.6 U	1.6 U	0.68	1.8	4.5
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	19	19	1.6 U	1.6 U	1.6 U	1.6 U	0.86	1.8	4.5
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.3 U	2.3 U	2.0 U	2.0 U	2.0 U	2.0 U	0.98	2.3	4.5
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.4 U	1.4 U	1.2 U	1.2 U	1.2 U	1.2 U	0.36	1.4	4.5
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.3 U	2.3 U	2.0 U	2.0 U	2.0 U	2.0 U	0.64	2.3	4.5
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.3 U	2.3 U	2.0 U	2.0 U	2.0 U	2.0 U	0.60	2.3	4.5

ng/L - nanograms per liter, or parts per trillion (ppt)
U - Compound was analyzed for, but not detected.
J - Estimated result. Value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-03252021 is a field balnk
SANG-INF-03252021D is a field duplicate of SANG-INF-03252021
Samples highlighted in gray are the UCMR3 PFAS compounds.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PEU154	PEU159	PEU160	PEU158	PEU157	PEU156	PEU155			
Sampling Date		2021/03/29 08:55	2021/03/29 09:30	2021/03/29 09:30	2021/03/29 09:25	2021/03/29 09:18	2021/03/29 09:10	2021/03/29 09:00			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-03292021**	**SANG-INF-03292021**	**SANG-INF-03292021D**	**SANG-PDG1-03292021**	**SANG-PDG2-03292021**	**SANG-PDR1-03292021**	**SANG-EFF-03292021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.4 U	12	12	1.4 U	1.4 U	3.1	2.2	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.2 U	36	34	1.2 U	1.2 U	1.2 U	1.2 U	0.57	1.3	2.2
Perfluorohexanoic acid (PFHxA)	ng/L	1.4 U	29	29	1.4 U	1.4 U	1.4 U	1.4 U	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.2 U	16	15	1.2 U	1.2 U	1.2 U	1.2 U	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.2 U	20	19	1.2 U	1.2 U	1.2 U	1.2 U	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.6 U	5.6	5.7	1.6 U	1.6 U	1.6 U	1.6 U	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.4 U	6.5	6.6	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.6 U	1.8 U	1.8 U	1.6 U	1.6 U	1.6 U	1.6 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.2 U	0.89 J	0.73 J	1.2 U	1.2 U	1.2 U	1.2 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.2 U	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.2 U	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.2 U	6.4	6.3	1.2 U	1.2 U	1.2 U	1.2 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPes	ng/L	1.6 U	5.7	5.5	1.6 U	1.6 U	1.6 U	1.6 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.2 U	48	48	1.2 U	1.2 U	1.2 U	1.2 U	0.58	1.3	2.2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.2 U	2.0 J	1.8 J	1.2 U	1.2 U	1.2 U	1.2 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.2 U	140 (1)	140 (1)	1.2 U	1.2 U	1.2 U	1.2 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.2 U	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.0 U	2.2 U	2.2 U	2.0 U	2.0 U	2.0 U	2.0 U	0.89	2.2	4.5
MeFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.0 U	3.0 U	3.0 U	3.0 U	1.3	3.3	4.5
EtFOSAA	ng/L	3.0 U	3.3 U	3.3 U	3.0 U	3.0 U	3.0 U	3.0 U	1.5	3.3	4.5
4:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	1.8 U	1.8 U	1.6 U	1.6 U	1.6 U	1.6 U	0.76	1.8	4.5
6:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	31	28	1.6 U	1.6 U	1.6 U	1.6 U	0.65	1.8	4.5
8:2 Fluorotelomer sulfonic acid	ng/L	1.6 U	10	9.9	1.6 U	1.6 U	1.6 U	1.6 U	0.83	1.8	4.5
Hexafluoropropyleneoxide dimer acid	ng/L	2.0 U	2.2 U	2.2 U	2.0 U	2.0 U	2.0 U	2.0 U	0.94	2.2	4.5
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.2 U	1.3 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	0.34	1.3	4.5
9Cl-PF3ONS (F-53B Major)	ng/L	2.0 U	2.2 U	2.2 U	2.0 U	2.0 U	2.0 U	2.0 U	0.62	2.2	4.5
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.0 U	2.2 U	2.2 U	2.0 U	2.0 U	2.0 U	2.0 U	0.57	2.2	4.5

ng/L - nanograms per liter, or parts per trillion
U - Undetected. Compound was anayzed for, but not detected.
J - Estimated result. Value may not be accurate or precise.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-03292021 is a field blank
Sample SANG-INF-03292021D is a field duplicate of SANG-INF-03292021
Compounds highlighted in gray represent the UCMR3 PFAS compunds.
(1) Due to high concentrations of the associated target analytes, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

RESULTS OF ANALYSES OF WATER **VALIDATED DATA**

BV Labs ID		PFJ905	PFJ910	PFJ911	PFJ909	PFJ908	PFJ907	PFJ906			
Sampling Date		2021/03/31 07:25	2021/03/31 08:00	2021/03/31 08:00	2021/03/31 07:53	2021/03/31 07:45	2021/03/31 07:38	2021/03/31 07:30			
COC Number		na	na	na	na	na	na	na			
	UNITS	**SANG-FB-03312021**	**SANG-INF-03312021**	**SANG-INF-03312021D**	**SANG-PAG1-03312021**	**SANG-PAG2-03312021**	**SANG-PAR1-03312021**	**SANG-EFF-03312021**	**DL**	**LOD**	**LOQ**
Perfluorinated Compounds											
Perfluorobutanoic acid (PFBA)	ng/L	1.5 U	22	22	1.5 U	1.5 U	4.1	2.8	0.74	1.5	2.2
Perfluoropentanoic acid (PFPeA)	ng/L	1.3 U	60	63	1.3 U	1.3 U	1.3 U	1.3 U	0.57	1.3	2.2
Perfluorohexanoic acid (PFHxA)	ng/L	1.5 U	52	54	1.5 U	1.5 U	1.5 U	1.5 U	0.77	1.5	2.2
Perfluoroheptanoic acid (PFHpA)	ng/L	1.3 U	28	30	1.3 U	1.3 U	1.3 U	1.3 U	0.56	1.3	2.2
Perfluorooctanoic acid (PFOA)	ng/L	1.3 U	33	34	1.3 U	1.3 U	1.3 U	1.3 U	0.54	1.3	2.2
Perfluorononanoic acid (PFNA)	ng/L	1.8 U	9.9	10	1.8 U	1.8 U	1.8 U	1.8 U	0.88	1.8	2.2
Perfluorodecanoic acid (PFDA)	ng/L	1.5 U	10	11	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluoroundecanoic acid (PFUnA)	ng/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.85	1.8	2.2
Perfluorododecanoic acid (PFDoA)	ng/L	1.3 U	1.3 U	0.67 J	1.3 U	1.3 U	1.3 U	1.3 U	0.65	1.3	2.2
Perfluorotridecanoic acid (PFTRDA)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.53	1.3	2.2
Perfluorotetradecanoic acid(PFTEDA)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.41	1.3	2.2
Perfluorobutanesulfonic acid (PFBS)	ng/L	1.3 U	10	10	1.3 U	1.3 U	1.3 U	1.3 U	0.52	1.3	2.2
Perfluoropentanesulfonic acid PFPes	ng/L	1.8 U	11	11	1.8 U	1.8 U	1.8 U	1.8 U	0.80	1.8	2.2
Perfluorohexanesulfonic acid(PFHxS)	ng/L	1.3 U	81	85	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluoroheptanesulfonic acid PFHpS	ng/L	1.3 U	3.7	3.9	1.3 U	1.3 U	1.3 U	1.3 U	0.63	1.3	2.2
Perfluorooctanesulfonic acid (PFOS)	ng/L	1.3 U	220 (1)	230 (1)	1.3 U	1.3 U	1.3 U	1.3 U	4.3	12	20
Perfluorononanesulfonic acid (PFNS)	ng/L	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.70	1.5	2.2
Perfluorodecanesulfonic acid (PFDS)	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.58	1.3	2.2
Perfluorooctane Sulfonamide (PFOSA)	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.89	2.2	4.4
MeFOSAA	ng/L	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.3	3.3	4.4
EtFOSAA	ng/L	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	1.5	3.3	4.4
4:2 Fluorotelomer sulfonic acid	ng/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.76	1.8	4.4
6:2 Fluorotelomer sulfonic acid	ng/L	1.8 U	63	65	1.8 U	1.8 U	1.8 U	1.8 U	0.65	1.8	4.4
8:2 Fluorotelomer sulfonic acid	ng/L	1.8 U	19	20	1.8 U	1.8 U	1.8 U	1.8 U	0.83	1.8	4.4
Hexafluoropropyleneoxide dimer acid	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.94	2.2	4.4
4,8-Dioxa-3H-perfluorononanoic acid	ng/L	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	0.34	1.3	4.4
9Cl-PF3ONS (F-53B Major)	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.62	2.2	4.4
11Cl-PF3OUdS (F-53B Minor)	ng/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	2.2	4.4

ng/L - nanograms per liter, or parts per trillion (ppt)
U - Compound was analyzed for, but not detected.
DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
Sample SANG-FB-03312021 is a field blank.
Sample SANG-inf-03312021D is a field duplicate of SANG-INF03312021
Samples highlighted in gray are the UCMR3 PFAS compounds.
(1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

TABLE 2 - OTHER WATER QUALITY MONITORING RESULTS

Glycols				
Sample Parameter	**Sampling Date**	**Influent (mg/L)**	**GAC2 Effluent (mg/L)**	**Effluent (mg/L)**
Diethylene glycol	1/11/2021	<52	<52	<52
Ethylene glycol		<10	<10	<10
Propylene glycol		<10	<10	<10
Triethylene Glycol		<54	<54	<54
Diethylene glycol	1/12/2021	<52	Not Sampled	Not Sampled
Ethylene glycol		<10	Not Sampled	Not Sampled
Propylene glycol		<10	Not Sampled	Not Sampled
Triethylene Glycol		<54	Not Sampled	Not Sampled
Diethylene glycol	2/9/2021	<52	<52	<52
Ethylene glycol		<10	<10	<10
Propylene glycol		<10	<10	<10
Triethylene Glycol		<54	<54	<54
Diethylene glycol	3/11/2021	<52	<52	<52
Ethylene glycol		<10	<10	<10
Propylene glycol		<10	<10	<10
Triethylene Glycol		<54	<54	<54

Total Organic Carbon (TOC)				
Sample Parameter	**Sampling Date**	**Influent (mg/L)**	**GAC2 Effluent (mg/L)**	**Effluent (mg/L)**
TOC	1/11/2021	3.1	0.79	2.1
TOC	2/9/2021	2.7	0.81	2.0
TOC	3/11/2021	3.1	0.63	1.1

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
January 4, 2021		Install 10 Micron Regular				
January 5, 2021				Fine Sand Filters 1A / 1B		
January 6, 2021		10 Micron Regular	Primary Carbon vessels A, B, C, & D			
January 8, 2021	25 Micron Regular	Remove Filters				
January 11, 2021			Primary Carbon vessels A, B, C, & D			
January 12, 2021		Install 10 Micron Regular				
January 13, 2021				Fine Sand Filters 2A /2B		
January 15, 2021	25 Micron Regular	Remove Filters	Primary Carbon vessels A, B, C, & D			
January 19, 2021		Install 10 Micron Regular				
January 20, 2021				Fine Sand Filters 3A /3B		
January 22, 2021	25 Micron Pleated	Remove Filters	Primary Carbon vessels A, B, C, & D			
January 25, 2021						Resin vessels A (3"), B (2"), C (3") & D (3")
January 26, 2021				Fine Sand Filters 3A /3B		
January 27, 2021			Primary and Secondary Carbon vessels A, B, C & D			
January 29, 2021	25 Micron Pleated	Remove Filters				
February 3, 2021			Primary Carbon vessels A, B, C, & D			

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
February 8, 2021					Resin vessels A, B, C & D taken offline for media change out.	
February 10, 2021					Train A Offline Drain Train A carbon vessels for Change Out	
February 12, 2021		Install 10 Micron Pleated	Primary & Secondary A-Train Carbon Vessels		Train B offline Train A Online	
February 13, 2021					Train D Offline Train B Online	
February 16, 2021					Train C Offline Train D Online	
February 17, 2021			Primary & Secondary C-Train Carbon Vessels		Train C Online (GAC only) *Trains A, B, & D Full Op *Train C , GAC Only	
February 18, 2021					Train C Online 12:20 - Treatment System fully Operational	
February 22, 2021		Install 10 Micron Pleated				
February 23, 2021				Fine Sand Filters 5A /5B		
February 24, 2021			Primary Carbon vessels A, B, C & D.			
February 26, 2021	25 Micron Pleated.	Remove Filters				
March 1, 2021		Install 10 Micron Pleated				
March 3, 2021			Primary Carbon vessels A, B, C, & D	Fine Sand Filters 2A /2B		

TABLE 3 - PREVENTIVE MAINTENANCE

Date	Primary Bag Filter Change and Type of Filters Installed	Secondary Bag Filter Change and Type of Filters Installed	Treatment Process Backwashed	Sand Filter Cleaning	Media Change Out	Resin Vessel Skimming
March 4, 2021			Secondary Carbon vessels A, B, C, & D			
March 5, 2021	25 Micron Pleated	Remove Filters				
March 8, 2021		10-micron Pleated				
March 9, 2021				After cleaning Filters 3A /3B		
March 10, 2021			Primary Carbon vessels A, B, C, & D			
March 12, 2021	25 Micron Pleated.	Remove Filters				
March 16, 2021	25 Micron Pleated.	10-micron Pleated				
March 17, 2021			Primary Carbon vessels A, B, C, & D			
March 18, 2021				Fine Sand Filters 4A /4B		
March 19, 2021	25 Micron Pleated	Remove Filters				
March 22, 2021				Fine Sand Filters 5A/5B		
March 23, 2021		10-micron Pleated				
March 24, 2021			Primary Carbon vessels A, B, C, & D			
March 25, 2021	25 Micron Pleated			Coarse Sand Filters 1A/1B		
March 26, 2021		Remove Filters				
March 29, 2021	25 Micron Pleated	Install 10 Micron				