

**MONTHLY PROGRESS REPORT #299
FOR FEBRUARY 2022**

EPA REGION I ADMINISTRATIVE ORDERS SDWA 1-97-1019 and 1-2000-0014

**JOINT BASE CAPE COD (JBCC)
TRAINING RANGE AND IMPACT AREA**

The following summary of progress is for the period from 1 to 28 February 2022.

1. SUMMARY OF REMEDIATION ACTIONS

Remediation Actions (RA) Underway at Camp Edwards as of 25 February 2022:

Demolition Area 1 Comprehensive Groundwater RA

The Demolition Area 1 Comprehensive Groundwater RA consists of the removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. Extraction, treatment, and recharge (ETR) systems at Frank Perkins Road, Base Boundary, and the Leading Edge include extraction wells, an ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater, and injection wells to return treated water to the aquifer.

The Frank Perkins Road Treatment Facility has been optimized as part of the Environmental and System Performance Monitoring (ESPM) program at Demolition Area 1. The treatment facility continues to operate at a flow rate of 175 gallons per minute (gpm), with over 2.895 billion gallons of water treated and re-injected as of 25 February 2022. The following Frank Perkins Road Treatment Facility shutdowns occurred in February.

- 0740 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and was restarted at 1442 on 02 February 2022.
- 2210 on 26 February 2022 due to a power supply interruption without an alarm and was restarted at 0745 on 28 February 2022.

The Base Boundary MTU continues to operate at a flow rate of 65 gpm. As of 25 February 2022, over 324.8 million gallons of water were treated and re-injected. No Base Boundary MTU shutdowns occurred in February.

The Leading Edge system continues to operate at a flow rate of 100 gpm. As of 25 February 2022, over 289.3 million gallons of water were treated and re-injected. The following Leading Edge system shutdowns occurred in February.

- 0635 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and was restarted at 1430 on 01 February 2022.
- 2215 on 17 February 2022 due to a power outage without an alarm caused by strong winds and was restarted at 1314 on 18 February 2022.

The Pew Road Mobile Treatment Unit (MTU) was turned off on 08 March 2021 (formerly operated at a flow rate of 65 GPM). Over 672.9 million gallons of water were treated and re-injected during the RA.

J-2 Range Groundwater RA

Northern Plant

The J-2 Range Northern Treatment facility consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The Extraction, Treatment, and Re-infiltration system includes three extraction wells, an ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater, and an infiltration basin to return treated water to the aquifer.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 25 February 2022, over 1.925 billion gallons of water have been treated and re-injected. The following MTU E and F shutdowns occurred in February.

- 0631 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and was restarted at 1115 on 01 February 2022.

The Northern Treatment Building G continues to operate at a flow rate of 225 gpm. As of 25 February 2022, over 1.453 billion gallons of water have been treated and re-injected. The following Northern MTU G shutdowns occurred in February.

- 0729 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and was restarted at 1100 on 01 February 2022.

Eastern Plant

The J-2 Range Eastern Treatment facility consists of removal and treatment of groundwater to minimize downgradient migration of explosives compounds and perchlorate. The ETI system includes the following components: three extraction wells in an axial array, an ex-situ treatment process consisting of an ion exchange (IX) resin and granular activated carbon (GAC) media to treat perchlorate and explosives compounds, and three infiltration trenches located along the lateral boundaries of the plume where treated water enters the vadose zone and infiltrates into the aquifer. The J-2 Range Eastern system is running at a combined total flow rate of 495 gpm.

The MTUs H and I continue to operate at a flow rate of 250 gpm. As of 25 February 2022, over 1.564 billion gallons of water have been treated and re-injected. The following MTU H and I shutdowns occurred in February.

- 0902 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and to replace the effluent fire fighter fitting damaged by the storm and was restarted at 0806 on 07 February 2022.
- 0533 on 18 February 2022 due to a power outage without an alarm caused by strong winds and was restarted at 0812 on 18 February 2022.

MTU J continues to operate at a flow rate of 120 gpm. As of 25 February 2022, over 729.1 million gallons of water have been treated and re-injected. The following MTU J shutdowns occurred in February.

- 0902 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and to replace two starter motors and the effluent fire fighter fitting all damaged by the storm and was restarted at 1305 on 04 February 2022.

MTU K continues to operate at a flow rate of 125 gpm. As of 25 February 2022, over 850.8 million gallons of water have been treated and re-injected. The following MTU K shutdowns occurred in February.

- 0902 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and to replace a pressure relief valve, the effluent fire fighter fitting, and cracked influent piping all damaged by the storm and was restarted at 1025 on 17 February 2022.

- 0533 on 18 February 2022 due to a power outage without an alarm caused by strong winds and was restarted at 0752 on 18 February 2022.

J-3 Range Groundwater RA

The J-3 Range Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The ETR system includes four extraction wells, an ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater and utilizes the existing Fuel Spill-12 (FS-12) infiltration gallery to return treated water to the aquifer.

The J-3 system is currently operating at 255 gpm. As of 25 February 2022, over 1.567 billion gallons of water have been treated and re-injected. The following J-3 Range system shutdowns occurred in February.

- 0710 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and an FS-12 shutdown without alarm and was restarted at 1142 on 01 February 2022.

J-1 Range Groundwater RA

Southern Plant

The J-1 Range Southern Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds. The ETR system includes two extraction wells, an ex-situ treatment process to remove explosives compounds from the groundwater, and an infiltration trench to return treated water to the aquifer.

The Southern MTU continues to operate at a flow rate of 125 gpm. As of 25 February 2022, over 706.7 million gallons of water have been treated and re-injected. The following J-1 Range Southern system shutdowns occurred in February.

- 0902 on 29 January 2022 due to a power outage without an alarm caused by a blizzard, to install a new VFD, and to replace a bad contactor, the effluent fire fighter fitting, a ball valve, and cracked influent piping all damaged by the storm and was restarted at 1153 on 16 February 2022.

Northern Plant

The J-1 Range Northern Groundwater RA consists of removal and treatment of contaminated groundwater to control further migration of explosives compounds and perchlorate. The ETR system includes two extraction wells, an ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater, and an infiltration trench to return treated water to the aquifer.

The Northern MTU continues to operate at a total system flow rate of 250 gpm. As of 25 February 2022, over 1.064 billion gallons of water have been treated and re-injected. No J-1 Range Northern MTU shutdowns occurred in February.

Central Impact Area RA

The Central Impact Area (CIA) Groundwater treatment facility consists of removal and treatment of groundwater to minimize downgradient migration of explosives compounds and perchlorate.

The ETR system includes the following components: three extraction wells, an ex-situ treatment process consisting of an ion exchange resin and granular activated carbon media to treat explosives compounds, and three infiltration galleries to return treated water to the aquifer. The CIA systems 1, 2, and 3 continue to run at a combined total flow rate of 750 gpm. As of 25 February 2022, over 2.757 billion gallons of water have been treated and re-injected. The following CIA system shutdowns occurred in February.

- 0740 on 29 January 2022 due to a power outage without an alarm caused by a blizzard and was restarted at 1355 on 02 February 2022.
- 1034 on 09 February 2022 to install a new phase monitor and was restarted at 1050 on 09 February 2022.
- 2210 on 26 February 2022 due to a power supply interruption without an alarm and was restarted at 0847 on 28 February 2022.

2. SUMMARY OF ACTIONS TAKEN

Operable Unit (OU) Activity as of 25 February 2022:

CIA

- Groundwater sampling within CIA SPM
- Performed intrusive investigations
- Routine processing of MD
- Routine check of CSS cover

Demolition Area 1

- No activity

Demolition Area 2

- No activity

J-1 Range

- Bag filters exchanged

J-2 Range

- Bag filters exchanged
- Groundwater sampling within J-2 East SPM
- Groundwater sampling within J-2 North SPM

J-3 Range

- Bag filters exchanged
- Groundwater sampling within J-3 Range SPM

L Range

- Groundwater sampling within L Range LTM

Small Arms Ranges

- Groundwater sampling within Small Arms Ranges LTM

Northwest Corner

- No activity

Training Areas

- Inspected staged soil at H Range

Impact Area Roads

- No activity

Other

- Collected process water samples from Central Impact Area, Demolition Area 1, J-1 Range Northern, J-1 Range Southern, J-2 Range Eastern, J-2 Range Northern, and J-3 Range treatment systems
- Snow plowing at all locations after blizzard

JBCC Impact Area Groundwater Study Program (IAGWSP) Tech Update Meeting Minutes for 24 February 2022Project and Fieldwork Update

All the treatment systems are up and running. There was breakthrough at CIA 3. USACE is coordinating change out of media with the Monument Beach Sportsman's Club since change out requires a cease fire. It is tentatively scheduled for Wednesday, 2 March 2022. The LTM crews began the annual monitoring in the CIA which will be ongoing through March and April.

The disposal of the 50 cubic yards of soil currently staged at H Range is still pending. USACE has been checking on the piles weekly to ensure they stay covered.

Weston has five teams in the CIA; four that are digging and one performing demolition operations. They have completed Survey Unit (SU) 1, SU2, and SU5; and they are approximately 85% complete at SU3-1 (priority). They are 100% complete in Parsons SU8 and Parsons SU9. In Priority 2 Area 4, they are about 10% complete in SU 3-2. Weston projects the teams will be working through the first week of March and would like to perform demolition operations next week (week of 28 February 2022), beginning with blow-in-place (BIP) actions. They will start moving the consolidated shot structure soil and will notify the team when the liner is visible for inspection. It was noted that an additional 10 acres need to be selected for this field season and it was suggested it be added as a topic for the next tech meeting.

J-2 North Plume Shell Update Presentation

A presentation was provided on the J-2 North Plume Shell update. To update the plume shell, the following steps were taken:

1. The JBCC Environmental Data Management System (EDMS) was queried for perchlorate data in J-2 North.
2. An existing steady-state MODFLOW groundwater model was run for "average" conditions.
3. The simulation was started at the earliest date of groundwater sample collection and was ended at the end of 2021 with representative groundwater extraction rates used for the simulation period.
4. Particles were initiated in MODPATH at locations and times of each sample collection point and migrated using results of the MODFLOW groundwater flow model.

5. MODPATH simulations were run to migrate particles (x, y, and z) to the present time.
6. The model-predicted x, y, z, and c values were imported to Excel and matched to their respective measured concentrations.
7. The values were then input into ESRI ArcView software and used as a guide to manually develop the plume into contours representing 10-foot layers.

The plume shell start date was 3 August 2000 and concentrations ranged from non-detect (ND) to 370 µg/L. The number of points migrated was 2,503 with 326 used for the plume shell contouring. The plume contour values were 0.25 µg/L, 0.60 µg/L, 2 µg/L, and 6 µg/L. The maximum elevation was -15 feet mean sea level (MSL) and the minimum plume elevation was -165 MSL. A plan view depiction of the updated J-2 North perchlorate plume and layer-by-layer depictions were displayed and discussed. Graphs illustrating the extraction well predicted vs. measured concentrations and mass removals were displayed and discussed.

The predicted cleanup times were discussed. The group was reminded that the Decision Document listed a cleanup time of 2027 for <2.0 µg/L. Simulation of the J-2 Range Northern perchlorate plume using the 2022 plume shell indicates that cleanup to 2 µg/L will occur by 2034.

J-2 East Plume Shell Update Presentation

A presentation was provided on the J-2 East Plume Shell update. It was explained that the same steps as described during the J-2 North presentation were taken for developing the J-2 East plume shells.

For RDX, the start date was 29 August 1997 and concentrations ranged from ND to 18 µg/L. The number of points migrated was 2,558 with 42 used for the plume shell contouring. The plume contour values were 0.25 µg/L, 0.60 µg/L, 2 µg/L, and 6 µg/L. The maximum elevation was 5 feet MSL, and the minimum plume elevation was -165 MSL. Plan view depiction of the updated plume and layer-by-layer depictions were displayed and discussed. Graphs illustrating the extraction well predicted vs. measured concentrations and mass removals were displayed and discussed.

The RDX cleanup time specified in the Decision Document was indicated to be year 2022. The simulation of the J-2 Range Eastern RDX plume using the 2022 RDX plume shell indicates that cleanup to 0.6 µg/L in the productive part of the aquifer will occur by 2033 and cleanup to 0.97 µg/L in the productive part of the aquifer will occur by 2032.

For perchlorate, the start date was 7 August 2000 and concentrations ranged from ND to 87.5 µg/L. The number of points migrated was 2,354 with 285 used for the plume shell contouring. The plume contour values were 0.25 µg/L, 0.60 µg/L, 2 µg/L, and 6 µg/L. The maximum elevation was 55 feet MSL and the minimum plume elevation was -175 MSL. A plan view depiction of the updated J-2 East perchlorate plume and layer-by-layer depictions were displayed and discussed. Graphs illustrating the extraction well predicted vs. measured concentrations and mass removals were displayed and discussed.

The predicted cleanup times were discussed. The group was reminded that the Decision Document listed a cleanup time of 2027 for <2.0 µg/L. Simulation of the J-2 Range East perchlorate plume using the 2022 plume shell indicates that cleanup to 2 µg/L in the productive part of the aquifer will occur by 2033.

J-3 Range Annual Environmental Monitoring Report Presentation

A presentation was provided on the J-3 Range Annual Environmental Monitoring Report. It was noted that during the reporting period (September 2020 to August 2021), new work included sampling for PFAS analytes. Samples were collected in July and August 2021 from 31 monitoring wells and the four extraction wells. Compared to the EPA health advisory (HA) of 70 nanograms/liter (ng/L), results showed low concentrations in 16 wells with a maximum of 15.0 ng/L (MW MW-181S), which is located near a former melt/pour facility (near MW MW-30). Well MW-218M1 had a detection of 120 ng/L but with high turbidity, and the resample showed 5.7 ng/L. Compared to the MassDEP PFAS6 GW-1 standard of 20 ng/L, low concentrations were seen in 15 wells with a maximum of 17.5 ng/L (MW MW-218M1). There were two wells above MassDEP standards, MW-197M2 (25.6 ng/L), which is on Greenway Road near MW-30/MW-MW-181, and MW-653M1 (90.8 ng/L), which is the pilot hole for J3EWIP2. Both these wells are near or downgradient of former melt/pour facilities. In addition, MW-218M1/M2 had elevated results but they were below 20 ng/L when the well was resampled.

Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. In Zone 1 (Source Area to J3EWIP1), the maximum perchlorate concentration was 3.1 µg/L (MW-163S, July 2021), which is an increase from 0.76 µg/L in July 2020. There were no other Massachusetts Maximum Contaminant Level (MMCL) exceedances in Zone 1 wells. The maximum RDX concentrations were 1.4 µg/L (MW-163S, July 2021); 0.71 µg/L (MW-193S, August 2021—an increase from ND, July 2020); and 1.4 µg/L (MW-143M3, July 2021—an increase from ND, July 2020). In Zone 2 (downgradient of J3EWIP1), the maximum perchlorate concentration was 2.8 µg/L (MW-637M2, January 2021—a decrease from 3.1 µg/L, July 2020). The maximum RDX concentration was 0.51 µg/L (J3EW0032, Jan 2021—consistent with past trends). There were no other wells above the 0.6 µg/L Risk-Based Concentration (RBC) in Zone 2 during the reporting period. Overall, the 2021 maximum network concentrations were consistent with past trends.

There was one synoptic gauging round in July of 2021. It was noted that hydraulic gradients were consistent with past years. Water levels overall were three to four feet lower than in 2020. The top of mound well (USGS 537 537-0107) water level was 70.15 ft MSL (74.26 ft MSL, July 2020). Groundwater flow is north to south, converging near extraction well capturing plumes.

Groundwater modeling activities were discussed. The group was reminded that in January 2018, the plume shells were updated using the five-year protocol. In September of 2018, they were updated with the drift function and incorporated the summer 2018 annual event. In September of 2021, the plume shells for perchlorate and RDX were updated using the drift function in annual increments for 2019, 2020, and 2021 annual sampling events. Notably, in the source area (Zone 1 and on-base) perchlorate >2 µg/L was driven by MW-163S (3.1 µg/L, July 2021). The extent of detections >2 µg/L is constrained by recent non-detect and trace detections in the network. Extraction well J3EWIP2 plays an important role extracting perchlorate mass as evidenced by J3EWIP2 perchlorate at 1.3 µg/L vs J3EWIP1 perchlorate at 0.16 µg/L.

The observed RDX is driven by MW-163S, MW-193S, MW-232M1, and MW-143M3 with two plumelets <2.0 µg/L. In downgradient area (Zone 2 and off-base), there are isolated perchlorate plumelets >2.0 µg/L (MW-637M2, 2.4 µg/L) and no RDX plumelets >0.6 µg/L off-base. The updated kriged plumelet < 2.0 µg/L straddles the base boundary. Measured and predicted

perchlorate and RDX plume shells were reviewed and discussed. It was noted there is not a very large extent for perchlorate based on measured data compared to when ETR began in 2006.

Comparison to the Decision Document criteria was discussed. The Decision Document predicted perchlorate would be below 2.0 µg/L (MMCL) by 2022 and RDX would be below 0.6 µg/L (RBC) and 2.0 µg/L (HA) by 2021. Based on the updated 2018 plume shell with drift update through August 2021, perchlorate would be below 2.0 µg/L off-base by 2028 and on base by 2036. RDX would be below 0.6 µg/L off-base by 2025 and on-base by 2027. The additional years to attenuate are attributed to a delay as perchlorate and RDX migrate through the relatively low hydraulic conductivity materials.

Surface water monitoring activities were reviewed. At Snake Pond, surface water samples were collected from three locations during two sampling events (May and July) showing very consistent trace to non-detect values. All explosives samples were non-detect to J-values, and RDX was below the reporting limit. All perchlorate samples were ND to J-values, and perchlorate was below the reporting limit. At the J-3 Wetland, the hydraulic data was consistent with previous monitoring events. Potentiometric contours east of MW-637 indicate that the wetlands are at the margin of the capture zone suggesting a weak hydraulic influence by the in-plume extraction wells, J3EWIP1 and J3EWIP2. There is no evidence of impact from operation of the J-3 system on wetland water levels.

Recommendations were reviewed and discussed. IAGWSP recommends adding MW-197M1 back into the chemical network. It was last sampled in 2006 and had a history of non-detect to trace perchlorate, but it is screened at a similar elevation to MW-198M2, which is approximately 175 feet to the west of where perchlorate was detected >1 µg/L. It is also recommended to monitor perchlorate and RDX concentrations upgradient of J2EWIP2. Recommendations for PFAS monitoring include resampling the wells that exceeded 50% of the 20 ng/L MMCL (i.e., 10 ng/L) in 2021 samples—MW-181S, MW-197M2, MW-653M—and evaluate the 1996 Air Force Center for Engineering and the Environment (AFCEE) well 90MW0080 for potential sampling. Finally, a proposal to discontinue Snake Pond surface water sampling is pending review by the Sandwich Board of Health. Surface water sampling will continue according to the currently approved schedule pending a final decision. The next model plume shell update is scheduled for next year (2023). EPA and MassDEP comments on the report are pending.

Action Items

The action items were discussed and updated.

JBCC Cleanup Team Meeting

The next JBCC Cleanup Team (JBCCCT) is scheduled for 13 April 2022 at 6:00 – 8:00 PM (1800 - 2000 EST) via Microsoft Teams. Additional meeting details will be provided at a later date. Presentation materials from previous meetings can be found on the IAGWSP web site at <http://jbcc-iagwsp.org/community/impact/presentations/>. The Cleanup Team meeting discusses late breaking news and responses to action items, as well as updates from the IAGWSP and the Installation Restoration Program (IRP). The JBCCCT meetings provide a forum for community input regarding issues related to both the IRP and the IAGWSP.

3. SUMMARY OF DATA RECEIVED

Table 1, which summarizes sampling for all media in a given month was unavailable due to a database error that is being addressed. All relevant Table 1 data for February 2022 will be reported in the next Monthly Progress Report. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 to 28 February 2022. These results are compared to the Maximum Contaminant Levels/Health Advisory (MCL/HA) values for respective analytes. Explosives and perchlorate are the primary contaminants of concern (COC) at Camp Edwards. Table 3 summarizes sampling of influent and groundwater samples for per- and polyfluoroalkyl substances (PFAS) from 1 June 2019 to present.

The operable units (OUs) under investigation and cleanup at Camp Edwards are the Central Impact Area, Demolition Area 1, Demolition Area 2, J-1 Range, J-2 Range, J-3 Range, L Range, Northwest Corner, Small Arms Ranges, and Training Areas. Environmental monitoring reports for each OU are generated each year to evaluate the current year groundwater results. These reports are available on the site Environmental Data Management System (EDMS) and at the project document repositories (IAGWSP office and Jonathan Bourne Library).

4. SUBMITTED DELIVERABLES

Deliverables submitted during the reporting period include the following:

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| • Monthly Progress Report No. 298 for January 2022 | 10 February 2022 |
| • Demolition Area 1 2021 Final Annual Environmental Monitoring Report | 02 February 2022 |
| • Replacement of Consolidated Shot Structure Material and Future Monitoring Final Project Note | 02 February 2022 |
| • Central Impact Area 2021 Source Removal Draft Annual Report | 15 February 2022 |
| • J-2 Range Northern 2021 Draft Annual Environmental Monitoring Report | 17 February 2022 |
| • Demolition Area 1 Revised Draft Well Field Design MW-533 Technical Memorandum | 17 February 2022 |
| • J-2 Range Eastern 2021 Draft Annual Environmental Monitoring Report | 25 February 2022 |
| • Central Impact Area RDX Plume Shell Development Draft Technical Memorandum | 25 February 2022 |

5. SCHEDULED ACTIONS

The following actions and/or documents are being prepared in March 2022.

- Demolition Area 1 Annual Environmental Monitoring Report Response to Comments
- Central Impact Area Draft Annual Environmental Monitoring Report Response to Comments
- J-1 Range Southern Annual Environmental Monitoring Report Response to Comments
- J-3 Range Draft Annual Environmental Monitoring Report
- J-3 Range Additional PFAS Sampling Technical Memorandum
- J-2 Range Eastern & Northern Draft Plume Shell Update Technical Memorandum
- Central Impact Area Draft Plume Shell Update Technical Memorandum
- Northwest Corner Draft Sampling Discontinuation Technical Memorandum
- J-2 Range Northern Draft Additional PFAS Sampling Technical Memorandum
- IRA Completion Report
- Small Arms Ranges Revised Draft Completion of Work Report
- Northwest Corner Demonstration of Compliance Report Response to Comments
- J-2 Range, Phase-2, Addendum to Post-DD Confirmation Geophysical and Soil Investigation Findings Revised Technical Memorandum and Response to Comments
- KD Range Confirmatory Geophysical and Soil Investigation Technical Memorandum
- Demolition Area 1 Extraction Well Technical Memorandum

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2019 PFAS MW&INF
 Demolition Area 1

Location	D1-INF	FPR-2-INF	MW-258M1	MW-663D	PR-INF
Field Sample ID	D1-INF_PFAS19	FPR-2-INF_PFAS19	MW-258M1_PFAS19	MW-663D_PFAS19	PR-INF_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	109.00 - 119.00	240.60 - 250.60	0.00 - 0.00
Sampling Date	06/24/2019	06/25/2019	06/19/2019	06/24/2019	06/25/2019
SDG	320517141	320517141	320515981	320517141	320517141
Sample Type	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	20.0 U	20.0 U	20.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
Perfluorobutanesulfonic acid (PFBS)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.910 U	0.950 U	0.980 U	2.20	0.980 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorohexane sulfonate (PFHxS)	0.910 U	0.950 U	0.980 U	0.980 U	2.00 U
Perfluorohexanoic acid (PFHxA)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.50 U	1.00 J	1.50 U
Perfluorooctanesulfonamide (PFOSA)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)	0.910 U	0.950 U	0.980 U	0.460 J	0.980 U
Perfluorotetradecanoic acid (PFTeDA)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorotridecanoic acid (PFTTrDA)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.50 U	1.20 J	1.50 U
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	2.20	0.00
§Sum of All Compounds Detected	0.00	0.00	0.00	4.86	0.00

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2019 PFAS MW&INF
 J1 Range Northern

Location	J1N-INF2	J1N-INF2	MW-136S	MW-564M1	MW-590M2
Field Sample ID	J1N-INF2_PFA19	J1N-INF2_PFA19R	MW-136S_PFA19	MW-564M1_PFA19	MW-590M2_PFA19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	107.00 - 117.00	227.00 - 237.00	238.00 - 248.00
Sampling Date	06/17/2019	07/30/2019	06/24/2019	06/24/2019	06/24/2019
SDG	320514661	320528231	320517141	320517141	320517141
Sample Type	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	20.0 U	18.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.30 U	9.60 U	9.80 U	9.20 U	9.60 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.30 U	9.60 U	9.80 U	9.20 U	9.60 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.30 U	9.60 U	9.80 U	9.20 U	9.60 U
Perfluorobutanesulfonic acid (PFBS)	0.930 U	0.960 U	0.980 U	0.920 U	0.960 U
Perfluorobutanoic acid (PFBA)	1.90 U	1.40 U	0.990 J	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.930 U	0.960 U	0.980 U	0.920 U	0.960 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.930 U	0.960 U	0.980 U	0.920 U	0.960 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.930 U	1.90 U	2.00 U	1.80 U	0.960 U
Perfluorohexanoic acid (PFHxA)	0.930 U	0.960 U	0.980 U	0.920 U	0.960 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	1.80 J	2.90 U	2.90 U	2.80 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	4.90	2.90 U	1.40 J	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	2.40	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.930 U	0.960 U	0.980 U	0.920 U	0.960 U
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.90 U	2.90 U	2.80 U	2.90 U
Perfluorotridecanoic acid (PFTrDA)	2.80 U	2.90 U	2.90 U	2.80 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
†PFOS + PFOA (EPA)	4.90	0.00	3.80	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	4.90	0.00	2.40	0.00	0.00
§Sum of All Compounds Detected	6.70	0.00	4.79	0.00	0.00

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 J2 Range Eastern

Location	J2E-INF-I	J2E-INF-J	J2E-INF-K	MW-307M3	MW-307M3	MW-368M1
Field Sample ID	J2E-INF-I_PFAS19	J2E-INF-J_PFAS19	J2E-INF-K_PFAS19	MW-307M3_PFAS19	MW-307M3_PFAS19D	MW-368M1_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	125.80 - 135.82	125.80 - 135.82	237.35 - 247.35
Sampling Date	06/20/2019	06/20/2019	06/20/2019	06/18/2019	06/18/2019	06/18/2019
SDG	320515981	320515981	320515981	320514662	320514662	320514662
Sample Type	Normal	Normal	Normal	Normal	Field Duplicate	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	20.0 U	18.0 U	19.0 U	17.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.70 U	9.30 U	9.80 U	9.00 U	9.60 U	8.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.70 U	9.30 U	9.80 U	9.00 U	9.60 U	8.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.70 U	9.30 U	9.80 U	9.00 U	9.60 U	8.50 U
Perfluorobutanesulfonic acid (PFBS)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorobutanoic acid (PFBA)	1.50 U	1.40 U	1.50 U	1.80 U	1.90 U	1.70 U
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	1.30 U
Perfluorodecanoic acid (PFDA)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	1.40 J
Perfluorododecanoic acid (PFDoA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	0.450 J
Perfluoroheptanesulfonic acid (PFHpS)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluoroheptanoic acid (PFHpA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	1.30 U
Perfluorohexane sulfonate (PFHxS)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorohexanoic acid (PFHxA)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorononanoic acid (PFNA)	1.50 U	1.40 U	1.50 U	0.880 J	0.730 J	0.650 J
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorooctanesulfonic acid (PFOS)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorooctanoic acid (PFOA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	1.30 U
Perfluoropentanoic acid (PFPeA)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluoroundecanoic acid (PFUnA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	4.90
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
§Sum of All Compounds Detected	0.00	0.00	0.00	0.880	0.730	7.40

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 J2 Range Eastern

	Location	MW-368M2	MW-667M1
	Field Sample ID	MW-368M2_PFAS19	MW-667M1_PFAS19
	Sampling Depth	202.73 - 212.73	302.30 - 312.30
	Sampling Date	06/18/2019	06/17/2019
	SDG	320514662	320514661
	Sample Type	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		18.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		8.80 U	9.00 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		8.80 U	9.00 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		8.80 U	9.00 U
Perfluorobutanesulfonic acid (PFBS)		0.880 U	0.900 U
Perfluorobutanoic acid (PFBA)		1.30 U	1.80 U
Perfluorodecanesulfonic acid (PFDS)		1.30 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.800 J	4.30
Perfluorododecanoic acid (PFDoA)		1.30 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.880 U	0.900 U
Perfluoroheptanoic acid (PFHpA)		1.30 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.880 U	0.900 U
Perfluorohexanoic acid (PFHxA)		0.880 U	0.900 U
Perfluorononanoic acid (PFNA)		1.30 U	2.80
Perfluorooctanesulfonamide (PFOSA)		2.60 U	2.70 U
Perfluorooctanesulfonic acid (PFOS)		2.60 U	2.70 U
Perfluorooctanoic acid (PFOA)		1.30 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.880 U	0.900 U
Perfluorotetradecanoic acid (PFTeDA)		2.60 U	2.70 U
Perfluorotridecanoic acid (PFTrDA)		2.60 U	2.70 U
Perfluoroundecanoic acid (PFUnA)		2.40	1.60 J
	†PFOS + PFOA (EPA)	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	7.10
	§Sum of All Compounds Detected	3.20	8.70

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 J2 Range Northern

Location	J2EW0001	J2EW0002	J2N-INF-E	J2N-INF-F	J2N-INF-F	J2N-INF-G
Field Sample ID	J2EW0001_PFAS19	J2EW0002_PFAS19	J2N-INF-E_PFAS19	J2N-INF-F_PFAS19	J2N-INF-F_PFAS19R	J2N-INF-G_PFAS19
Sampling Depth	179.00 - 234.00	198.00 - 233.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Sampling Date	11/20/2019	11/20/2019	06/18/2019	06/18/2019	07/30/2019	07/30/2019
SDG	320565491	320565491	320514662	320514662	320528231	320528231
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	40.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	19.0 U	20.0 U	9.30 U	9.30 U	9.60 U	9.70 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.60 U	10.0 U	9.30 U	9.30 U	9.60 U	9.70 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.60 U	10.0 U	9.30 U	9.30 U	9.60 U	9.70 U
Perfluorobutanesulfonic acid (PFBS)	0.960 U	1.00 U	0.930 U	0.930 U	0.960 U	1.40 J
Perfluorobutanoic acid (PFBA)	1.40 U	1.50 U	1.40 U	1.90 U	1.40 U	1.50 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.960 U	1.00 U	0.930 U	0.930 U	0.960 U	0.970 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)	0.960 U	0.370 J	0.930 U	0.400 J	0.500 J	0.970 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.00 J	1.40 U	0.940 J	1.00 J	1.50 U
Perfluorohexane sulfonate (PFHxS)	0.960 U	11.0	0.930 U	9.90	9.00	1.90 U
Perfluorohexanoic acid (PFHxA)	0.960 U	1.30 J	0.930 U	1.20 J	1.30 J	2.30
Perfluorononanoic acid (PFNA)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)	2.90 U	3.00 U	2.80 U	2.80 U	2.90 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	2.90 U	1.30 J	2.80 U	2.80 U	1.10 J	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.50 J	1.40 U	1.70 J	1.50 J	1.50 U
Perfluoropentanoic acid (PFPeA)	0.960 U	0.910 J	0.930 U	0.840 J	1.00 J	1.20 J
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	3.00 U	2.80 U	2.80 U	2.90 U	2.90 U
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	3.00 U	2.80 U	2.80 U	2.90 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
†PFOS + PFOA (EPA)	0.00	2.80	0.00	1.70	2.60	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	11.0	0.00	9.90	9.00	0.00
§Sum of All Compounds Detected	0.00	17.4	0.00	15.0	15.4	4.90

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 J2 Range Northern

	Location	MW-234M2	MW-313M1	MW-587M2
	Field Sample ID	MW-234M2_PFAS19	MW-313M1_PFAS19	MW-587M2_PFAS19
	Sampling Depth	110.00 - 120.00	255.40 - 265.40	220.00 - 230.00
	Sampling Date	06/17/2019	06/19/2019	06/19/2019
	SDG	320514661	320515981	320515981
	Sample Type	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		18.0 U	20.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		8.80 U	9.80 U	9.70 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		8.80 U	9.80 U	9.70 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		8.80 U	9.80 U	9.70 U
Perfluorobutanesulfonic acid (PFBS)		0.880 U	0.980 U	0.970 U
Perfluorobutanoic acid (PFBA)		1.80 U	0.700 J	1.50 U
Perfluorodecanesulfonic acid (PFDS)		1.30 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)		0.880 U	1.20 J	0.970 U
Perfluorododecanoic acid (PFDoA)		1.30 U	1.50 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)		0.880 U	0.980 U	0.970 U
Perfluoroheptanoic acid (PFHpA)		1.30 U	1.50 U	1.50 U
Perfluorohexane sulfonate (PFHxS)		0.600 J	0.980 U	0.970 U
Perfluorohexanoic acid (PFHxA)		0.880 U	0.980 U	0.970 U
Perfluorononanoic acid (PFNA)		1.30 U	1.10 J	1.50 U
Perfluorooctanesulfonamide (PFOSA)		2.60 U	2.90 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)		1.90 J	2.90 U	2.90 U
Perfluorooctanoic acid (PFOA)		0.550 J	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)		0.880 U	0.680 J	0.970 U
Perfluorotetradecanoic acid (PFTeDA)		2.60 U	2.90 U	2.90 U
Perfluorotridecanoic acid (PFTrDA)		2.60 U	2.90 U	2.90 U
Perfluoroundecanoic acid (PFUnA)		1.30 U	1.40 J	1.50 U
	†PFOS + PFOA (EPA)	2.45	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00
	§Sum of All Compounds Detected	3.05	5.08	0.00

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 J3 Range

Location	J3-INF	J3-INF	MW-163S	MW-163S	MW-163S	MW-227M2
Field Sample ID	J3-INF_PFAS19	J3-INF_PFAS19D	MW-163S_PFAS19	MW-163S_PFAS19D	MW-163S_PFAS19R	MW-227M2_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	38.00 - 48.00	38.00 - 48.00	38.00 - 48.00	110.00 - 120.00
Sampling Date	06/17/2019	06/17/2019	06/18/2019	06/18/2019	07/30/2019	06/19/2019
SDG	320514661	320514661	320514662	320514662	320528231	320515981
Sample Type	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	17.0 U	17.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.40 U	9.20 U	8.60 U	8.60 U	9.30 U	9.60 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.40 U	9.20 U	8.60 U	8.60 U	9.30 U	9.60 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.40 U	9.20 U	8.60 U	8.60 U	9.30 U	9.60 U
Perfluorobutanesulfonic acid (PFBS)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluorobutanoic acid (PFBA)	1.90 U	1.80 U	1.70 U	1.70 U	0.560 J	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluorododecanoic acid (PFDoA)	1.70 J	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	1.50 J	1.50 J	0.690 J	0.610 J	1.90 U	0.540 J
Perfluorohexanoic acid (PFHxA)	0.940 U	0.920 U	0.410 J	0.860 U	0.930 U	0.960 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.60 U	2.60 U	2.80 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.80 U	12.0	12.0	12.0	2.90 U
Perfluorooctanoic acid (PFOA)	0.520 J	1.40 U	1.70	1.60 J	1.30 J	1.40 U
Perfluoropentanoic acid (PFPeA)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.60 U	2.60 U	2.80 U	2.90 U
Perfluorotridecanoic acid (PFTTrDA)	1.40 J	2.80 U	2.60 U	2.60 U	2.80 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
†PFOS + PFOA (EPA)	0.520	0.00	13.7	13.6	13.3	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	13.7	12.0	12.0	0.00
§Sum of All Compounds Detected	5.12	1.50	14.8	14.2	13.9	0.540

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 J3 Range

Location	MW-250M2
Field Sample ID	MW-250M2_PFAS19
Sampling Depth	145.00 - 155.00
Sampling Date	06/20/2019
SDG	320515981
Sample Type	Normal
PFAS 21 Cmps	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.70 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.70 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.70 U
Perfluorobutanesulfonic acid (PFBS)	0.970 U
Perfluorobutanoic acid (PFBA)	0.710 J
Perfluorodecanesulfonic acid (PFDS)	1.40 U
Perfluorodecanoic acid (PFDA)	0.970 U
Perfluorododecanoic acid (PFDoA)	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.970 U
Perfluoroheptanoic acid (PFHpA)	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.970 U
Perfluorohexanoic acid (PFHxA)	0.970 U
Perfluorononanoic acid (PFNA)	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.90 U
Perfluorooctanesulfonic acid (PFOS)	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U
Perfluoropentanoic acid (PFPeA)	0.970 U
Perfluorotetradecanoic acid (PFTeDA)	2.90 U
Perfluorotridecanoic acid (PFTrDA)	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U
†PFOS + PFOA (EPA)	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00
§Sum of All Compounds Detected	0.710

PFAS Summary Report – Groundwater
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 KGS 2020 J1 Ranges SPM Fall
 J1 Range Northern

Location	MW-136M1	MW-136M1	MW-191M2	MW-245M1	MW-245M2	MW-303M2
Field Sample ID	MW-136M1_F20	MW-136M1_F20D	MW-191M2_F20	MW-245M1_F20	MW-245M2_F20	MW-303M2_F20
Sampling Depth	124.00 - 134.00	124.00 - 134.00	120.00 - 130.00	244.00 - 254.00	204.00 - 214.00	235.09 - 245.10
Sampling Date	12/07/2020	12/07/2020	12/07/2020	12/07/2020	11/10/2020	12/08/2020
SDG	320677691	320677691	320677691	320677691	320665921	320677701
Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.60 U	9.20 U	9.70 U	9.30 U	9.30 U	9.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.60 U	9.20 U	15.0 J	9.30 U	9.30 U	9.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.60 U	9.20 U	2.90 J	9.30 U	9.30 U	9.50 U
Perfluorobutanesulfonic acid (PFBS)	0.960 U	0.920 U	0.970 U	0.930 U	0.930 U	0.950 U
Perfluorobutanoic acid (PFBA)	0.920 J	0.670 J	1.50 U	1.40 U	4.00	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.960 U	0.920 U	0.970 U	0.930 U	0.930 U	0.700 J
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U	1.70 J
Perfluoroheptanesulfonic acid (PFHpS)	0.960 U	0.920 U	0.970 U	0.930 U	0.930 U	0.950 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.50 U	1.40 U	0.700 J	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.360 J	0.920 U	0.970 U	0.930 U	0.930 U	0.950 U
Perfluorohexanoic acid (PFHxA)	0.960 U	0.920 U	0.970 U	0.930 U	0.850 J	0.950 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	2.90 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.960 U	0.920 U	0.970 U	0.930 U	4.00	0.410 J
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U	2.80
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
§Sum of All Compounds Detected	1.28	0.670	17.9	0.00	9.55	5.61

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 KGS 2020 J1 Ranges SPM Fall
 J1 Range Northern

	Location	MW-303M3	MW-326M1	MW-326M2	MW-326M3	MW-346M1	MW-346M2
	Field Sample ID	MW-303M3_F20	MW-326M1_F20	MW-326M2_F20	MW-326M3_F20	MW-346M1_F20	MW-346M2_F20
	Sampling Depth	139.74 - 149.69	250.01 - 260.01	196.27 - 206.28	165.24 - 175.26	0.00 - 0.00	0.00 - 0.00
	Sampling Date	12/08/2020	12/09/2020	12/09/2020	12/09/2020	12/02/2020	12/02/2020
	SDG	320677701	320678771	320678771	320678771	320675551	320675551
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	20.0 U	20.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	8.90 U	10.0 U	10.0 U	9.50 U	9.70 U	9.30 U	9.30 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.90 U	10.0 U	10.0 U	9.50 U	9.70 U	9.30 U	9.30 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.90 U	10.0 U	10.0 U	9.50 U	9.70 U	9.30 U	9.30 U
Perfluorobutanesulfonic acid (PFBS)	0.890 U	1.00 U	1.00 U	0.950 U	0.970 U	0.930 U	0.930 U
Perfluorobutanoic acid (PFBA)	0.920 J	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.30 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	1.60 J	0.950 J	5.40	3.50	2.50	2.40	2.40
Perfluorododecanoic acid (PFDoA)	1.30 U	1.50 U	1.20 J	0.600 J	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.890 U	1.00 U	1.00 U	0.950 U	0.970 U	0.930 U	0.930 U
Perfluoroheptanoic acid (PFHpA)	1.30 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.890 U	1.00 U	1.00 U	0.950 U	0.970 U	0.930 U	0.930 U
Perfluorohexanoic acid (PFHxA)	0.890 U	1.00 U	1.00 U	0.950 U	0.970 U	0.930 U	0.930 U
Perfluorononanoic acid (PFNA)	2.60	1.50 J	1.40 J	2.70	3.40	3.50	3.50
Perfluorooctanesulfonamide (PFOSA)	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	1.30 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.890 U	0.440 J	1.00 U	0.950 U	0.620 J	0.870 J	0.870 J
Perfluorotetradecanoic acid (PFTeDA)	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluoroundecanoic acid (PFUnA)	1.30 U	1.00 J	13.0	6.90	5.90	2.50	2.50
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.60	0.00	5.40	6.20	5.90	5.90
	§Sum of All Compounds Detected	5.12	3.89	21.0	13.7	12.4	9.27

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 J1 Range Northern

	Location	MW-346M3	MW-346M4	MW-58S
	Field Sample ID	MW-346M3_F20	MW-346M4_F20	MW-58S_F20
	Sampling Depth	0.00 - 0.00	0.00 - 0.00	100.00 - 110.00
	Sampling Date	12/02/2020	12/02/2020	12/07/2020
	SDG	320675551	320675551	320677691
	Sample Type	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		20.0 U	18.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.80 U	9.20 U	9.30 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.80 U	9.20 U	9.30 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.80 U	9.20 U	9.30 U
Perfluorobutanesulfonic acid (PFBS)		0.980 U	0.920 U	0.930 U
Perfluorobutanoic acid (PFBA)		1.50 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.730 J	1.70 J	0.930 U
Perfluorododecanoic acid (PFDoA)		1.50 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.980 U	0.920 U	0.930 U
Perfluoroheptanoic acid (PFHpA)		1.50 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.980 U	0.920 U	0.930 U
Perfluorohexanoic acid (PFHxA)		0.980 U	0.920 U	0.930 U
Perfluorononanoic acid (PFNA)		2.20	0.650 J	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.50 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.750 J	0.410 J	0.930 U
Perfluorotetradecanoic acid (PFTeDA)		2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)		2.90 U	2.80 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		1.00 J	6.00	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.20	0.00	0.00
	§Sum of All Compounds Detected	4.68	8.76	0.00

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J2 Range Northern

Location	J2EW0002	J2EW0002	J2EW2-MW2-B	J2EW2-MW2-C	MW-293M2	MW-293M2
Field Sample ID	J2EW0002_F20	J2EW0002_F20D	J2EW2-MW2-B_F20	J2EW2-MW2-C_F20	MW-293M2_F20	MW-293M2_F20D
Sampling Depth	198.00 - 233.00	198.00 - 233.00	209.79 - 219.79	243.83 - 253.81	196.42 - 206.42	196.42 - 206.42
Sampling Date	09/10/2020	09/10/2020	09/09/2020	09/09/2020	08/27/2020	08/27/2020
SDG	320645641	320645641	320645661	320645661	320641331	320641331
Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	20.0 U	19.0 U	19.0 U	19.0 U	18.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.90 U	9.50 U	9.40 U	9.70 U	9.20 U	9.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.90 U	9.50 U	9.40 U	9.70 U	9.20 U	9.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.90 U	9.50 U	9.40 U	9.70 U	9.20 U	9.50 U
Perfluorobutanesulfonic acid (PFBS)	0.990 U	0.950 U	0.940 U	0.970 U	3.40	3.60
Perfluorobutanoic acid (PFBA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.990 U	0.950 U	0.940 U	0.970 U	4.90	4.50
Perfluorododecanoic acid (PFDoA)	1.50 U	1.40 U	1.40 U	1.50 U	3.50	3.60
Perfluoroheptanesulfonic acid (PFHpS)	0.990 U	0.950 U	0.940 U	0.970 U	0.920 U	0.950 U
Perfluoroheptanoic acid (PFHpA)	0.930 J	0.910 J	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	9.80	9.30	0.940 U	0.970 U	0.920 U	0.950 U
Perfluorohexanoic acid (PFHxA)	1.10 J	1.10 J	0.940 U	0.970 U	0.920 U	0.950 U
Perfluorononanoic acid (PFNA)	1.50 U	1.40 U	1.40 U	1.50 U	2.00	1.50 J
Perfluorooctanesulfonamide (PFOSA)	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	1.70 J	1.70 J	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	1.10 J	1.20 J	0.940 U	0.970 U	0.460 J	0.410 J
Perfluorotetradecanoic acid (PFTeDA)	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)	3.00 U	2.80 U	2.80 U	2.90 U	1.50 J	1.90 J
Perfluoroundecanoic acid (PFUnA)	1.50 U	1.40 U	1.40 U	1.50 U	25.0	28.0
†PFOS + PFOA (EPA)	1.70	1.70	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	9.80	9.30	0.00	0.00	6.90	4.50
§Sum of All Compounds Detected	14.6	14.2	0.00	0.00	40.8	43.5

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 J2 Range Northern

	Location	MW-300M1	MW-300M2	MW-300M3	MW-302M2	MW-305M1	MW-348M2
	Field Sample ID	MW-300M1_F20	MW-300M2_F20	MW-300M3_F20	MW-302M2_F20	MW-305M1_F20	MW-348M2_F20
	Sampling Depth	293.03 - 303.02	197.23 - 207.23	135.31 - 145.31	194.35 - 204.43	202.82 - 212.82	206.54 - 216.54
	Sampling Date	09/08/2020	09/08/2020	09/08/2020	08/27/2020	08/31/2020	08/31/2020
	SDG	320644781	320644781	320644781	320641331	320642421	320642421
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	19.0 U	18.0 U	18.0 U	20.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.50 U	9.00 U	9.40 U	9.20 U	9.10 U	9.80 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.50 U	9.00 U	9.40 U	9.20 U	9.10 U	9.80 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.50 U	9.00 U	9.40 U	9.20 U	9.10 U	9.80 U	
Perfluorobutanesulfonic acid (PFBS)	0.950 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	0.550 J	1.40 U	1.40 U	1.00 J	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorodecanoic acid (PFDA)	3.10	3.60	1.50 J	2.80	2.40	2.50	
Perfluorododecanoic acid (PFDoA)	0.800 J	1.10 J	0.610 J	1.70 J	1.40 U	2.20	
Perfluoroheptanesulfonic acid (PFHpS)	0.950 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorohexane sulfonate (PFHxS)	1.90 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluorohexanoic acid (PFHxA)	0.950 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluorononanoic acid (PFNA)	3.90	2.30	0.960 J	1.00 J	1.40 J	1.50 U	
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluorooctanesulfonic acid (PFOS)	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluoropentanoic acid (PFPeA)	0.580 J	0.430 J	0.940 U	1.40 J	0.910 U	1.20 J	
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	0.880 J	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	8.50	9.20	4.80	22.0	1.40 J	8.10	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	7.00	5.90	0.00	2.80	2.40	2.50
	§Sum of All Compounds Detected	16.9	17.5	8.42	28.9	5.20	15.0

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 J2 Range Northern

	Location	MW-586M1	MW-586M2	MW-587M1	MW-588M1	MW-588M2	MW-589M1
	Field Sample ID	MW-586M1_F20	MW-586M2_F20	MW-587M1_F20	MW-588M1_F20	MW-588M2_F20	MW-589M1_F20
	Sampling Depth	237.00 - 247.00	211.00 - 221.00	250.00 - 260.00	238.00 - 248.00	198.00 - 208.00	240.00 - 250.00
	Sampling Date	09/02/2020	09/02/2020	09/10/2020	08/27/2020	08/27/2020	09/02/2020
	SDG	320643521	320643521	320645641	320641331	320641331	320643521
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	19.0 U	19.0 U	18.0 U	18.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.60 U	9.40 U	9.30 U	9.20 U	9.00 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.60 U	9.40 U	9.30 U	9.20 U	9.00 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.60 U	9.40 U	9.30 U	9.20 U	9.00 U	
Perfluorobutanesulfonic acid (PFBS)	0.920 U	0.960 U	0.940 U	0.930 U	3.60	0.900 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.920 U	0.960 U	0.940 U	0.930 U	0.920 U	0.900 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.960 U	0.940 U	0.930 U	0.920 U	0.900 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	0.920 U	0.960 U	0.940 U	0.930 U	0.920 U	0.900 U	
Perfluorohexanoic acid (PFHxA)	0.920 U	0.960 U	0.940 U	0.930 U	0.920 U	0.900 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.70 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.70 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	0.600 J	
Perfluoropentanoic acid (PFPeA)	0.490 J	0.490 J	0.940 U	0.420 J	0.920 U	0.600 J	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.70 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.70 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.600
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.490	0.490	0.00	0.420	3.60	1.20

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 J2 Range Northern

	Location	MW-589M2	MW-621M1	MW-621M2	MW-622M1	MW-622M2	MW-631M1
	Field Sample ID	MW-589M2_F20	MW-621M1_F20	MW-621M2_F20	MW-622M1_F20	MW-622M2_F20	MW-631M1_F20
	Sampling Depth	211.00 - 221.00	249.40 - 259.40	219.40 - 229.40	245.40 - 255.40	220.40 - 230.40	233.10 - 243.10
	Sampling Date	09/02/2020	08/26/2020	08/26/2020	09/01/2020	09/01/2020	08/26/2020
	SDG	320643521	320641331	320641331	320642411	320642411	320641331
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.40 U	9.60 U	9.40 U	9.30 U	9.40 U	9.60 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.40 U	9.60 U	9.40 U	9.30 U	9.40 U	9.60 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.40 U	9.60 U	9.40 U	9.30 U	9.40 U	9.60 U	
Perfluorobutanesulfonic acid (PFBS)	0.940 U	0.960 U	0.940 U	0.930 U	0.940 U	0.960 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.940 U	0.960 U	0.940 U	0.930 U	0.940 U	0.960 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.940 U	0.960 U	0.940 U	0.930 U	0.940 U	0.960 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	0.940 U	0.960 U	0.940 U	0.930 U	0.940 U	0.960 U	
Perfluorohexanoic acid (PFHxA)	0.940 U	0.960 U	0.940 U	0.930 U	0.940 U	0.960 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.90 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.90 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoropentanoic acid (PFPeA)	0.940 U	0.440 J	0.940 U	0.400 J	0.940 U	0.420 J	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.00	0.440	0.00	0.400	0.00	0.420

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J2 Range Northern

	Location	MW-631M2	MW-632M1	MW-632M2	MW-632M2	MW-640M1	MW-640M2
	Field Sample ID	MW-631M2_F20	MW-632M1_F20	MW-632M2_F20	MW-632M2_F20D	MW-640M1_F20	MW-640M2_F20
	Sampling Depth	200.10 - 210.10	254.50 - 264.50	229.50 - 239.50	229.50 - 239.50	246.00 - 256.00	216.00 - 226.00
	Sampling Date	08/26/2020	09/03/2020	09/03/2020	09/03/2020	09/03/2020	09/03/2020
	SDG	320641331	320643511	320643511	320643511	320643511	320643511
	Sample Type	Normal	Normal	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	18.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.40 U	9.00 U	9.60 U	9.40 U	9.30 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.40 U	9.00 U	9.60 U	9.40 U	9.30 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.40 U	9.00 U	9.60 U	9.40 U	9.30 U	
Perfluorobutanesulfonic acid (PFBS)	8.50	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U	
Perfluorobutanoic acid (PFBA)	1.70 J	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.920 U	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	1.80 U	0.940 U	0.900 U	0.960 U	0.360 J	0.930 U	
Perfluorohexanoic acid (PFHxA)	5.40	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoropentanoic acid (PFPeA)	1.90	0.450 J	0.900 U	0.960 U	0.630 J	0.930 U	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	17.5	0.450	0.00	0.00	0.990	0.00

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 J2 Range Northern

	Location	MW-703M1	MW-703M2	MW-704M1	MW-704M2
	Field Sample ID	MW-703M1_F20	MW-703M2_F20	MW-704M1_F20	MW-704M2_F20
	Sampling Depth	248.00 - 258.00	224.10 - 234.10	244.00 - 254.00	217.80 - 227.80
	Sampling Date	08/31/2020	08/31/2020	09/01/2020	09/01/2020
	SDG	320642421	320642421	320642411	320642411
	Sample Type	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		18.0 U	18.0 U	19.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.10 U	9.20 U	9.70 U	9.20 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.10 U	9.20 U	9.70 U	9.20 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.10 U	9.20 U	9.70 U	9.20 U
Perfluorobutanesulfonic acid (PFBS)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluorobutanoic acid (PFBA)		1.40 U	1.40 U	1.40 J	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluorodecanoic acid (PFDA)		3.20	1.60 J	1.50 J	1.90
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluorohexanoic acid (PFHxA)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluorononanoic acid (PFNA)		1.80	0.900 J	1.50 U	0.890 J
Perfluorooctanesulfonamide (PFOSA)		1.30 J	2.20 J	2.90 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		2.70 U	2.70 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.650 J	0.830 J	1.10 J	0.400 J
Perfluorotetradecanoic acid (PFTeDA)		2.70 U	2.70 U	2.90 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.70 U	2.70 U	2.90 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		0.650 J	1.40 U	1.00 J	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	5.00	0.00	0.00	1.90
	§Sum of All Compounds Detected	7.60	5.53	5.00	3.19

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 J3 Range

	Location	MW-143M2	MW-143M3	MW-163S	MW-163S	MW-181S	MW-193M1
	Field Sample ID	MW-143M2_F20	MW-143M3_F20	MW-163S_F20	MW-163S_F20D	MW-181S_F20	MW-193M1_F20
	Sampling Depth	117.00 - 122.00	107.00 - 112.00	38.00 - 48.00	38.00 - 48.00	32.25 - 42.25	57.50 - 62.50
	Sampling Date	07/20/2020	07/21/2020	07/16/2020	07/16/2020	07/21/2020	07/16/2020
	SDG	320629171	320629171	320627321	320627321	320629171	320627321
	Sample Type	Normal	Normal	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	19.0 U	20.0 U	19.0 U	19.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.40 U	9.50 U	9.70 U	9.80 U	9.40 U	9.60 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.40 U	9.50 U	9.70 U	9.80 U	9.40 U	9.60 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.40 U	9.50 U	9.70 U	9.80 U	9.40 U	9.60 U	
Perfluorobutanesulfonic acid (PFBS)	1.20 J	0.620 J	0.970 U	0.980 U	0.940 U	0.960 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.00 J	1.00 J	1.40 U	0.570 J	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.940 U	0.950 U	0.970 U	0.980 U	0.940 U	0.960 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.940 U	0.950 U	0.970 U	0.980 U	0.940 U	0.960 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	26.0	4.20	1.90 U	2.00 U	1.90 U	1.90 U	
Perfluorohexanoic acid (PFHxA)	0.940 U	0.950 U	0.970 U	0.980 U	0.940 U	0.960 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.90 U	2.90 U	2.80 U	2.90 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.80 U	4.90	5.00	16.0	2.90 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	0.840 J	0.940 J	0.510 J	1.40 U	
Perfluoropentanoic acid (PFPeA)	0.940 U	0.950 U	0.970 U	0.460 J	0.940 U	0.490 J	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.90 U	2.90 U	2.80 U	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.80 U	2.90 U	2.90 U	2.80 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	0.00	5.74	5.94	16.5	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	26.0	4.20	4.90	5.00	16.0	0.00
	§Sum of All Compounds Detected	27.2	4.82	6.74	7.40	16.5	1.06

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 J3 Range

	Location	MW-193S	MW-196M1	MW-196S	MW-197M1	MW-197M2	MW-197M3
	Field Sample ID	MW-193S_F20	MW-196M1_F20	MW-196S_F20	MW-197M1_F20	MW-197M2_F20	MW-197M3_F20D
	Sampling Depth	32.50 - 37.50	45.00 - 50.00	32.00 - 37.00	120.00 - 125.00	80.20 - 85.20	60.20 - 65.20
	Sampling Date	07/16/2020	07/23/2020	07/23/2020	07/20/2020	07/20/2020	07/20/2020
	SDG	320627321	320630121	320630121	320629171	320629171	320629171
	Sample Type	Normal	Normal	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		18.0 U	18.0 U	18.0 U	19.0 U	19.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U
Perfluorobutanesulfonic acid (PFBS)		2.20	0.920 U	0.900 U	0.940 U	1.80 J	0.920 U
Perfluorobutanoic acid (PFBA)		1.20 J	1.80 U	1.80 U	1.40 U	4.90	1.40 J
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.920 U	0.550 J	0.900 U	0.940 U	0.930 U	0.920 U
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.920 U	0.920 U	0.900 U	0.940 U	0.930 U	0.920 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.30 U	1.40 U	4.00	1.40 U
Perfluorohexane sulfonate (PFHxS)		19.0	1.00 J	0.900 U	1.90 U	37.0	1.80 U
Perfluorohexanoic acid (PFHxA)		0.830 J	0.950 J	0.510 J	0.940 U	8.40	0.450 J
Perfluorononanoic acid (PFNA)		1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		2.80 U	1.10 J	3.80	2.80 U	10.0	2.80 U
Perfluorooctanoic acid (PFOA)		1.40 U	2.10	1.10 J	0.550 J	3.10	1.10 J
Perfluoropentanoic acid (PFPeA)		1.30 J	0.660 J	0.440 J	0.400 J	6.50	0.440 J
Perfluorotetradecanoic acid (PFTeDA)		2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	3.20	4.90	0.550	13.1	1.10
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	19.0	2.10	3.80	0.00	54.1	0.00
	§Sum of All Compounds Detected	24.5	6.36	5.85	0.950	75.7	3.39

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	Location	MW-197M3	MW-198M1	MW-198M2	MW-198M3	MW-198M4	MW-232M1
	Field Sample ID	MW-197M3_F20	MW-198M1_F20	MW-198M2_F20	MW-198M3_F20	MW-198M4_F20	MW-232M1_F20
	Sampling Depth	60.20 - 65.20	150.00 - 155.00	120.00 - 125.00	100.00 - 105.00	70.00 - 75.00	77.50 - 82.50
	Sampling Date	07/20/2020	07/15/2020	07/15/2020	07/15/2020	07/15/2020	07/16/2020
	SDG	320629171	320627321	320627321	320627321	320627321	320627321
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U
Perfluorobutanesulfonic acid (PFBS)	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluorobutanoic acid (PFBA)	1.50 J	1.40 U	0.740 J	0.740 J	6.50	2.20	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.80 J	1.40 U	
Perfluorohexane sulfonate (PFHxS)	1.80 U	0.950 U	0.950 U	1.90 U	4.40	0.950 U	
Perfluorohexanoic acid (PFHxA)	0.920 U	0.950 U	0.950 U	0.950 U	3.70	0.950 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U	
Perfluorooctanesulfonic acid (PFOS)	1.00 J	2.80 U	2.90 U	2.80 U	2.30 J	2.90 U	
Perfluorooctanoic acid (PFOA)	0.990 J	1.40 U	1.40 U	1.40 U	2.30	0.640 J	
Perfluoropentanoic acid (PFPeA)	0.430 J	0.460 J	0.950 U	0.950 U	2.80	0.420 J	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	1.99	0.00	0.00	0.00	4.60	0.640
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	6.70	0.00
	§Sum of All Compounds Detected	3.92	0.460	0.740	0.740	23.8	3.26

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	Location	MW-232M2	MW-30
	Field Sample ID	MW-232M2_F20	MW-30_F20
	Sampling Depth	61.00 - 66.00	26.00 - 36.00
	Sampling Date	07/16/2020	07/21/2020
	SDG	320627321	320629171
	Sample Type	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		20.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		10.0 U	9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		10.0 U	9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		10.0 U	9.40 U
Perfluorobutanesulfonic acid (PFBS)		1.00 U	0.940 U
Perfluorobutanoic acid (PFBA)		3.20	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.40 U
Perfluorodecanoic acid (PFDA)		1.00 U	0.940 U
Perfluorododecanoic acid (PFDoA)		1.50 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		1.00 U	0.940 U
Perfluoroheptanoic acid (PFHpA)		1.50 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		1.00 U	0.940 U
Perfluorohexanoic acid (PFHxA)		1.00 U	0.940 U
Perfluorononanoic acid (PFNA)		1.50 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		3.00 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		3.00 U	15.0
Perfluorooctanoic acid (PFOA)		1.10 J	0.790 J
Perfluoropentanoic acid (PFPeA)		0.520 J	0.940 U
Perfluorotetradecanoic acid (PFTeDA)		3.00 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		3.00 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		1.50 U	1.40 U
	†PFOS + PFOA (EPA)	1.10	15.8
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	15.0
	§Sum of All Compounds Detected	4.82	15.8

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 J2 Range Northern

Location	J2EW0002	J2EW0002	J2EW2-MW2-B	J2EW2-MW2-C	MW-293M2	MW-293M2
Field Sample ID	J2EW0002_F21	J2EW0002_F21D	J2EW2-MW2-B_F21	J2EW2-MW2-C_F21	MW-293M2_F21	MW-293M2_F21D
Sampling Depth	198.00 - 233.00	198.00 - 233.00	209.79 - 219.79	243.83 - 253.81	0.00 - 0.00	0.00 - 0.00
Sampling Date	09/27/2021	09/27/2021	09/15/2021	09/15/2021	09/08/2021	09/08/2021
SDG	320796651	320796651	320791141	320791141	320787611	320787611
Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	6.70 J	6.70 J	19.0 U	20.0 U	18.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.40 U	9.00 U	9.50 U	10.0 U	9.20 U	8.90 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.40 U	9.00 U	9.50 U	10.0 U	9.20 U	8.90 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.40 U	9.00 U	9.50 U	10.0 U	9.20 U	8.90 U
Perfluorobutanesulfonic acid (PFBS)	0.940 U	0.900 U	0.950 U	1.00 U	3.90	3.80
Perfluorobutanoic acid (PFBA)	1.40 U	1.30 U	1.40 U	1.50 U	0.840 J	1.10 J
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.30 U	1.40 U	1.50 U	1.40 U	1.30 U
Perfluorodecanoic acid (PFDA)	0.940 U	0.900 U	0.950 U	1.00 U	3.20	2.80
Perfluorododecanoic acid (PFDoA)	1.40 U	1.30 U	1.40 U	1.50 U	2.40	2.30
Perfluoroheptanesulfonic acid (PFHpS)	0.940 U	0.900 U	0.950 U	1.00 U	0.920 U	0.890 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	0.550 J	1.40 U	1.50 U	1.40 U	1.30 U
Perfluorohexane sulfonate (PFHxS)	8.10	7.70	0.950 U	1.00 U	0.920 U	0.890 U
Perfluorohexanoic acid (PFHxA)	0.820 J	0.770 J	0.950 U	1.00 U	1.30 J	1.10 J
Perfluorononanoic acid (PFNA)	1.40 U	1.30 U	1.40 U	1.50 U	1.30 J	1.10 J
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.70 U	2.90 U	3.10 U	2.80 U	2.70 U
Perfluorooctanesulfonic acid (PFOS)	1.30 J	1.10 J	2.90 U	3.10 U	2.80 U	2.70 U
Perfluorooctanoic acid (PFOA)	1.80 J	1.20 J	1.40 U	1.50 U	1.40 U	1.30 U
Perfluoropentanoic acid (PFPeA)	0.680 J	0.640 J	0.950 U	1.00 U	1.10 J	1.00 J
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.70 U	2.90 U	3.10 U	2.80 U	2.70 U
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.70 U	2.90 U	3.10 U	0.760 J	2.70 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.30 U	1.40 U	1.50 U	23.0	22.0
†PFOS + PFOA (EPA)	3.10	2.30	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	8.10	7.70	0.00	0.00	3.20	2.80
§Sum of All Compounds Detected	19.4	18.7	0.00	0.00	37.8	35.2

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	Location	MW-300M1	MW-300M1	MW-300M2	MW-300M3	MW-302M2	MW-302M2
	Field Sample ID	MW-300M1_F21	MW-300M1_F21D	MW-300M2_F21	MW-300M3_F21	MW-302M2_F21	MW-302M2_F21D
	Sampling Depth	293.03 - 303.02	293.03 - 303.02	197.23 - 207.23	135.31 - 145.31	194.35 - 204.43	194.35 - 204.43
	Sampling Date	09/21/2021	09/21/2021	09/21/2021	09/21/2021	09/13/2021	09/13/2021
	SDG	320793351	320793351	320793351	320793351	320790821	320790821
	Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		19.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.70 U	9.60 U	9.30 U	9.50 U	9.60 U	9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.70 U	9.60 U	9.30 U	9.50 U	9.60 U	9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.70 U	9.60 U	9.30 U	9.50 U	9.60 U	9.40 U
Perfluorobutanesulfonic acid (PFBS)		0.970 U	0.960 U	0.930 U	0.950 U	0.960 U	0.940 U
Perfluorobutanoic acid (PFBA)		1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		3.40	3.60	4.00	1.70 J	2.60	2.50
Perfluorododecanoic acid (PFDoA)		0.520 J	0.680 J	1.10 J	0.710 J	2.80	3.00
Perfluoroheptanesulfonic acid (PFHpS)		0.970 U	0.960 U	0.930 U	0.950 U	0.960 U	0.940 U
Perfluoroheptanoic acid (PFHpA)		1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.970 U	0.960 U	0.930 U	0.440 J	0.960 U	0.940 U
Perfluorohexanoic acid (PFHxA)		0.970 U	0.960 U	0.930 U	0.950 U	0.960 U	0.940 U
Perfluorononanoic acid (PFNA)		4.80	4.80	3.60	2.10	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.90 U	2.80 U	2.90 U	2.90 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		2.90 U	2.90 U	2.80 U	2.90 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.970 U	0.960 U	0.930 U	0.950 U	0.960 U	0.940 U
Perfluorotetradecanoic acid (PFTeDA)		2.90 U	2.90 U	2.80 U	2.90 U	2.90 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)		2.90 U	2.90 U	0.700 J	0.840 J	1.10 J	1.20 J
Perfluoroundecanoic acid (PFUnA)		8.30	8.60	7.80	4.40	27.0	27.0
+PFOS + PFOA (EPA)		0.00	0.00	0.00	0.00	0.00	0.00
#PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		8.20	8.40	7.60	2.10	2.60	2.50
§Sum of All Compounds Detected		17.0	17.7	17.2	10.2	33.5	33.7

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	Location	MW-305M1	MW-330M1	MW-330M2	MW-330M3	MW-340D	MW-340M1
	Field Sample ID	MW-305M1_F21	MW-330M1_F21	MW-330M2_F21	MW-330M3_F21	MW-340D_F21	MW-340M1_F21
	Sampling Depth	202.82 - 212.82	313.10 - 323.13	238.01 - 248.04	154.97 - 164.99	0.00 - 0.00	0.00 - 0.00
	Sampling Date	09/14/2021	09/17/2021	09/17/2021	09/17/2021	09/23/2021	09/23/2021
	SDG	320790821	320791141	320791141	320791141	320793861	320793861
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	19.0 U	20.0 U	19.0 U	19.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.70 U	9.60 U	9.70 U	9.90 U	9.50 U	9.60 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.70 U	9.60 U	9.70 U	9.90 U	9.50 U	9.60 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.70 U	9.60 U	9.70 U	9.90 U	9.50 U	9.60 U	
Perfluorobutanesulfonic acid (PFBS)	0.970 U	0.960 U	0.970 U	0.990 U	0.950 U	0.960 U	
Perfluorobutanoic acid (PFBA)	1.50 U	1.60 J	0.890 J	1.50 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	3.60	38.0	8.90	19.0	18.0	2.30	
Perfluorododecanoic acid (PFDoA)	1.50 U	2.50	2.20	0.810 J	1.80 J	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.970 U	0.960 U	0.970 U	0.990 U	0.950 U	0.960 U	
Perfluoroheptanoic acid (PFHpA)	1.50 U	1.10 J	1.50 U	1.50 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	0.970 U	0.960 U	0.970 U	0.990 U	0.950 U	0.960 U	
Perfluorohexanoic acid (PFHxA)	0.970 U	0.770 J	0.970 U	0.990 U	0.950 U	0.960 U	
Perfluorononanoic acid (PFNA)	2.20	16.0	12.0	25.0	14.0	1.60 J	
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.90 U	2.90 U	3.00 U	2.80 U	2.90 U	
Perfluorooctanesulfonic acid (PFOS)	2.90 U	2.90 U	2.90 U	3.00 U	2.80 U	2.90 U	
Perfluorooctanoic acid (PFOA)	1.50 U	0.660 J	0.650 J	1.50 U	1.40 U	1.40 U	
Perfluoropentanoic acid (PFPeA)	0.970 U	2.50	1.20 J	0.990 U	0.950 U	0.960 U	
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	1.10 J	2.90 U	3.00 U	0.840 J	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	1.60 J	2.10 J	3.00 U	1.20 J	2.90 U	
Perfluoroundecanoic acid (PFUnA)	3.30	23.0	9.60	8.90	18.0	1.50 J	
+PFOS + PFOA (EPA)	0.00	0.660	0.650	0.00	0.00	0.00	
#PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	5.80	54.0	20.9	44.0	32.0	2.30	
§Sum of All Compounds Detected	9.10	88.8	37.5	53.7	53.8	5.40	

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	Location	MW-340M2	MW-345M1	MW-345M2	MW-348M2	MW-586M1	MW-586M2
	Field Sample ID	MW-340M2_F21	MW-345M1_F21	MW-345M2_F21	MW-348M2_F21	MW-586M1_F21	MW-586M2_F21
	Sampling Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	206.54 - 216.54	237.00 - 247.00	211.00 - 221.00
	Sampling Date	09/23/2021	09/20/2021	09/20/2021	09/07/2021	09/09/2021	09/09/2021
	SDG	320793861	320793351	320793351	320787611	320787751	320787751
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	20.0 U	18.0 U	19.0 U	18.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.50 U	9.20 U	9.90 U	8.90 U	9.30 U	9.10 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.50 U	9.20 U	9.90 U	8.90 U	9.30 U	9.10 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.50 U	9.20 U	9.90 U	8.90 U	9.30 U	9.10 U	
Perfluorobutanesulfonic acid (PFBS)	0.950 U	0.920 U	0.990 U	0.890 U	0.930 U	0.910 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	0.790 J	1.30 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.30 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	1.60 J	56.0	2.90	2.40	0.930 U	0.910 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	3.40	0.760 J	2.40	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.950 U	0.920 U	0.990 U	0.890 U	0.930 U	0.910 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	0.910 J	1.50 U	1.30 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	0.950 U	0.410 J	0.810 J	0.890 U	0.930 U	0.910 U	
Perfluorohexanoic acid (PFHxA)	0.950 U	0.920 U	0.990 U	0.890 U	0.930 U	0.910 U	
Perfluorononanoic acid (PFNA)	4.00	14.0	6.80	1.30 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.70 U	3.00 U	2.70 U	2.80 U	2.70 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.70 U	1.20 J	2.70 U	2.80 U	2.70 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.10 J	0.580 J	1.30 U	1.40 U	1.40 U	
Perfluoropentanoic acid (PFPeA)	0.950 U	0.480 J	0.960 J	0.890 U	0.930 U	0.910 U	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	0.930 J	3.00 U	2.70 U	2.80 U	2.70 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	1.80 J	0.840 J	0.740 J	2.80 U	2.70 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	32.0	3.60	8.70	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	1.10	1.78	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	4.00	70.0	9.70	2.40	0.00	0.00
	§Sum of All Compounds Detected	5.60	111	19.2	14.2	0.00	0.00

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 J2 Range Northern

	Location	MW-587M1	MW-588M1	MW-588M2	MW-589M1	MW-589M2	MW-612M1
	Field Sample ID	MW-587M1_F21	MW-588M1_F21	MW-588M2_F21	MW-589M1_F21	MW-589M2_F21	MW-612M1_F21
	Sampling Depth	250.00 - 260.00	238.00 - 248.00	198.00 - 208.00	240.00 - 250.00	211.00 - 221.00	297.00 - 307.00
	Sampling Date	08/24/2021	09/08/2021	09/08/2021	09/09/2021	09/09/2021	09/14/2021
	SDG	320781081	320787611	320787611	320787751	320787751	320790821
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	18.0 U	19.0 U	19.0 U	20.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.30 U	9.10 U	9.40 U	9.40 U	9.80 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.30 U	9.10 U	9.40 U	9.40 U	9.80 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.30 U	9.10 U	9.40 U	9.40 U	9.80 U	
Perfluorobutanesulfonic acid (PFBS)	0.920 U	0.930 U	1.70 J	0.940 U	0.940 U	0.980 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorodecanoic acid (PFDA)	0.920 U	0.930 U	0.910 U	0.940 U	0.940 U	0.980 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.930 U	0.910 U	0.940 U	0.940 U	0.980 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorohexane sulfonate (PFHxS)	0.920 U	0.930 U	0.910 U	0.940 U	0.940 U	0.980 U	
Perfluorohexanoic acid (PFHxA)	0.920 U	0.930 U	0.910 U	0.940 U	0.940 U	0.980 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	3.00 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	3.00 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	0.570 J	1.40 U	1.50 U	
Perfluoropentanoic acid (PFPeA)	0.920 U	0.930 U	0.910 U	0.940 U	0.940 U	0.980 U	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	3.00 U	
Perfluorotridecanoic acid (PFTrDA)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	3.00 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.570	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.00	0.00	1.70	0.570	0.00	0.00

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 J2 Range Northern

	Location	MW-612M2	MW-613M1	MW-613M2	MW-621M1	MW-621M2	MW-622M1
	Field Sample ID	MW-612M2_F21	MW-613M1_F21	MW-613M2_F21	MW-621M1_F21	MW-621M2_F21	MW-622M1_F21
	Sampling Depth	267.00 - 277.00	267.10 - 277.10	246.10 - 256.10	249.40 - 259.40	219.40 - 229.40	245.40 - 255.40
	Sampling Date	09/14/2021	09/17/2021	09/17/2021	09/08/2021	09/08/2021	09/13/2021
	SDG	320790821	320791141	320791141	320787611	320787611	320790821
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	19.0 U	19.0 U	18.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.30 U	9.40 U	9.40 U	9.30 U	8.90 U	9.40 U	9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.30 U	9.40 U	9.40 U	9.30 U	8.90 U	9.40 U	9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.30 U	9.40 U	9.40 U	9.30 U	8.90 U	9.40 U	9.40 U
Perfluorobutanesulfonic acid (PFBS)	0.930 U	0.940 U	0.940 U	0.930 U	0.890 U	0.940 U	0.940 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.930 U	0.940 U	0.940 U	0.930 U	0.890 U	0.940 U	0.940 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.930 U	0.940 U	0.940 U	0.930 U	0.890 U	0.940 U	0.940 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.930 U	0.940 U	0.940 U	0.930 U	0.890 U	0.940 U	0.940 U
Perfluorohexanoic acid (PFHxA)	0.930 U	0.940 U	0.940 U	0.930 U	0.890 U	0.940 U	0.940 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.930 U	0.940 U	0.940 U	0.930 U	0.890 U	0.940 U	0.940 U
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.00	0.00	0.00	0.00	0.00	0.00

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 KGS 2021 J2 North SPM Fall
 J2 Range Northern

	Location	MW-622M2	MW-631M1	MW-631M2	MW-632M1	MW-632M2	MW-640M1
	Field Sample ID	MW-622M2_F21	MW-631M1_F21	MW-631M2_F21	MW-632M1_F21	MW-632M2_F21	MW-640M1_F21
	Sampling Depth	220.40 - 230.40	233.10 - 243.10	200.10 - 210.10	254.50 - 264.50	229.50 - 239.50	246.00 - 256.00
	Sampling Date	09/13/2021	08/23/2021	08/23/2021	09/07/2021	09/07/2021	09/07/2021
	SDG	320790821	320781081	320781081	320787611	320787611	320787611
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	18.0 U	18.0 U	18.0 U	18.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.60 U	8.80 U	9.00 U	9.00 U	9.00 U	9.00 U	9.60 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.60 U	8.80 U	9.00 U	9.00 U	9.00 U	9.00 U	9.60 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.60 U	8.80 U	9.00 U	9.00 U	9.00 U	9.00 U	9.60 U
Perfluorobutanesulfonic acid (PFBS)	0.960 U	0.880 U	12.0	0.900 U	0.900 U	0.900 U	0.960 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.30 U	2.80	1.40 U	1.30 U	1.30 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.960 U	0.880 U	0.900 U	0.900 U	0.900 U	0.900 U	0.960 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.960 U	0.880 U	0.900 U	0.900 U	0.900 U	0.900 U	0.960 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.960 U	0.880 U	0.900 U	0.900 U	0.900 U	0.900 U	0.960 U
Perfluorohexanoic acid (PFHxA)	0.960 U	0.880 U	23.0	0.900 U	0.900 U	0.900 U	0.960 U
Perfluorononanoic acid (PFNA)	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.60 U	2.70 U	2.70 U	2.70 U	2.70 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	2.90 U	2.60 U	2.70 U	2.70 U	2.70 U	2.70 U	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.960 U	0.880 U	11.0	0.900 U	0.900 U	0.900 U	0.960 U
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.60 U	2.70 U	2.70 U	2.70 U	2.70 U	2.90 U
Perfluorotridecanoic acid (PFTrDA)	2.90 U	2.60 U	2.70 U	2.70 U	2.70 U	2.70 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U
	‡PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.00	0.00	48.8	0.00	0.00	0.00

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 KGS 2021 J2 North SPM Fall
 J2 Range Northern

	Location	MW-640M2	MW-703M1	MW-703M2	MW-704M1	MW-704M2
	Field Sample ID	MW-640M2_F21	MW-703M1_F21	MW-703M2_F21	MW-704M1_F21	MW-704M2_F21
	Sampling Depth	216.00 - 226.00	248.00 - 258.00	224.10 - 234.10	244.00 - 254.00	217.80 - 227.80
	Sampling Date	09/07/2021	09/14/2021	09/14/2021	09/13/2021	09/13/2021
	SDG	320787611	320790821	320790821	320790821	320790821
	Sample Type	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		18.0 U	20.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.10 U	9.80 U	9.70 U	9.70 U	9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.10 U	9.80 U	9.70 U	9.70 U	9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.10 U	9.80 U	9.70 U	9.70 U	9.40 U
Perfluorobutanesulfonic acid (PFBS)		0.910 U	0.980 U	0.970 U	0.970 U	0.940 U
Perfluorobutanoic acid (PFBA)		1.40 U	1.50 U	1.50 U	3.30	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.910 U	3.90	2.00	2.00	2.20
Perfluorododecanoic acid (PFDoA)		1.40 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.910 U	0.980 U	0.970 U	0.970 U	0.940 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.910 U	0.980 U	0.970 U	0.970 U	0.940 U
Perfluorohexanoic acid (PFHxA)		0.910 U	0.980 U	0.970 U	0.900 J	0.940 U
Perfluorononanoic acid (PFNA)		1.40 U	1.60 J	0.640 J	1.10 J	0.830 J
Perfluorooctanesulfonamide (PFOSA)		2.70 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		2.70 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.910 U	0.700 J	0.970 U	3.20	0.940 U
Perfluorotetradecanoic acid (PFTeDA)		2.70 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.70 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.50 U	1.50 U	1.50 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	3.90	2.00	2.00	2.20
	§Sum of All Compounds Detected	0.00	6.20	2.64	10.5	3.03

PFAS Summary Report – Groundwater
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 KGS 2021 J2 Ranges SPM Spring
 J2 Range Northern

	Location	J2EW0002
	Field Sample ID	J2EW0002_521
	Sampling Depth	198.00 - 233.00
	Sampling Date	01/13/2021
	SDG	320689351
	Sample Type	Normal
PFAS 21 Cmps		Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		7.40 J
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.40 U
Perfluorobutanesulfonic acid (PFBS)		0.940 U
Perfluorobutanoic acid (PFBA)		1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U
Perfluorodecanoic acid (PFDA)		0.940 U
Perfluorododecanoic acid (PFDoA)		1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.430 J
Perfluoroheptanoic acid (PFHpA)		0.860 J
Perfluorohexane sulfonate (PFHxS)		11.0
Perfluorohexanoic acid (PFHxA)		0.900 J
Perfluorononanoic acid (PFNA)		1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.80 J
Perfluorooctanesulfonic acid (PFOS)		1.00 J
Perfluorooctanoic acid (PFOA)		1.80 J
Perfluoropentanoic acid (PFPeA)		1.90 U
Perfluorotetradecanoic acid (PFTeDA)		2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.80 U
Perfluoroundecanoic acid (PFUnA)		1.40 U
	†PFOS + PFOA (EPA)	2.80
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	11.0
	§Sum of All Compounds Detected	25.2

PFAS Summary Report – Groundwater
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 KGS 2021 J3 Range SPM Fall
 J3 Range

	Location	90EW0001	90WT0004	J3-EFF	J3-EFF	J3-INF	J3-INF
	Field Sample ID	90EW0001_F21	90WT0004_F21	J3-EFF_4Q21	J3-EFF_F21	J3-INF_4Q21	J3-INF_F21
	Sampling Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	Sampling Date	07/13/2021	08/10/2021	10/20/2021	07/13/2021	10/20/2021	07/13/2021
	SDG	320762631	320775331	320807451	320762631	320807451	320762631
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	18.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.20 U	9.60 U	9.50 U	9.70 U	9.50 U	9.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.20 U	9.60 U	9.50 U	9.70 U	9.50 U	9.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.20 U	9.60 U	9.50 U	9.70 U	9.50 U	9.50 U
Perfluorobutanesulfonic acid (PFBS)	0.920 U	0.920 U	0.960 U	0.950 U	0.970 U	0.950 U	0.950 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.920 U	0.920 U	0.960 U	0.950 U	0.970 U	0.950 U	0.950 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.920 U	0.960 U	0.950 U	0.970 U	0.950 U	0.950 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.500 J	0.920 U	0.960 U	0.950 U	1.00 J	1.20 J	1.20 J
Perfluorohexanoic acid (PFHxA)	0.920 U	0.920 U	0.960 U	0.950 U	0.970 U	0.950 U	0.950 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.920 U	0.920 U	0.960 U	0.950 U	0.970 U	0.950 U	0.950 U
Perfluorotetradecanoic acid (PFTeDA)	2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)	2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U	2.80 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.500	0.00	0.00	0.00	1.00	1.20

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 KGS 2021 J3 Range SPM Fall
 J3 Range

	Location	J3EW0032	J3EWIP1	J3EWIP2	MW-142M2	MW-142S	MW-143M1
	Field Sample ID	J3EW0032_F21	J3EWIP1_F21	J3EWIP2_F21	MW-142M2_F21	MW-142S_F21	MW-143M1_F21
	Sampling Depth	102.00 - 152.00	153.00 - 193.00	150.50 - 170.50	140.00 - 150.00	42.00 - 52.00	144.00 - 154.00
	Sampling Date	07/13/2021	07/13/2021	07/13/2021	07/27/2021	07/27/2021	07/26/2021
	SDG	320762631	320762631	320762631	320769671	320769671	320769671
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	20.0 U	19.0 U	20.0 U	19.0 UJ	19.0 UJ	19.0 UJ	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.80 U	9.40 U	9.80 U	9.70 UJ	9.30 UJ	9.60 UJ	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.80 U	9.40 U	9.80 U	9.70 UJ	9.30 UJ	9.60 UJ	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.80 U	9.40 U	9.80 U	9.70 UJ	9.30 UJ	9.60 UJ	
Perfluorobutanesulfonic acid (PFBS)	0.980 U	0.940 U	0.980 U	0.970 UJ	0.930 UJ	0.960 UJ	
Perfluorobutanoic acid (PFBA)	1.50 U	1.40 U	1.50 U	1.50 UJ	1.40 UJ	1.40 UJ	
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.50 U	1.50 UJ	1.40 UJ	1.40 UJ	
Perfluorodecanoic acid (PFDA)	0.980 U	0.940 U	0.980 U	0.970 UJ	0.930 UJ	0.960 UJ	
Perfluorododecanoic acid (PFDoA)	1.50 U	1.40 U	1.50 U	1.50 UJ	1.40 UJ	1.40 UJ	
Perfluoroheptanesulfonic acid (PFHpS)	0.980 U	0.940 U	0.980 U	0.970 UJ	0.930 UJ	0.960 UJ	
Perfluoroheptanoic acid (PFHpA)	1.50 U	1.40 U	1.50 U	1.50 UJ	1.40 UJ	1.40 UJ	
Perfluorohexane sulfonate (PFHxS)	0.720 J	0.520 J	2.80	2.80 J	0.930 UJ	0.960 UJ	
Perfluorohexanoic acid (PFHxA)	0.980 U	0.940 U	0.980 U	0.970 UJ	0.930 UJ	0.960 UJ	
Perfluorononanoic acid (PFNA)	1.50 U	1.40 U	1.50 U	1.50 UJ	1.40 UJ	1.40 UJ	
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.80 U	2.90 U	2.90 UJ	2.80 UJ	2.90 UJ	
Perfluorooctanesulfonic acid (PFOS)	2.90 U	2.80 U	2.90 U	2.90 UJ	2.80 UJ	2.90 UJ	
Perfluorooctanoic acid (PFOA)	1.50 U	1.40 U	1.50 U	1.50 UJ	0.510 J	1.40 UJ	
Perfluoropentanoic acid (PFPeA)	0.980 U	0.940 U	0.980 U	0.970 UJ	0.930 UJ	0.960 UJ	
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.80 U	2.90 U	2.90 UJ	2.80 UJ	2.90 UJ	
Perfluorotridecanoic acid (PFTrDA)	2.90 U	2.80 U	2.90 U	2.90 UJ	2.80 UJ	2.90 UJ	
Perfluoroundecanoic acid (PFUnA)	1.50 U	1.40 U	1.50 U	1.50 UJ	1.40 UJ	1.40 UJ	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.510	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	2.80	2.80	0.00	0.00
	§Sum of All Compounds Detected	0.720	0.520	2.80	2.80	0.510	0.00

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 J3 Range

	Location	MW-143M2	MW-143M2	MW-144M2	MW-144S	MW-145M1	MW-145S
	Field Sample ID	MW-143M2_F21DR	MW-143M2_F21R	MW-144M2_F21	MW-144S_F21R	MW-145M1_F21	MW-145S_F21
	Sampling Depth	117.00 - 122.00	117.00 - 122.00	130.00 - 140.00	26.00 - 36.00	125.00 - 135.00	30.00 - 40.00
	Sampling Date	09/16/2021	09/16/2021	07/27/2021	09/16/2021	08/11/2021	08/11/2021
	SDG	320791142	320791142	320769671	320791142	320776031	320776031
	Sample Type	Field Duplicate	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	19.0 UJ	20.0 U	19.0 U	19.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.50 U	9.40 U	9.40 UJ	9.90 U	9.50 U	9.40 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.50 U	9.40 U	9.40 UJ	9.90 U	9.50 U	9.40 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.50 U	9.40 U	9.40 UJ	9.90 U	9.50 U	9.40 U	
Perfluorobutanesulfonic acid (PFBS)	0.640 J	0.700 J	0.940 UJ	0.990 U	0.950 U	0.940 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 UJ	1.50 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 UJ	1.50 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.950 U	0.940 U	0.940 UJ	0.990 U	0.950 U	0.940 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 UJ	1.50 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.950 U	0.940 U	0.940 UJ	0.990 U	0.950 U	0.940 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 UJ	1.50 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	4.10	4.00	0.940 UJ	0.990 U	0.950 U	1.50 J	
Perfluorohexanoic acid (PFHxA)	0.950 U	0.940 U	0.940 UJ	0.990 U	0.950 U	0.630 J	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 UJ	1.50 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.80 UJ	3.00 U	2.90 U	2.80 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.80 U	2.80 UJ	3.60 J	2.90 U	3.90	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 UJ	0.570 J	1.40 U	0.760 J	
Perfluoropentanoic acid (PFPeA)	0.950 U	0.940 U	0.940 UJ	0.990 U	0.950 U	0.940 U	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.80 UJ	3.00 U	2.90 U	2.80 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.80 U	2.80 UJ	3.00 U	2.90 U	2.80 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 UJ	1.50 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	4.17	0.00	4.66
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	4.10	4.00	0.00	0.00	0.00	3.90
	§Sum of All Compounds Detected	4.74	4.70	0.00	4.17	0.00	6.79

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 J3 Range

	Location	MW-157M1	MW-157M2	MW-157M3	MW-163S	MW-181S	MW-181S
	Field Sample ID	MW-157M1_F21	MW-157M2_F21	MW-157M3_F21	MW-163S_F21	MW-181S_F21	MW-181S_F21D
	Sampling Depth	154.00 - 164.00	110.00 - 120.00	70.00 - 80.00	38.00 - 48.00	32.25 - 42.25	32.25 - 42.25
	Sampling Date	07/14/2021	07/14/2021	07/14/2021	07/14/2021	08/02/2021	08/02/2021
	SDG	320763871	320763871	320763871	320763871	320772471	320772471
	Sample Type	Normal	Normal	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	20.0 U	19.0 U	19.0 U	18.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.30 U	9.70 U	10.0 U	9.40 U	9.50 U	9.00 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.30 U	9.70 U	10.0 U	9.40 U	9.50 U	9.00 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.30 U	9.70 U	10.0 U	9.40 U	9.50 U	9.00 U	
Perfluorobutanesulfonic acid (PFBS)	0.930 U	9.40	1.00 U	0.940 U	0.950 U	0.900 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.930 U	0.970 U	1.00 U	0.940 U	0.950 U	0.900 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.930 U	0.970 U	1.00 U	0.940 U	0.950 U	0.900 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
Perfluorohexane sulfonate (PFHxS)	0.930 U	0.720 J	1.50 J	0.450 J	0.950 U	0.900 U	
Perfluorohexanoic acid (PFHxA)	0.930 U	0.970 U	1.00 U	0.940 U	0.950 U	0.900 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.90 U	3.00 U	2.80 U	2.80 U	2.70 U	
Perfluorooctanesulfonic acid (PFOS)	2.80 U	2.90 U	3.00 U	4.80	15.0	15.0	
Perfluorooctanoic acid (PFOA)	1.40 U	1.50 U	0.730 J	1.10 J	1.40 U	1.40 U	
Perfluoropentanoic acid (PFPeA)	0.930 U	0.970 U	1.00 U	0.940 U	0.950 U	0.900 U	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.90 U	3.00 U	2.80 U	2.80 U	2.70 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.90 U	3.00 U	2.80 U	2.80 U	2.70 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.730	5.90	15.0	15.0
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	4.80	15.0	15.0
	§Sum of All Compounds Detected	0.00	10.1	2.23	6.35	15.0	15.0

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 J3 Range

	Location	MW-193S	MW-193S	MW-196M1	MW-196S	MW-197M2	MW-197M2
	Field Sample ID	MW-193S_F21	MW-193S_F21D	MW-196M1_F21	MW-196S_F21	MW-197M2_F21	MW-197M2_F21D
	Sampling Depth	32.50 - 37.50	32.50 - 37.50	45.00 - 50.00	32.00 - 37.00	80.20 - 85.20	80.20 - 85.20
	Sampling Date	08/04/2021	08/04/2021	08/11/2021	08/11/2021	08/02/2021	08/02/2021
	SDG	320772871	320772871	320776031	320776031	320772471	320772471
	Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		19.0 U	19.0 U	19.0 U	20.0 U	19.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.40 U	9.40 U	9.60 U	10.0 U	9.60 U	9.20 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.40 U	9.40 U	9.60 U	10.0 U	9.60 U	9.20 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.40 U	9.40 U	9.60 U	10.0 U	9.60 U	9.20 U
Perfluorobutanesulfonic acid (PFBS)		0.940 U	0.940 U	0.960 U	1.00 U	0.450 J	0.460 J
Perfluorobutanoic acid (PFBA)		1.40 U	1.40 U	0.900 J	1.50 U	2.60	2.60
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.940 U	0.940 U	0.960 U	1.00 U	0.960 U	0.920 U
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.940 U	0.940 U	0.960 U	1.00 U	0.960 U	0.920 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.40 U	1.50 U	3.00	3.00
Perfluorohexane sulfonate (PFHxS)		2.80	2.60	0.960 U	0.440 J	15.0	15.0
Perfluorohexanoic acid (PFHxA)		0.940 U	0.940 U	0.760 J	0.480 J	5.00	5.50
Perfluorononanoic acid (PFNA)		1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.80 U	2.80 U	2.90 U	3.00 U	2.90 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)		2.80 U	2.80 U	2.90 U	5.30 J	4.90	4.80
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.40 J	0.700 J	2.70	2.90
Perfluoropentanoic acid (PFPeA)		0.940 U	0.940 U	0.960 U	1.00 U	4.20	4.20
Perfluorotetradecanoic acid (PFTeDA)		2.80 U	2.80 U	2.90 U	3.00 U	2.90 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.80 U	2.80 U	2.90 U	3.00 U	2.90 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	1.40	6.00	7.60	7.70
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.80	2.60	0.00	5.30	25.6	25.7
	§Sum of All Compounds Detected	2.80	2.60	3.06	6.92	37.9	38.5

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 J3 Range

	Location	MW-197M3	MW-198M4	MW-218M1	MW-218M1	MW-218M2	MW-218M2
	Field Sample ID	MW-197M3_F21	MW-198M4_F21	MW-218M1_F21	MW-218M1_F21R	MW-218M2_F21	MW-218M2_F21R
	Sampling Depth	60.20 - 65.20	70.00 - 75.00	128.00 - 133.00	128.00 - 133.00	98.00 - 103.00	98.00 - 103.00
	Sampling Date	08/02/2021	08/05/2021	08/16/2021	09/30/2021	08/16/2021	09/30/2021
	SDG	320772471	320773351	320778561	320797671	320778561	320797671
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		19.0 U	19.0 U	18.0 U	19.0 U	19.0 U	20.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.40 U	9.30 U	9.10 U	9.50 U	9.40 U	10.0 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.40 U	9.30 U	9.10 U	9.50 U	9.40 U	10.0 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.40 U	9.30 U	9.10 U	9.50 U	9.40 U	10.0 U
Perfluorobutanesulfonic acid (PFBS)		0.940 U	0.930 U	0.420 J	0.950 U	0.940 U	1.00 U
Perfluorobutanoic acid (PFBA)		1.30 J	1.40 J	400	1.40 U	64.0	3.00
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorodecanoic acid (PFDA)		0.940 U	0.930 U	42.0	5.60	10.0	5.10
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	32.0	1.40 U	2.30	0.600 J
Perfluoroheptanesulfonic acid (PFHpS)		0.940 U	0.930 U	0.910 U	0.950 U	0.940 U	1.00 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	360	1.40 U	100	2.10
Perfluorohexane sulfonate (PFHxS)		2.40	8.50	0.910 U	0.950 U	0.940 U	1.00 U
Perfluorohexanoic acid (PFHxA)		0.590 J	0.930 U	350	0.950 U	57.0	1.90 J
Perfluorononanoic acid (PFNA)		1.40 U	1.40 U	75.0	6.20	35.0	6.20
Perfluorooctanesulfonamide (PFOSA)		2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	3.00 U
Perfluorooctanesulfonic acid (PFOS)		2.80 U	1.70 J	2.70 U	2.80 U	2.80 U	3.00 U
Perfluorooctanoic acid (PFOA)		1.00 J	0.870 J	120	5.70	49.0	2.10
Perfluoropentanoic acid (PFPeA)		0.940 U	0.930 U	770	0.950 U	110	5.00
Perfluorotetradecanoic acid (PFTeDA)		2.80 U	2.80 U	35.0	2.80 U	2.00 J	3.00 U
Perfluorotridecanoic acid (PFTrDA)		2.80 U	2.80 U	49.0	2.80 U	2.60 J	3.00 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.40 U	48.0	3.60	6.80	3.50
	†PFOS + PFOA (EPA)	1.00	2.57	120	5.70	49.0	2.10
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.40	8.50	597	17.5	194	15.5
	§Sum of All Compounds Detected	5.29	12.5	2280	21.1	439	29.5

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 KGS 2021 J3 Range SPM Fall
 J3 Range

	Location	MW-218M3	MW-218M3	MW-250M1	MW-250M3	MW-30	MW-576M2
	Field Sample ID	MW-218M3_F21	MW-218M3_F21R	MW-250M1_F21	MW-250M3_F21	MW-30_F21	MW-576M2_F21
	Sampling Depth	78.00 - 83.00	78.00 - 83.00	185.00 - 195.00	95.00 - 105.00	26.00 - 36.00	133.90 - 143.90
	Sampling Date	08/16/2021	09/30/2021	07/15/2021	07/15/2021	08/02/2021	08/10/2021
	SDG	320778561	320797671	320763871	320763871	320772471	320775331
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	18.0 U	18.0 U	18.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.10 U	9.30 U	9.00 U	9.00 U	9.00 U	9.40 U	9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.10 U	9.30 U	9.00 U	9.00 U	9.00 U	9.40 U	9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.10 U	9.30 U	9.00 U	9.00 U	9.00 U	9.40 U	9.40 U
Perfluorobutanesulfonic acid (PFBS)	0.910 U	0.930 U	0.900 U	0.900 U	0.900 U	0.940 U	0.940 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.910 U	0.930 U	0.900 U	0.900 U	0.900 U	0.940 U	0.940 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.910 U	0.930 U	0.900 U	0.900 U	0.900 U	0.940 U	0.940 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	0.910 U	0.930 U	0.550 J	1.90	0.900 U	0.470 J	0.470 J
Perfluorohexanoic acid (PFHxA)	0.910 U	0.930 U	0.900 U	0.900 U	0.900 U	0.940 U	0.940 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)	2.70 U	2.80 U	2.70 U	2.70 U	2.70 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	2.70 U	2.80 U	2.70 U	1.00 J	7.00	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	0.910 U	0.930 U	0.900 U	0.900 U	0.900 U	0.940 U	0.940 U
Perfluorotetradecanoic acid (PFTeDA)	2.70 U	2.80 U	2.70 U	2.70 U	2.70 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)	2.70 U	2.80 U	2.70 U	2.70 U	2.70 U	2.80 U	2.80 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	1.00	7.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	1.90	7.00	0.00
	§Sum of All Compounds Detected	0.00	0.00	0.550	2.90	7.00	0.470

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 KGS 2021 J3 Range SPM Fall
 J3 Range

	Location	MW-636M1	MW-636M2	MW-653M1	MW-653M2
	Field Sample ID	MW-636M1_F21	MW-636M2_F21	MW-653M1_F21	MW-653M2_F21
	Sampling Depth	141.60 - 151.60	110.50 - 120.50	147.50 - 157.50	59.30 - 69.30
	Sampling Date	07/29/2021	07/29/2021	07/29/2021	07/29/2021
	SDG	320769861	320769861	320769861	320769861
	Sample Type	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		19.0 U	19.0 U	20.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.50 U	9.30 U	9.80 U	9.10 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.50 U	9.30 U	9.80 U	9.10 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.50 U	9.30 U	9.80 U	9.10 U
Perfluorobutanesulfonic acid (PFBS)		0.950 U	1.20 J	3.50	0.910 U
Perfluorobutanoic acid (PFBA)		1.40 U	1.40 U	1.20 J	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.950 U	0.930 U	0.980 U	0.910 U
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.950 U	0.930 U	0.980 U	0.910 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	2.50	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.950 U	4.80	83.0	0.910 U
Perfluorohexanoic acid (PFHxA)		0.460 J	0.570 J	5.80	0.910 U
Perfluorononanoic acid (PFNA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.80 U	2.90 U	2.70 U
Perfluorooctanesulfonic acid (PFOS)		2.90 U	1.60 J	5.30	2.70 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.80 J	1.40 U
Perfluoropentanoic acid (PFPeA)		0.950 U	0.930 U	3.30	0.910 U
Perfluorotetradecanoic acid (PFTeDA)		2.90 U	2.80 U	2.90 U	2.70 U
Perfluorotridecanoic acid (PFTrDA)		2.90 U	2.80 U	2.90 U	2.70 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.40 U	1.50 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	1.60	7.10	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	4.80	90.8	0.00
	§Sum of All Compounds Detected	0.460	8.17	106	0.00

PFAS Summary Report – Groundwater
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 KGS 2022 J2 North PFAS Spring
 J2 Range Eastern

	Location	MW-128S	MW-18D	MW-18S	MW-48D	MW-48M2	MW-48S
	Field Sample ID	MW-128S_S22	MW-18D_S22	MW-18S_S22	MW-48D_S22	MW-48M2_S22	MW-48S_S22
	Sampling Depth	87.00 - 97.00	265.00 - 275.00	35.00 - 45.00	221.00 - 231.00	161.00 - 171.00	99.00 - 109.00
	Sampling Date	01/11/2022	12/27/2021	12/27/2021	01/04/2022	01/04/2022	01/05/2022
	SDG	320838001	320834481	320834481	320836321	320836321	320837121
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
Perfluorobutanesulfonic acid (PFBS)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
Perfluorobutanoic acid (PFBA)		0.480 U	0.500 U	0.490 U	0.470 U	0.490 U	0.500 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
Perfluorododecanoic acid (PFDoA)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluoroheptanoic acid (PFHpA)		0.960 U	1.00 U	0.980 U	0.950 U	0.990 U	1.00 U
Perfluorohexane sulfonate (PFHxS)		4.30	1.00 U	0.980 U	0.950 U	0.990 U	0.600 J
Perfluorohexanoic acid (PFHxA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorononanoic acid (PFNA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)		0.480 U	0.500 U	0.490 U	0.470 U	0.490 U	0.500 U
Perfluorotetradecanoic acid (PFTeDA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorotridecanoic acid (PFTTrDA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	4.30	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	4.30	0.00	0.00	0.00	0.00	0.600

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 KGS 2022 J2 North PFAS Spring
 J2 Range Eastern

	Location	MW-49D	MW-49M1	MW-49M2	MW-49M3	MW-49S
	Field Sample ID	MW-49D_S22	MW-49M1_S22	MW-49M2_S22	MW-49M3_S22	MW-49S_S22
	Sampling Depth	185.00 - 195.00	160.00 - 170.00	130.00 - 140.00	100.50 - 110.50	68.50 - 78.00
	Sampling Date	01/03/2022	01/03/2022	01/03/2022	01/03/2022	01/03/2022
	SDG	320836321	320836321	320836321	320836321	320836321
	Sample Type	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
Perfluorobutanesulfonic acid (PFBS)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
Perfluorobutanoic acid (PFBA)		0.500 U	0.480 U	0.490 U	0.480 U	0.480 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
Perfluorododecanoic acid (PFDoA)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
Perfluoroheptanesulfonic acid (PFHpS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
Perfluorohexane sulfonate (PFHxS)		1.00 U	0.960 U	0.980 U	0.960 U	0.960 U
Perfluorohexanoic acid (PFHxA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorononanoic acid (PFNA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.500 U	0.480 U	0.490 U	0.480 U	0.480 U
Perfluorotetradecanoic acid (PFTeDA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoroundecanoic acid (PFUnA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	0.00	0.00	0.00	0.00	0.00

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 J2 Range Northern

	Location	C-4D	C-4D	C-4M	C-4S	C-7D	C-7M
	Field Sample ID	C-4D_S22	C-4D_S22D	C-4M_S22	C-4S_S22	C-7D_S22	C-7M_S22
	Sampling Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	Sampling Date	01/13/2022	01/13/2022	01/13/2022	01/13/2022	01/12/2022	01/12/2022
	SDG	320838831	320838831	320838831	320838831	320838831	320838831
	Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.960 U	0.950 U	0.920 U	0.950 U	0.930 U	0.950 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.960 U	0.950 U	0.920 U	0.950 U	0.930 U	0.950 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.960 U	0.950 U	0.920 U	0.950 U	0.930 U	0.950 U
Perfluorobutanesulfonic acid (PFBS)		0.960 U	0.950 U	0.920 U	0.950 U	0.930 U	0.950 U
Perfluorobutanoic acid (PFBA)		0.480 U	0.470 U	0.460 U	0.480 U	0.470 U	0.480 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		4.30	4.50	5.90	5.30	4.80	4.20
Perfluorododecanoic acid (PFDoA)		0.760 J	1.00 J	1.60 J	1.10 J	1.70 J	0.960 J
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		0.960 U	0.950 U	0.920 U	0.950 U	0.930 U	0.950 U
Perfluorohexane sulfonate (PFHxS)		0.960 U	0.950 U	0.920 U	0.950 U	0.930 U	0.950 U
Perfluorohexanoic acid (PFHxA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorononanoic acid (PFNA)		0.900 J	0.930 J	1.30 J	1.90	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.480 U	0.470 U	0.460 U	0.480 U	0.470 U	0.480 U
Perfluorotetradecanoic acid (PFTeDA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U	1.40 U	1.40 U	0.970 J	0.940 J	1.40 U
Perfluoroundecanoic acid (PFUnA)		4.60	4.30	13.0	14.0	12.0	5.80
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	4.30	4.50	5.90	7.20	4.80	4.20
	§Sum of All Compounds Detected	10.6	10.7	21.8	23.3	19.4	11.0

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 J2 Range Northern

	Location	C-7S	J2EW3-MW1-A	J2EW3-MW1-B	J2EW3-MW-2-A	J2EW3-MW-2-B	J2EW3-MW-2-C
	Field Sample ID	C-7S_S22	J2EW3-MW1-A_S22	J2EW3-MW1-B_S22	J2EW3-MW-2-A_S22	J2EW3-MW-2-B_S22	J2EW3-MW-2-C_S22
	Sampling Depth	0.00 - 0.00	145.66 - 155.66	210.66 - 220.66	151.16 - 161.16	216.16 - 226.16	251.13 - 261.13
	Sampling Date	01/12/2022	01/05/2022	01/05/2022	01/06/2022	01/06/2022	01/06/2022
	SDG	320838831	320837121	320837121	320836691	320836691	320836691
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.990 U	0.990 U	0.990 U	1.00 U	1.00 U	0.950 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.990 U	0.990 U	0.990 U	1.00 U	1.00 U	0.950 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.990 U	0.990 U	0.990 U	1.00 U	1.00 U	0.950 U
Perfluorobutanesulfonic acid (PFBS)		0.990 U	0.990 U	0.990 U	1.00 U	1.00 U	1.30 J
Perfluorobutanoic acid (PFBA)		0.490 U	0.490 U	0.490 U	0.500 U	0.510 U	0.380 J
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorodecanoic acid (PFDA)		2.20	0.990 U	0.990 U	1.00 U	1.00 U	0.950 U
Perfluorododecanoic acid (PFDoA)		1.70 J	0.990 U	0.990 U	1.00 U	1.00 U	0.950 U
Perfluoroheptanesulfonic acid (PFHpS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		0.990 U	0.990 U	0.990 U	1.00 U	1.00 U	0.950 U
Perfluorohexane sulfonate (PFHxS)		0.990 U	0.990 U	0.990 U	1.00 U	1.00 U	1.20 J
Perfluorohexanoic acid (PFHxA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.70 J
Perfluorononanoic acid (PFNA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorooctanoic acid (PFOA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.490 U	0.490 U	0.490 U	0.500 U	0.510 U	0.900 J
Perfluorotetradecanoic acid (PFTeDA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluorotridecanoic acid (PFTTrDA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
Perfluoroundecanoic acid (PFUnA)		13.0	1.50 U	1.50 U	1.50 U	1.50 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.20	0.00	0.00	0.00	0.00	0.00
	§Sum of All Compounds Detected	16.9	0.00	0.00	0.00	0.00	5.48

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 J2 Range Northern

Location	J2EW3-MW1-C	J2N-EFF-E	J2N-EFF-F	J2N-EFF-G	MW-130D	MW-18M1
Field Sample ID	J2EW3-MW1-C_S22	J2N-EFF-E_S22	J2N-EFF-F_S22	J2N-EFF-G_S22	MW-130D_S22	MW-18M1_S22
Sampling Depth	245.66 - 255.66	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	320.00 - 330.00	171.00 - 176.00
Sampling Date	01/05/2022	01/10/2022	01/10/2022	01/10/2022	12/29/2021	12/27/2021
SDG	320837121	320838001	320838001	320838001	320835011	320834481
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	0.930 U	0.970 U	1.20 J	0.950 U	1.00 U	0.990 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorobutanesulfonic acid (PFBS)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorobutanoic acid (PFBA)	0.460 U	0.490 U	0.250 J	0.290 J	0.510 U	0.500 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorododecanoic acid (PFDoA)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluoroheptanesulfonic acid (PFHpS)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluoroheptanoic acid (PFHpA)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorohexane sulfonate (PFHxS)	0.930 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorohexanoic acid (PFHxA)	1.40 U	1.50 U	1.00 J	1.60 J	1.50 U	1.50 U
Perfluorononanoic acid (PFNA)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)	1.40 U	1.50 U	1.40 U	1.40 U	1.00 J	1.50 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)	0.460 U	0.490 U	0.620 J	0.510 J	0.510 U	0.500 U
Perfluorotetradecanoic acid (PFTeDA)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluorotridecanoic acid (PFTTrDA)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	1.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
§Sum of All Compounds Detected	0.00	0.00	3.07	2.40	1.00	0.00

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 KGS 2022 J2 North PFAS Spring
 J2 Range Northern

	Location	MW-18M2	MW-289M1	MW-293M1	MW-296M1	MW-296M2	MW-318M1
	Field Sample ID	MW-18M2_S22	MW-289M1_S22	MW-293M1_S22	MW-296M1_S22	MW-296M2_S22	MW-318M1_S22
	Sampling Depth	107.00 - 112.00	0.00 - 0.00	0.00 - 0.00	255.08 - 265.08	214.98 - 224.98	305.79 - 315.81
	Sampling Date	12/27/2021	12/22/2021	01/11/2022	01/10/2022	01/10/2022	12/22/2021
	SDG	320834481	320833751	320838001	320838001	320838001	320833751
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	1.00 U	0.970 U	0.960 U	0.940 U	0.930 U	5.30	
8:2 Fluorotelomer sulfonate (8:2 FTS)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.00 U	0.970 U	0.960 U	0.940 U	0.930 U	0.950 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.00 U	0.970 U	0.590 J	0.940 U	0.930 U	0.950 U	
Perfluorobutanesulfonic acid (PFBS)	1.00 U	0.970 U	0.960 U	0.940 U	0.930 U	0.950 U	
Perfluorobutanoic acid (PFBA)	0.500 U	1.90 U	0.480 U	0.310 J	0.460 U	1.90 U	
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	1.00 U	2.00	14.0	0.940 U	1.20 J	3.50	
Perfluorododecanoic acid (PFDoA)	1.00 U	1.10 J	1.30 J	0.780 J	0.490 J	0.950 U	
Perfluoroheptanesulfonic acid (PFHpS)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoroheptanoic acid (PFHpA)	1.00 U	0.970 U	0.960 U	0.940 U	0.930 U	0.950 U	
Perfluorohexane sulfonate (PFHxS)	1.00 U	0.700 J	0.960 U	0.940 U	0.930 U	0.950 U	
Perfluorohexanoic acid (PFHxA)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorononanoic acid (PFNA)	1.50 U	1.50 U	20.0	0.570 J	1.10 J	1.70 J	
Perfluorooctanesulfonamide (PFOSA)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorooctanesulfonic acid (PFOS)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorooctanoic acid (PFOA)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluoropentanoic acid (PFPeA)	0.500 U	0.490 U	0.480 U	0.470 U	0.460 U	0.480 U	
Perfluorotetradecanoic acid (PFTeDA)	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U	
Perfluorotridecanoic acid (PFTTrDA)	1.50 U	1.50 U	0.990 J	1.40 U	1.40 U	1.40 U	
Perfluoroundecanoic acid (PFUnA)	1.50 U	10.0	15.0	3.20	1.20 J	6.50	
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	2.00	34.0	0.00	0.00	3.50
	§Sum of All Compounds Detected	0.00	13.8	51.9	4.86	3.99	17.0

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 KGS 2022 J2 North PFAS Spring
 J2 Range Northern

	Location	MW-318M2	MW-318M2	MW-327M1	MW-327M2	MW-327M3	MW-330M1
	Field Sample ID	MW-318M2_S22	MW-318M2_S22D	MW-327M1_S22	MW-327M2_S22	MW-327M3_S22	MW-330M1_S22D
	Sampling Depth	205.80 - 215.82	205.80 - 215.82	296.06 - 306.04	265.01 - 275.01	220.16 - 230.15	313.10 - 323.13
	Sampling Date	12/22/2021	12/22/2021	12/28/2021	12/28/2021	12/28/2021	12/16/2021
	SDG	320833751	320833751	320834481	320834481	320834481	320831661
	Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.920 U	0.960 U	0.910 U	0.950 U	0.960 U	0.970 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.920 U	0.960 U	0.910 U	0.950 U	0.960 U	0.970 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.920 U	0.960 U	0.910 U	0.950 U	0.960 U	0.970 U
Perfluorobutanesulfonic acid (PFBS)		0.920 U	0.960 U	0.910 U	0.450 J	0.960 U	0.970 U
Perfluorobutanoic acid (PFBA)		1.80 U	1.90 U	0.460 U	1.80 J	0.480 U	1.30 J
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorodecanoic acid (PFDA)		1.60 J	1.40 J	2.00	1.40 J	2.10	18.0
Perfluorododecanoic acid (PFDoA)		0.920 U	0.960 U	3.20	8.80	0.820 J	0.800 J
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluoroheptanoic acid (PFHpA)		0.920 U	0.960 U	0.910 U	0.470 J	0.960 U	0.870 J
Perfluorohexane sulfonate (PFHxS)		0.920 U	0.960 U	0.910 U	0.950 U	0.960 U	0.970 U
Perfluorohexanoic acid (PFHxA)		1.30 J	1.20 J	1.40 U	0.560 J	1.40 U	0.580 J
Perfluorononanoic acid (PFNA)		0.560 J	0.630 J	1.40 U	1.40 U	1.40 U	3.50
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluoropentanoic acid (PFPeA)		1.10 J	1.00 J	0.240 J	0.900 J	0.480 U	1.60 J
Perfluorotetradecanoic acid (PFTeDA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U	1.40 U	0.650 J	1.70 J	1.40 U	1.50 U
Perfluoroundecanoic acid (PFUnA)		5.80	5.80	17.0	17.0	4.70	16.0
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	2.00	0.00	2.10	21.5
	§Sum of All Compounds Detected	10.4	10.0	23.1	33.1	7.62	42.7

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J2 Range Northern

	Location	MW-330M1	MW-330M2	MW-330M3	MW-330M3	MW-337D	MW-337M1
	Field Sample ID	MW-330M1_S22	MW-330M2_S22	MW-330M3_S22	MW-330M3_S22D	MW-337D_S22	MW-337M1_S22
	Sampling Depth	313.10 - 323.13	238.01 - 248.04	154.97 - 164.99	154.97 - 164.99	0.00 - 0.00	0.00 - 0.00
	Sampling Date	12/16/2021	12/16/2021	12/16/2021	12/16/2021	12/20/2021	12/20/2021
	SDG	320831661	320831661	320831661	320831661	320833421	320833421
	Sample Type	Normal	Normal	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	0.990 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.990 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.990 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U	
Perfluorobutanesulfonic acid (PFBS)	0.990 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U	
Perfluorobutanoic acid (PFBA)	1.40 J	0.400 J	0.510 J	0.490 U	2.10 U	2.10 U	
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorodecanoic acid (PFDA)	23.0	5.10	14.0	11.0	23.0	1.00 J	
Perfluorododecanoic acid (PFDoA)	1.40 J	0.650 J	0.560 J	0.980 U	0.640 J	1.00 U	
Perfluoroheptanesulfonic acid (PFHpS)	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluoroheptanoic acid (PFHpA)	0.910 J	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U	
Perfluorohexane sulfonate (PFHxS)	0.990 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U	
Perfluorohexanoic acid (PFHxA)	0.680 J	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorononanoic acid (PFNA)	4.20	4.70	6.50	6.00	19.0	5.80	
Perfluorooctanesulfonamide (PFOSA)	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorooctanesulfonic acid (PFOS)	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorooctanoic acid (PFOA)	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluoropentanoic acid (PFPeA)	1.70 J	0.250 J	0.500 U	0.490 U	0.520 U	0.510 U	
Perfluorotetradecanoic acid (PFTeDA)	1.50 U	1.50 U	1.50 U	1.50 U	0.530 J	1.50 U	
Perfluorotridecanoic acid (PFTTrDA)	0.880 J	0.820 J	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluoroundecanoic acid (PFUnA)	18.0	5.20	6.50	5.70	16.0	1.90 J	
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00	
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	27.2	9.80	20.5	17.0	42.0	5.80	
§Sum of All Compounds Detected	52.2	17.1	28.1	22.7	59.2	8.70	

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 J2 Range Northern

	Location	MW-340D	MW-340D	MW-345M1	MW-345M1	MW-48M1	MW-48M3
	Field Sample ID	MW-340D_S22	MW-340D_S22D	MW-345M1_S22	MW-345M1_S22D	MW-48M1_S22	MW-48M3_S22
	Sampling Depth	329.60 - 339.60	329.60 - 339.60	0.00 - 0.00	0.00 - 0.00	191.00 - 201.00	131.50 - 142.00
	Sampling Date	12/29/2021	12/29/2021	12/16/2021	12/16/2021	01/04/2022	01/04/2022
	SDG	320835011	320835011	320831661	320831661	320836321	320836321
	Sample Type	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		6.50 J	0.970 U	0.970 U	0.990 U	0.980 U	0.990 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		1.00 U	0.970 U	0.970 U	0.990 U	0.980 U	0.990 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		1.00 U	0.970 U	0.970 U	0.990 U	0.980 U	0.990 U
Perfluorobutanesulfonic acid (PFBS)		1.00 U	0.970 U	0.970 U	0.990 U	0.980 U	0.990 U
Perfluorobutanoic acid (PFBA)		0.310 J	0.490 U	0.440 J	0.280 J	0.490 U	0.490 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)		13.0	14.0	21.0	28.0	0.980 U	0.990 U
Perfluorododecanoic acid (PFDoA)		0.830 J	0.990 J	0.960 J	1.70 J	0.980 U	0.990 U
Perfluoroheptanesulfonic acid (PFHpS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluoroheptanoic acid (PFHpA)		1.00 U	0.970 U	0.970 U	0.990 U	0.980 U	0.990 U
Perfluorohexane sulfonate (PFHxS)		1.00 U	0.970 U	0.970 U	0.990 U	0.980 U	0.990 U
Perfluorohexanoic acid (PFHxA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluorononanoic acid (PFNA)		3.50	3.60	3.00	4.50	1.50 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluorooctanoic acid (PFOA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)		0.500 U	0.490 U	0.490 U	0.490 U	0.490 U	0.490 U
Perfluorotetradecanoic acid (PFTeDA)		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluorotridecanoic acid (PFTrDA)		1.50 U	1.50 U	1.50 U	1.30 J	1.50 U	1.50 U
Perfluoroundecanoic acid (PFUnA)		19.0	20.0	20.0	23.0	1.50 U	1.50 U
	+PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	#PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	16.5	17.6	24.0	32.5	0.00	0.00
	§Sum of All Compounds Detected	43.1	38.6	45.4	58.8	0.00	0.00

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 J2 Range Northern

Location	MW-55D	MW-55M1	MW-55M2	MW-55M3	MW-619M1	MW-619M2
Field Sample ID	MW-55D_S22	MW-55M1_S22	MW-55M2_S22	MW-55M3_S22	MW-619M1_S22	MW-619M2_S22
Sampling Depth	255.00 - 265.00	225.00 - 235.00	195.00 - 205.00	164.50 - 174.00	255.10 - 265.10	234.10 - 244.10
Sampling Date	12/21/2021	12/21/2021	12/21/2021	12/21/2021	12/20/2021	12/20/2021
SDG	320833421	320833421	320833421	320833421	320833421	320833421
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
Perfluorobutanesulfonic acid (PFBS)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
Perfluorobutanoic acid (PFBA)	1.90 U	1.90 U	1.90 U	2.00 U	1.90 U	1.90 U
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
Perfluorododecanoic acid (PFDoA)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
Perfluoroheptanesulfonic acid (PFHpS)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluoroheptanoic acid (PFHpA)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
Perfluorohexane sulfonate (PFHxS)	0.970 U	0.950 U	0.950 U	1.00 U	0.950 U	0.970 U
Perfluorohexanoic acid (PFHxA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluorononanoic acid (PFNA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)	0.590 J	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluorooctanoic acid (PFOA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluoropentanoic acid (PFPeA)	0.480 U	0.480 U	0.470 U	0.500 U	0.480 U	0.480 U
Perfluorotetradecanoic acid (PFTeDA)	0.620 J	0.540 J	1.40 U	1.50 U	1.40 U	0.620 J
Perfluorotridecanoic acid (PFTTrDA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluoroundecanoic acid (PFUnA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.00	0.00
§Sum of All Compounds Detected	1.21	0.540	0.00	0.00	0.00	0.620

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 J2 Range Northern

	Location	MW-620M1	MW-634M1	MW-63D	MW-63M1	MW-63M2	MW-63M3
	Field Sample ID	MW-620M1_S22	MW-634M1_S22	MW-63D_S22	MW-63M1_S22	MW-63M2_S22	MW-63M3_S22
	Sampling Depth	268.60 - 278.60	305.60 - 315.60	375.00 - 380.00	244.00 - 254.00	214.00 - 224.00	182.00 - 192.00
	Sampling Date	12/20/2021	12/22/2021	12/15/2021	12/15/2021	12/15/2021	12/15/2021
	SDG	320833421	320833751	320831661	320831661	320831661	320831661
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
Perfluorobutanesulfonic acid (PFBS)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
Perfluorobutanoic acid (PFBA)	0.480 U	2.00 U	2.00 U	0.490 U	0.290 J	0.490 U	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorodecanoic acid (PFDA)	0.960 U	0.980 U	0.990 U	0.980 U	2.20	0.970 U	
Perfluorododecanoic acid (PFDoA)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
Perfluoroheptanesulfonic acid (PFHpS)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluoroheptanoic acid (PFHpA)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
Perfluorohexane sulfonate (PFHxS)	0.960 U	0.980 U	0.990 U	0.980 U	1.00 U	0.970 U	
Perfluorohexanoic acid (PFHxA)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.50 U	1.50 U	1.50 U	1.20 J	1.50 U	
Perfluorooctanesulfonamide (PFOSA)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorooctanesulfonic acid (PFOS)	1.40 U	1.50 U	0.790 J	0.590 J	1.60 U	1.50 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluoropentanoic acid (PFPeA)	0.480 U	0.490 U	0.490 U	0.490 U	0.520 U	0.490 U	
Perfluorotetradecanoic acid (PFTeDA)	0.610 J	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluorotridecanoic acid (PFTTrDA)	1.40 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.50 U	1.50 U	1.50 U	1.40 J	1.50 U	
	†PFOS + PFOA (EPA)	0.00	0.00	0.790	0.590	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	2.20	0.00
	§Sum of All Compounds Detected	0.610	0.00	0.790	0.590	5.09	0.00

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 J2 Range Northern

	Location	MW-63S
	Field Sample ID	MW-63S_S22
	Sampling Depth	153.00 - 163.00
	Sampling Date	12/15/2021
	SDG	320831661
	Sample Type	Normal
PFAS 21 Cmps		Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.950 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.950 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.950 U
Perfluorobutanesulfonic acid (PFBS)		0.950 U
Perfluorobutanoic acid (PFBA)		0.470 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U
Perfluorodecanoic acid (PFDA)		0.950 U
Perfluorododecanoic acid (PFDoA)		0.950 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U
Perfluoroheptanoic acid (PFHpA)		0.950 U
Perfluorohexane sulfonate (PFHxS)		0.950 U
Perfluorohexanoic acid (PFHxA)		1.40 U
Perfluorononanoic acid (PFNA)		1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U
Perfluorooctanesulfonic acid (PFOS)		1.40 U
Perfluorooctanoic acid (PFOA)		1.40 U
Perfluoropentanoic acid (PFPeA)		0.470 U
Perfluorotetradecanoic acid (PFTeDA)		1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U
Perfluoroundecanoic acid (PFUnA)		1.40 U
	†PFOS + PFOA (EPA)	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00
	§Sum of All Compounds Detected	0.00

PFAS Summary Report – Groundwater
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 KGS 2022 J2 North PFAS Spring
 J3 Range

Location	MW-237S
Field Sample ID	MW-237S_S22
Sampling Depth	49.00 - 59.00
Sampling Date	12/29/2021
SDG	320835011
Sample Type	Normal
PFAS 21 Cmps	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	0.990 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.990 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.990 U
Perfluorobutanesulfonic acid (PFBS)	0.990 U
Perfluorobutanoic acid (PFBA)	0.500 U
Perfluorodecanesulfonic acid (PFDS)	1.50 U
Perfluorodecanoic acid (PFDA)	0.990 U
Perfluorododecanoic acid (PFDoA)	0.990 U
Perfluoroheptanesulfonic acid (PFHpS)	1.50 U
Perfluoroheptanoic acid (PFHpA)	0.990 U
Perfluorohexane sulfonate (PFHxS)	0.990 U
Perfluorohexanoic acid (PFHxA)	1.50 U
Perfluorononanoic acid (PFNA)	1.50 U
Perfluorooctanesulfonamide (PFOSA)	1.50 U
Perfluorooctanesulfonic acid (PFOS)	1.50 U
Perfluorooctanoic acid (PFOA)	1.50 U
Perfluoropentanoic acid (PFPeA)	0.500 U
Perfluorotetradecanoic acid (PFTeDA)	1.50 U
Perfluorotridecanoic acid (PFTrDA)	1.50 U
Perfluoroundecanoic acid (PFUnA)	1.50 U
†PFOS + PFOA (EPA)	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00
§Sum of All Compounds Detected	0.00

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2022 J2 North PFAS Spring
 Lima Range

	Location	MW-236S
	Field Sample ID	MW-236S_S22
	Sampling Depth	96.00 - 106.00
	Sampling Date	01/11/2022
	SDG	320838001
	Sample Type	Normal
PFAS 21 Cmps		Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.960 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.960 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.960 U
Perfluorobutanesulfonic acid (PFBS)		0.960 U
Perfluorobutanoic acid (PFBA)		1.50 J
Perfluorodecanesulfonic acid (PFDS)		1.40 U
Perfluorodecanoic acid (PFDA)		0.960 U
Perfluorododecanoic acid (PFDoA)		0.960 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U
Perfluoroheptanoic acid (PFHpA)		1.20 J
Perfluorohexane sulfonate (PFHxS)		0.960 U
Perfluorohexanoic acid (PFHxA)		1.20 J
Perfluorononanoic acid (PFNA)		1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U
Perfluorooctanesulfonic acid (PFOS)		2.30
Perfluorooctanoic acid (PFOA)		1.30 J
Perfluoropentanoic acid (PFPeA)		0.640 J
Perfluorotetradecanoic acid (PFTeDA)		1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U
Perfluoroundecanoic acid (PFUnA)		1.40 U
	†PFOS + PFOA (EPA)	3.60
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.30
	§Sum of All Compounds Detected	8.14

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2022 J3 Range SPM Spring
 J3 Range

	Location	J3-EFF	J3-INF
	Field Sample ID	J3-EFF_1Q22	J3-INF_1Q22
	Sampling Depth	0.00 - 0.00	0.00 - 0.00
	Sampling Date	01/24/2022	01/24/2022
	SDG	320842111	320842111
	Sample Type	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.940 U	0.950 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.940 U	0.950 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.940 U	0.950 U
Perfluorobutanesulfonic acid (PFBS)		0.940 U	0.950 U
Perfluorobutanoic acid (PFBA)		0.240 J	0.250 J
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.940 U	0.950 U
Perfluorododecanoic acid (PFDoA)		0.940 U	0.950 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		0.940 U	0.950 U
Perfluorohexane sulfonate (PFHxS)		0.940 U	1.10 J
Perfluorohexanoic acid (PFHxA)		1.40 U	1.40 U
Perfluorononanoic acid (PFNA)		1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)		1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.470 U	0.470 U
Perfluorotetradecanoic acid (PFTeDA)		1.40 U	1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U	1.40 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00
	§Sum of All Compounds Detected	0.240	1.35

PFAS Summary Report – Groundwater Joint Base Cape Cod, IAGWSP

Notes:

ng/L = nanograms per liter; ug/ka = micrograms per kilogram; U = not detected; J = estimated; UJ = estimated non detect

Non detects are calculated as zero in the summations.

Bolded results indicate detections of PFAS

Bolded and highlighted results indicate detection of PFAS above the EPA Lifetime Health Advisory: PFOS + PFOA > 70 ng/L.

Bolded and highlighted results indicate detection of PFAS6 above the MassDEP MCL: PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA > 20 ng/L

† Lifetime Health Advisory, US Environmental Protection Agency, May 2016

The PFOS and PFOA summation includes all detections at and above the DL.

‡ PFAS Maximum Contaminant Level (MCL) Final Amendments ("MCL", 310 CMR 22.00 PFAS MCL Amendments), Massachusetts Department of Environmental Protection, October 2, 2020

The MassDEP PFAS summation includes all quantifiable results reported at and above the LOQ.

§ Sum of All Compounds Detected includes all detections at and above the DL.