MONTHLY PROGRESS REPORT #312
FOR MARCH 2023

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 01 to 31 March 2023.

1. SUMMARY OF REMEDIATION ACTIONS

Remediation Actions (RA) Underway at Camp Edwards as of 31 March 2023:

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 2.995 billion gallons of water treated and re-injected as of 31 March 2023. No Frank Perkins Road Treatment Facility shutdowns occurred in March.

The Base Boundary Mobile Treatment Unit (MTU) continues to operate at a flow rate of 65 gpm. As of 31 March 2023, over 362.0 million gallons of water were treated and re-injected. The following Base Boundary MTU shutdowns occurred in March.

- 1020 on 22 March 2023 to tighten a leaking camlock fitting and was restarted at 1030 on 22 March 2023.

The Leading Edge system continues to operate at a flow rate of 100 gpm. As of 31 March 2023, over 346.2 million gallons of water were treated and re-injected. No Leading Edge system shutdowns occurred in March.

The Pew Road MTU was turned off with regulatory approval 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 31 March 2023, over 2.066 billion gallons of water have been treated and re-injected. No MTU E and F shutdowns occurred in March.

The Northern Treatment Building G continues to operate at a flow rate of 225 gpm. As of 31 March 2023, over 1.581 billion gallons of water have been treated and re-injected. No Northern MTU G shutdowns occurred in March.

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 31 March 2023, over 1.706 billion gallons of water have been treated and re-injected. No MTU H and I shutdowns occurred in March.

MTU J continues to operate at a flow rate of 120 gpm. As of 31 March 2023, over 797.4 million gallons of water have been treated and re-injected. No MTU J shutdowns occurred in March.

MTU K continues to operate at a flow rate of 125 gpm. As of 31 March 2023, over 922.5 million gallons of water have been treated and re-injected. No MTU K shutdowns occurred in March.

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 a flow rate of 255 gpm. As of 31 March 2023, over 1.706 billion gallons of water have been treated and re-injected. No J-3 Range system shutdowns occurred in March.

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 50 gpm since 21 November 2022 (normal flow rate is 125 gpm). As of 31 March 2023, over 756.7 million gallons of water have been treated and re-injected. No J-1 Range Southern system shutdowns occurred in March.

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 31 March 2023, over 1.207 billion gallons of water have been treated and re-injected. No J-1 Range Northern MTU shutdowns occurred in March.

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 31 March 2023, over 3.172 billion gallons of water have been treated and re-injected. No CIA system shutdowns occurred in March.

2. SUMMARY OF ACTIONS TAKEN

Operable Unit (OU) Activity as of 31 March 2023:

CIA

- Groundwater sampling within CIA SPM
- Hydraulic monitoring event within CIA SPM
- Mobilization of UXO teams and equipment
- Commencement of 2023 grid flagging
- Commencement of P4A3 surface clearing
- Commencement of demolition operations
- Routine visual check of consolidated shot structure (CSS) cover and surface area around perimeter of CSS

Demolition Area 1

- No activity

Demolition Area 2

- No activity

J-1 Range

- No activity

J-2 Range
- Drilling and groundwater profile sampling, at J-2 Range North
- Groundwater sampling at J-2 Range North SPM wells
- Groundwater sampling at J-2 North PFAS wells

J-3 Range
- No activity

L Range
- No activity

Small Arms Ranges
- No activity

Northwest Corner
- No activity

Training Areas
- No activity

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

JBCC Impact Area Groundwater Study Program (IAGWSP) Tech Update Meeting Minutes for 09 March 2023

Project and Fieldwork Update

USACE provided the project and fieldwork update starting with an update on the groundwater sampling crews. USACE noted that crews are continuing to work in the Central Impact Area (CIA) performing annual sampling. They began 19 January and are scheduled to be finished in mid to late March. The CIA hydraulic sampling event was completed on 7 February. After CIA sampling is completed, crews will move to perform the J-2 North semi-annual round to include PFAS sampling. Crews are in the process of sampling the monthly process water samples. USACE referred the group to the weekly update for systems shutdown statistics and noted there weren't any significant shutdowns since the last tech update meeting.

USACE continued with a status of operations and maintenance activities. USACE reminded the group that the J-1 South treatment system continues to run at a reduced flow rate of 50 gallons per minute (gpm). The contractor provided a draft design for the new infiltration gallery, and is currently addressing comments provided by IAGWSP and USACE. USACE said that they hope to have internal comments resolved shortly and will provide the draft design to the agencies to

review next week. USACE noted that the goal is to begin construction of the new gallery in late March or April.
USACE continued with an update on the drilling activities for the new J-2 North wells. USACE explained that the drilling crew is currently profiling at J-2 North well #1, also known as BH-734. Crews started on 23 February and are currently (09 March 2023) at the 207-217 feet below ground surface (bgs) interval and are purging water there prior to sample collection. To date crews have collected samples from the 152-157, 152-167, 182-187, and 192-197 feet bgs intervals. Drilling at this location will likely extend into early to mid-next week. Well installation will begin once the screen setting calls have been conducted. EPA asked if screen setting calls will be held for each location as the data are received and validated or all at the end. USACE replied that the calls would be staggered and explained that once all results were received at each location, a screen setting call would be held. EPA asked if advance notice could be provided for each call. USACE asked if a week was sufficient, and EPA replied that it was and asked how the drilling was going. USACE said it was a little behind schedule because they were getting drawdown at some intervals, so they used a lower flow pump, which slowed the process a bit. EPA asked if the drilling procedure that was used was the same used by past drillers. USACE noted that it was, and that the driller, Cascade has worked for the program before.

USACE noted that drillers and sampling crews are following the established “MMR Tech Procedures” and that USACE was in the field observing them yesterday. EPA asked when she would be able to get onsite to observe the drilling. IAGWSP replied that it would be best if the drillers were working on a location across Gibbs Road because where they are currently working there is a limiting exclusion zone, making it hard to observe from within it without interrupting the drilling. A tentative date of Tuesday, 14 March 2023 was set.

USACE stated that the consolidated shot soil structure soil sampling results were received. USACE noted that the results are consistent with those seen in the past when material was reused for another field season. USACE also received results from the 5 ft x 5 ft location associated with 75 cracked and blown-in-place items. Those soils will be disposed of when Weston Solutions returns in the spring. USACE stated that there is currently no CIA fieldwork. The contractor is re-mobilizing to the site on 20 March, however USACE explained that the first week will consist of office setup and site orientation activities; and work will begin on 27 March. USACE said the draft 2023 QAPP is under internal review, and it will be distributed to the agencies as soon as that is completed. EPA asked about soils that were supposed to be removed from G Range as the result of a site inspection after the Small Arms Ranges completion of work report. USACE said that the determination was if the status of the range were to change, then soil removal would be considered, but the range use has not changed. ARNG noted that the IAGWSP and USACE will review the documentation and report back to the group.

<u>J-1 Range Northern 2021 Data Presentation</u>

IAGWSP introduced a presentation on the J-1 Range Northern 2021 data. IAGWSP explained that the reporting period was January 2021 through December 2021.

IAGWSP began with a review of the treatment system metrics during the reporting period. IAGWSP noted that the system had a very good uptime during the reporting period of 99.82%. IAGWSP noted that there were a couple of changeouts of the granular activated carbon (GAC) media in September and December of 2021. MassDEP remarked that it was amazing to have gone eight years without a carbon changeout but noted there wasn’t a lot of mass coming into

the system when considering the amount of mass removal, but it was still significant. EPA said that the mass removed during the reporting period seemed low and asked if there was an estimate of how much RDX and perchlorate was still left in the plume. USACE noted that they would have that information at the next meeting with the new plume shell.

IAGWSP moved on to discuss the groundwater monitoring results and trends. In Zone 1, between the source area and extraction well J1NEW0002, for perchlorate there was a slight decline from 2020 in mid-plume MW-346M1 (23.2 µg/L, Dec 2020 to 19.9 µg/L, Dec 2021). This was the plume-wide maximum and the only well greater than the 15 µg/L (EPA Health Advisory [HA]) in 2021. There was an increasing trend at depth in downgradient MW-265M1 (3.5 µg/L, Nov 2021) and a declining trend in shallower MW-265M2 (8.6 µg/L, Nov 2021). The first ever Massachusetts Maximum Contaminant Level (MMCL) exceedance at depth in mid-plume was MW-326M1 (2.1 µg/L, Dec 2021). Concentrations remain elevated downgradient at MW-245M2 (10.5/11.2 µg/L in May/Dec 2021, respectively) but steadily rising trend <MMCL at depth in MW 245M1 (1.2 µg/L, Dec 2021). IAGWSP continued with statistics for RDX, and noted that there was a long-term declining trend in trailing edge well MW- 303M2 (4.7/5.1 µg/L in May/Dec 2021, respectively). This location was below the EPA HA since 2010, while there was a long-term rising trend downgradient mid-plume at MW-346M1 (11.1 µg/L in Dec 2021). It was greater than the HA since 2012. The maximum RDX plume-wide detection was at MW-245M2 (24.2/19.1 µg/L in May/Dec 2021, respectively). The deeper MW-245M1 is rising but is currently below the risk-based concentration (RBC).

IAGWSP continued with statistics for perchlorate in Zone 2, which is the downgradient section between J1NEW0002 and J1NEW0001. IAGWSP explained there is a continued trend with concentrations less than 0.35 µg/L in the trailing edge (MW-370M2). The deep screen MW-370M1, which has been elevated since system startup, declined slightly to 7.4 µg/L in Dec 2021, and was the maximum perchlorate result in Zone 2. The mid-plume wells to the east are less than 2 µg/L (1.7 µg/L at MW-564M1 in Nov 2021; 1.1 µg/L at MW-566M1 in both May/Nov 2021). The mid-plume wells to the west remain above 2 µg/L (3.3 µg/L at MW-549M1), while a rising trend resumed in MW-547M1 (3.8 µg/L in Nov 2021). At the leading edge: MW-584M1 < MMCL (1.3/0.99 µg/L in May/Dec 2021, respectively); and MW- 590M2 (3.3/2.1 µg/L in May/Dec 2021, respectively) have been declining since a 2018 high of 7.6 µg/L.

IAGWSP said for RDX in Zone 2, there is a continued non-detect in the trailing edge (MW-370M2) since 2014. There is a decline below the RBC in deep trailing edge (MW-370M1) of 0.0.52 µg/L in Dec 2021, from 0.71 µg/L in Dec 2020, and this is the only time this location has been above RBC since sampling was resumed in 2015. For the second consecutive year, the well on Wood Rd was below the HA in mid-plume at MW-564M1 (0.95 µg/L in Nov 2021), and the maximum RDX in Zone 2 at MW-590M2 was back below RBC (0.38 µg/L in Dec 2021). IAGWSP reviewed figures showing the J-1 North chemical monitoring network, observed plumes, concentration trends, and cross sections for both RDX and perchlorate. EPA pointed out a small plumelet to the west of the main plume and asked about its origins. USACE said it was migrated data from MW-315 and MW-306, and it will dissipate.

USACE continued the presentation with a review of the hydraulic monitoring. USACE noted that there was one synoptic water level round (10 November 2021), and that the top of mound maximum was approximately 72 ft above mean sea level (msl) in early January then continued decline in summer to about 69.5 ft msl at time of synoptic water level round in mid-November. During the synoptic round in November, the elevation range was 69.41 ft msl at the top of the mound (TOM) to 66.68 ft msl at Wood Rd with a gradient of 0.00043 ft/ft. USACE noted it was

slightly steeper than 2020 but consistent with the range of previous years. The downgradient leading edge appears to capture the Wood Road wells greater than 2 µg/L perchlorate (MW-590M2), and the downgradient limit of capture is estimated to be between J1NEW0001 and MW-689. The western predicted RDX between 0.6 to 2 µg/L (west of MW-286) may be partially captured; it disperses before 2035.

The capture zones were developed manually and by model, and the model predicted and observed capture zones both included entire plumes. Figures with model predicted vs. observed capture zones were displayed. USACE displayed a figure showing the plume cleanup progress compared to when the remedial investigation and feasibility study was issued up to 2021. USACE reviewed the estimated times to cleanup. The decision document in 2008 estimated a range of 2035 to 2037 for perchlorate to be below 2 µg/L and 2034 to 2047 for RDX to be below 0.6 µg/L. When the first plume shell was developed in 2012, the estimates were 2038 for perchlorate and 2046 for RDX. When the plume shell was updated in 2017, those dates were revised to 2040 and 2051, respectively. USACE noted that when they present the new plume shell at the next tech meeting, the group will see that the times essentially will not change. MassDEP noted that this plume was not within the Zone II for any of the Upper Cape Water Supply Cooperative Wells. IAGWSP finished the presentation by saying that that the recommendations in the report are to continue monitoring with no proposed changes to the monitoring frequency, except to increase the sampling frequency of MW-547M1/M2 from annual to semi-annual.

Action Items

USACE used the document tracking list to review and discuss deliverables.

JBCC Impact Area Groundwater Study Program (IAGWSP) Tech Update Meeting Minutes for 23 March 2023

Project and Fieldwork Update

USACE provided the project and fieldwork update starting with an update on the status of the groundwater sampling crews. USACE noted that Koman Government Solutions (KGS) crews are continuing to work in the Central Impact Area (CIA) performing annual sampling. They anticipate finishing by the end of this week or early next week. After CIA sampling is completed, crews will move to perform the J-2 North semi-annual round to include PFAS sampling. The monthly process water samples were collected from the treatment systems 1 through 9 March. They completed the CIA hydraulic sampling event on 7 February. USACE referred the group to the weekly update for systems shutdown statistics and noted there weren't any significant shutdowns since the last tech update meeting.

USACE continued with a status of operations and maintenance activities. USACE reminded the group that the J-1 South treatment system continues to run at a reduced flow rate of 50 gallons per minute (gpm). USACE noted an internal meeting was held earlier in the week with the contractor to discuss USACE comments on the initial design submittal. The contractor is making a few revisions to the design based on USACE comments and USACE anticipates getting something back from them this week. After a review of the changes, it will be shared with the agencies.

USACE continued with an update on the drilling activities for the new J-2 North wells. USACE explained that the drilling crew completed profiling at J-2 North well #1, also known as BH-734, yesterday, 22 March 2023. They deconned the equipment, are setting up on the new location today, and should begin drilling later in the day. If they encounter the same difficulty that they did on the first location, the contractor may use a "push ahead" in the tighter intervals. USACE explained that they have a sonic fiber core and when they go to slightly above where they want to sample, they essentially push a steel screen ahead. It has a special drive head to it and allows them to get to the sample interval more easily. USACE noted that it can be considered a more representative sample because you are not compacting as much with the fiber core from the formation. It has been helpful in getting around where they are having recharge difficulties. USACE said that if there was a site visit coming up, the drillers could show the agencies the apparatus, which might help to visualize it better. EPA asked if they were able to collect all the profile samples from the first location. USACE replied that there were some shallow intervals that they missed due to recharge issues, but once they got into a rhythm, they were able to collect all the deeper intervals. USACE clarified that they were able to collect 15 intervals and noted that at past well locations, profile samples were not collected from every interval and reminded the group that it was common to not have a profile sample from certain intervals.

EPA asked that when the results are provided, it could be noted why certain intervals couldn't be obtained. USACE replied that would be documented, along with a profile diagram with the results on it. EPA asked if someone had sent the final J-2 Northern PFAS Workplan to the Upper Cape Water Supply Cooperative. IAGWSP replied that she would check with USACE to see who received it. ARNG noted that Ms. Jodi Cutler (IAGWSP) is now a board member of the Upper Cape Water Supply Cooperative. ARNG explained that Ms. Cutlet was recently appointed as the ex officio member to the Board for Joint Base Cape Cod and said they are very much aware of the program's activities. IAGWSP will make sure they have a copy of the workplan for their archives.

EPA said it was looking at the J-3 PFAS workplan and while it read that "reporting would take place in early 2023," they didn't think the program had gone out to begin the work yet. EPA asked for a status update on the work. USACE said the PFAS sampling is being wrapped into the annual the J- 3 sampling event, currently scheduled for July.

USACE stated that Weston Solutions began their remobilization this week and began staking out the grids for the field season. Next week they will continue to stake out grids and they would like to perform demolition operations. EPA asked if the items to be demolished included the 524 fuzes. USACE replied that it did. EPA continued that the 524 fuzes show up on the PFAS keyword search results and because of this, might require extra sampling. USACE reminded the group that no sampling is conducted after blow-in-place (BIPs) and shots in the field, however a 5 ft x 5 ft area is excavated, and waste characterization is done on those soils. EPA deferred the conversation to the after-tech meeting when the contractor will be on the call.

<u>J-1 Range Northern Perchlorate & RDX Plume Shell Presentation: 3D Interpolation</u>

USACE introduced part two of the J-1 Range Northern 2022 plume shell development presentations, which is the 3D interpolation phase, a follow-on to the 2D contouring that was discussed at the last tech meeting. USACE explained he would review the process of how the 3D interpolation is done and show the results of how it looks in the model.

USACE began with perchlorate and a summary of the 2D perchlorate data points used in the 3D process. He explained that there were 2,000 historical samples that were migrated in MODFLOW and MODPATH software, and out of those 2,000 samples, 597 were extracted by either of the two extraction wells, primarily from the upgradient extraction well EW-2. There are 1,167 points, or samples, that are not able to be used directly in the 3D interpolation process because they are essentially zero, or non-detect points. There were additional points that were deleted selectively because the migrated data contradicted actual chemistry data by nearby well screens. What is left are 236 data points based on actual raw data of which 95 were between the traditional detection limit of 0.35 µg/L for perchlorate and the cleanup level of 2 µg/L, and 141 of which are either equal to, or greater than, 2 µg/L. USACE noted that 236 points are not enough for kriging, which is why a lot of control contours in the layer-by-layer manual contour process are added. What's left after the contouring is the interpreted top and bottom of the perchlorate plume above 2 µg/L, which is at 0 ft mean sea level (msl) and extends down to an elevation of -120 ft msl.

USACE displayed a figure showing the data points at 2 µg/L and greater and noted that the yellow icons represented perchlorate between 2 µg/L and 15 µg/L, and the red icons were 15 µg/L or greater. USACE highlighted a small amount of mass based on detections in monitoring wells MW-584 or MW-590 on Wood Road that indicates a small amount of mass greater than 2 µg/L that is not captured but is being monitored. EPA asked if the detections on Wood Road are not at that location in the aquifer because they were there before the extraction system went online and they are therefore bypassing the extraction well. USACE clarified that for these points, the start of their travel time is based on their sample collection date. Therefore, they would have migrated and gotten as far as they were going to under the ambient water table gradient before the extraction well started at the end of 2013, so some may escape capture and get a little bit beyond Wood Road. USACE noted that there is a transect of screens on Wood Road that really haven't suggested anything of high concentrations migrating downgradient or to the north of Wood Road.

USACE reviewed the process for the 3D plume shell development. USACE explained that 2D data points are retained along with control contours (x, y, z, and c) converted from 2D contours into points and are imported into GroundWater Desktop (GWD) Software. There were 236 measured points retained; 10,885 vertices converted to points (0.35, 2, and 15 µg/L); 6,367 points converted from raster tops/bottoms (0 µg/L); and 17,488 total x, y, z, and c points to perform 3D kriging geostatistical interpolation. Data is kriged to the J1 North MODFLOW Grid, at a minimum 30 ft x 30 ft cells. Search radius and variogram settings were selected and a model versus experimental variogram was computed. The maximum kriged value was 55.34 µg/L and the maximum value in raw dataset was 63.5 µg/L.

MassDEP asked if a scaler was applied and noted that sometimes when the maximum kriged value doesn't match the raw data maximum, a scaler is applied to make it a little closer match. USACE replied there are other input variables in the kriging method used, so a scaler isn't used. USACE noted that if you apply a scaler to match the higher value, you are bumping up all the concentrations within a certain contour therefore adding more mass. MassDEP explained the mass of perchlorate greater than 2 µg/L equals 6.68 pounds, and mass greater than, or equal to, 15 µg/L is 1.56 pounds. USACE noted that slide six depicts perchlorate data interpolated to the MODFLOW grid and associated contours from 2D interpolation. The interpolation of data is exported from GWD into the flow and transport model.

USACE displayed a 3D visualization directly from the GWD software and highlighted the groundwater flow direction and where the two J-1 North extraction wells are relative to the distribution of mass and explained the figure was showing the 3D view of the new perchlorate plume shell from 2 µg/L and higher. USACE pointed out that they are estimating the new perchlorate plume shell is 5,500 feet long. USACE then displayed the side-by-side model-predicted 2017 vs. 2022 perchlorate plume shells.

USACE continued the presentation by moving to RDX. The same process was followed for RDX with 2,225 points migrated and 576 extracted by the two extraction wells. There were 1,526 deleted points. There are only 123 actual points left over from the RDX migration of which 25 were between the detection limit of 0.25 µg/L and the risk-based concentration (RBC) cleanup limit of 0.6 µg/L, and 98 were greater than the cleanup limit of 0.6 µg/L. The top and bottom of the RDX plume are interpreted to be ranging from +10 ft msl down to a depth of -110 ft msl. USACE showed the 2D figure and noted that points at 0.6 µg/L and above were colored green and noted that between Wood Road and EW-1 and the upgradient extraction well EW-2, there are no yellow or red icons. The chain of concentrations greater than 0.6 µg/L is on a flow path that will eventually be extracted. at Wood Road. USACE continued to explain the RDX process and explained that they took the 123 raw data points that were left and added over 5,800 data points (left over from the control contour) and points left over from the tops and bottoms (almost 2,500). Those points were kriged, and the results showed a maximum kriged value of 27.06 µg/L compared to the maximum value in the raw dataset of 26.31 µg/L. The mass of RDX in the new plume shell greater than 0.6 µg/L is estimated to be 5.51 pounds and the mass greater than 0.97 µg/L is estimated to be 4.87 pounds.

USACE showed the 3D visualization directly from the GWD software and explained the figure was showing the 3D view of the new RDX plume shell from 0.6 µg/L and higher. USACE noted the RDX plume shell is a little shorter, approximately 4,500 feet long. The 3D view did not show anything above 0.6 µg/L north or downgradient of Wood Road; all the RDX appears to be to the south of Wood Road. USACE then displayed side-by-side model-predicted 2017 vs 2022 RDX plume shells and noted that updating the plume shell expanded the mass above 0.6 µg/L near Wood Road a little bit larger but ended up eliminating the mass of 0.6 µg/L in the vicinity of MW-286M1.

USACE displayed a table that highlighted the mass of perchlorate and RDX based on plume shells through 2021 and the mass in pounds of model-predicted in the plume vs. removed by the treatment system to date. Focusing on 2 µg/L and greater, USACE noted that in 2017, 11.5 pounds of perchlorate was estimated to be in the plume shell and now, only 6.7 pounds are estimated to be in the plume. USACE said you would expect a trend in this direction when you look at the amount of perchlorate removed between the end of 2016 and the end of 2021.

In 2017, RDX above 0.6 µg/L was 5.36 pounds, and in 2022 it was approximately the same. USACE explained that there is more data available, so this statistic is not too remarkable. RDX mass removed between 2016 and 2021 is approximately a half a pound. MassDEP was struck by the fact that it looked like a lot of perchlorate has been removed from the plume but RDX was significantly lower. MassDEP asked why there was such a discrepancy between the percentages for RDX vs. perchlorate. USACE replied that retardation and dispersion is represented in the transport model for RDX but for perchlorate, there is only dispersion. USACE noted that in the next five years, will be telling as a lot of the heavy mass is just starting to get mixed into the extraction well; most of it is immediately upgradient but heading there.

USACE continued with a review of updated cleanup timeframes. In the Decision Document (DD), perchlorate was estimated to be cleaned up to 2 µg/L between 2035 and 2037, and RDX was estimated to be cleaned up to 0.6 µg/L anywhere between 2035 and 2047. When the first set of plume shells were completed in 2012, cleanup times were approximately the same. With the 2017 and 2022 plume shell updates, it was a little longer, however most of the site gets cleaned up by the DD timeframes. He explained there is a little patch of mass at depth that gets into a lower permeability zone and it takes a long time for the last of the mass to attenuate, which will be evident in the aminations.

USACE displayed and ran the animations for perchlorate. USACE pointed out that the view is a little farther away than he typically would have done for J-1 North and explained it was in response to EPA requesting to see the proximity to the Upper Cape Water Supply Cooperative wells. MassDEP noted that it looked like by 2025 all the mass downgradient of Wood Road was gone or below 2 µg/L. USACE replied yes and noted that by 2032, the mass for perchlorate between Wood Road and EW-2 appears to be below 2 µg/L. USACE pointed out the mass that lingers until 2042. The RDX animations were run. MassDEP asked if the model is simulating both wells running at the current design rate of 125 gpm without packering or optimizations made during the process. USACE replied that was correct. MassDEP noted that it looked as if by 2032 all the perchlorate that would be extracted by EW-1 would be gone and wondered if you were to turn the downgradient well off and apply more extraction stress and possibly packering at EW-2, you could probably make some significant improvements on cleanup time. USACE agreed that could be looked at.

<u>L Range Annual Environmental Monitoring Report Presentation</u>

USACE introduced a presentation on the L Range Annual Environmental Monitoring Report. It was noted that the reporting period was March 2022 to February 2023. A figure with the L Range RDX plume and sampling locations was displayed, and USACE noted that there are eight wells sampled annually and five wells sampled semi-annually. At this time, the only mappable lobes of RDX contamination are above 0.6 µg/L but less than 2 µg/L. The July 2022 semi-annual event included MW-242M1, MW-595M1/M2, MW-596M1, and MW-651M1. RDX was detected in one sample above the risk-based concentration (RBC) of 0.6µg/L. The maximum detected concentration was 0.9 µg/L (MW-651M1) downgradient of the base boundary (western plume lobe).

USACE continued with the January 2023 annual event and noted it included eight wells, the five from the semi-annual event and 90MW0031, 90MW0034, and MW-650M1. RDX was detected in one sample above the RBC of 0.6 µg/L, and there were no samples above the EPA risk-screening level of 0.97 µg/L or the Massachusetts Department of Environmental Protection (MassDEP) Groundwater-1 (GW-1) standard of 1 µg/L. The maximum detected concentration was 0.66 µg/L (field duplicate 0.69 µg/L) in MW-595M. RDX at MW-651M1 decreased from 0.9 µg/L (July 2022) to 0.26 µg/L in January 2023. USACE noted that MW-596M1 bounds the eastern RDX lobe to the south, and MW-650M1bounds the central lobe to the south. USACE displayed a figure showing trend plots which showed the two locations where there were detections during the reporting period.

Comparisons to Decision Document criteria were discussed. Based on the July 2020 plume shell, which was migrated through February 2023, RDX is predicted to be below the RBC (0.6 µg/L) by 2031 and below background levels (0.25 µg/L) by 2053. There are currently no concentrations above the health advisory. MassDEP noted that the site might be doing better

than these numbers suggest, if the maximum concentration is 0.66 currently, it shouldn't take until 2031 to clean the remainder. IAGWSP is recommending continue monitoring with no proposed changes to the monitoring frequency.

Action Items

USACE used the document tracking list to review and discuss deliverables.

JBCC Cleanup Team Meeting

The next JBCC Cleanup Team (JBCCCT) will be held virtually via Microsoft Teams on 12 April 2023 (previous meeting was 07 December 2022). Meeting details and presentation materials 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 summarizes sampling for all media from 01 to 31 March 2023. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 01 to 31 March 2023. 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 01 June 2019 to present. Table 3 PFAS results are compared to the new Regional Screening Levels (RSL) published by EPA on 17 May 2022 as well as the EPA Lifetime Health Advisory for PFOS+PFOA and the MassDEP MCL for PFAS6.

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:

• Monthly Progress Report No. 311 for February 2023	13 March 2023
• Draft L Range Environmental Monitoring Report for March 2022 through February 2023	06 March 2023
• Draft Technical Memorandum: Demolition Area 1 Base Boundary Optimization at D1-EW-3	15 March 2023

• Response to EPA Region 1 requests to conduct PFAS testing at Multiple Operable Units Under the Safe Drinking Water Administrative Orders	21 March 2023
• Draft Quality Assurance Project Plan - 2023 Update for Source Response for Unexploded Ordnance at the Central Impact Area	24 March 2023
• Draft L Range 2022-2023 Environmental Monitoring Report Response to Comments Letter	28 March 2023

5. SCHEDULED ACTIONS

The following actions and/or documents are being prepared in April 2023.

- Response to Comments on the Draft Small Arms Ranges Environmental Monitoring Work Plan Addendum
- Draft Central Impact Area Source 2023 Quality Assurance Project Plan
- Response to Comments on the Draft J-2 Range Eastern 2022 Environmental Monitoring Report
- Draft J-2 Range Northern 2022 Environmental Monitoring Report
- Final Demolition Area 1 2022 Environmental Monitoring Report
- Response to Comments on the Demolition Area 1 Base Boundary Optimization at D1-EW-3 Technical Memorandum
- Final Central Impact Area 2022 Environmental Monitoring Report
- Final L Range Environmental Monitoring Report
- Memorandum of Resolution for the Northwest Corner Demonstration of Compliance Report (*on hold pending resolution of PFAS issues*)
- Draft Five Year Review Report
- Land Use Controls Report

TABLE 1
Sampling Progress: 01 to 31 March 2023

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Northern	BH-735	BH-735-262-267	N	03-30-2023	Water	262	267
J2 Range Northern	BH-735	BH-735-252-257	N	03-30-2023	Water	252	257
J2 Range Northern	BH-735	BH-735-242-247	MS	03-30-2023	Water	242	247
J2 Range Northern	BH-735	BH-735-242-247	N	03-30-2023	Water	242	247
J2 Range Northern	BH-735	BH-735-242-247	SD	03-30-2023	Water	242	247
J2 Range Northern	BH-735	BH-735-232-237	N	03-30-2023	Water	232	237
J2 Range Northern	J2EW0003	J2EW0003_S23	N	03-30-2023	Ground Water	202	232
J2 Range Northern	J2EW0002	J2EW0002_S23	FD	03-30-2023	Ground Water	198	233
J2 Range Northern	J2EW0002	J2EW0002_S23	N	03-30-2023	Ground Water	198	233
J2 Range Northern	J2EW0001	J2EW0001_S23	N	03-30-2023	Ground Water	179	234
J2 Range Northern	BH-735	BH-735-222-227	N	03-29-2023	Water	222	227
J2 Range Northern	BH-735	BH-735-212-217	N	03-29-2023	Water	212	217
J2 Range Northern	BH-735	BH-735-202-207	N	03-29-2023	Water	202	207
Central Impact Area	MW-123M2	MW-123M2_S23	N	03-29-2023	Ground Water	236	246
J2 Range Northern	FIELDQC	BH-735-GAC-MID1-4	FB	03-29-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-735-GAC-EFF-4	FB	03-29-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-123M1	MW-123M1_S23	N	03-29-2023	Ground Water	291	301
J2 Range Northern	FIELDQC	BH-735-EB01-P-032923	EB	03-29-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-735-EB01-S-032923	EB	03-29-2023	Water Quality Control Matrix	0	0
J2 Range Northern	BH-735	BH-735-197	N	03-28-2023	Water	197	197
Central Impact Area	MW-615M2	MW-615M2_S23	N	03-28-2023	Ground Water	200	210
Central Impact Area	MW-270D	MW-270D_S23	N	03-28-2023	Ground Water	132	137
J2 Range Northern	BH-735	BH-735-177-D	FD	03-28-2023	Water	177	177
J2 Range Northern	BH-735	BH-735-177	N	03-28-2023	Water	177	177
Central Impact Area	MW-284M2	MW-284M2_S23	N	03-28-2023	Ground Water	45	55
Northwest Corner	MW-284M2	MW-284M2_S23	N	03-28-2023	Ground Water	45	55
Central Impact Area	MW-284M1	MW-284M1_S23	N	03-28-2023	Ground Water	115	125
Northwest Corner	MW-284M1	MW-284M1_S23	N	03-28-2023	Ground Water	115	125
J2 Range Northern	BH-735	BH-735-167	N	03-28-2023	Water	167	167
J2 Range Northern	BH-735	BH-735-187	N	03-28-2023	Water	187	187
J2 Range Northern	BH-735	BH-735-157	N	03-24-2023	Water	157	157
J2 Range Northern	FIELDQC	BH-735-EB01-PA-032423	EB	03-24-2023	Water Quality Control Matrix	0	0
J2 Range Northern	BH-735	BH-735-147	N	03-24-2023	Water	147	147
J2 Range Northern	FIELDQC	BH-FRB02-032323	AB	03-23-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-615M1	MW-615M1_S23	N	03-23-2023	Ground Water	260	270
Central Impact Area	MW-615M1	MW-615M1_S23D	FD	03-23-2023	Ground Water	260	270
Central Impact Area	MW-614M2	MW-614M2_S23	MS	03-23-2023	Ground Water	215	225
Central Impact Area	MW-614M2	MW-614M2_S23	N	03-23-2023	Ground Water	215	225
Central Impact Area	MW-614M2	MW-614M2_S23	SD	03-23-2023	Ground Water	215	225
Central Impact Area	MW-614M1	MW-614M1_S23	N	03-23-2023	Ground Water	275	285
Central Impact Area	MW-108M4	MW-108M4_S23	N	03-23-2023	Ground Water	240	250
Central Impact Area	MW-108M1	MW-108M1_S23	N	03-23-2023	Ground Water	297	307
J2 Range Northern	FIELDQC	BH-EB01-MP-032223	EB	03-22-2023	Water Quality Control Matrix	0	0
Former D Range	MW-174S	MW-174S_S23	N	03-22-2023	Ground Water	190	200
Western Boundary	MW-282M2	MW-282M2_S23	N	03-22-2023	Ground Water	206	216
Western Boundary	MW-282M1	MW-282M1_S23	N	03-22-2023	Ground Water	310	320
J2 Range Northern	BH-734	BH-734-345.5-350-5	N	03-21-2023	Water	345.5	350.5
Central Impact Area	MW-51M2	MW-51M2_S23	N	03-21-2023	Ground Water	203	213
Central Impact Area	MW-51M1	MW-51M1_S23	N	03-21-2023	Ground Water	234	244
Central Impact Area	MW-51D	MW-51D_S23	N	03-21-2023	Ground Water	264	274
J2 Range Northern	BH-734	BH-734-332-337	N	03-21-2023	Water	332	327
J2 Range Northern	FIELDQC	BH-EB01-P-03123	EB	03-21-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-207M1	MW-207M1_S23	N	03-21-2023	Ground Water	254	264
J2 Range Northern	FIELDQC	BH-EB01-S-032123	EB	03-21-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-350M2	MW-350M2_S23	N	03-20-2023	Ground Water	126	136

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 March 2023

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Central Impact Area	MW-625M2	MW-625M2_S23	N	03-20-2023	Ground Water	230	240
Central Impact Area	MW-625M1	MW-625M1_S23	N	03-20-2023	Ground Water	260	270
J2 Range Northern	BH-734	BH-734-322-327	N	03-20-2023	Water	322	327
J2 Range Northern	BH-734	BH-734-322-327-D	FD	03-20-2023	Water	322	327
J2 Range Northern	FIELDQC	BH-734-GAC-EFF-03	FB	03-20-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-EFF-03	FB	03-20-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-MID1-03	FB	03-20-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-MID1-03	FB	03-20-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-624M2	MW-624M2_S23	N	03-20-2023	Ground Water	254	264
Central Impact Area	MW-624M1	MW-624M1_S23	N	03-20-2023	Ground Water	284	294
J2 Range Northern	BH-734	BH-734-312-317	N	03-17-2023	Water	312	317
J2 Range Northern	BH-734	BH-734-302-307	N	03-17-2023	Water	302	307
J2 Range Northern	BH-734	BH-734-292-297	MS	03-16-2023	Water	292	297
J2 Range Northern	BH-734	BH-734-292-297	N	03-16-2023	Water	292	297
J2 Range Northern	BH-734	BH-734-292-297	SD	03-16-2023	Water	292	297
Central Impact Area	MW-103M2	MW-103M2_S23	N	03-16-2023	Ground Water	282	292
Central Impact Area	MW-103M1	MW-103M1_S23	MS	03-16-2023	Ground Water	298	308
Central Impact Area	MW-103M1	MW-103M1_S23	N	03-16-2023	Ground Water	298	308
Central Impact Area	MW-103M1	MW-103M1_S23	SD	03-16-2023	Ground Water	298	308
Central Impact Area	MW-149M1	MW-149M1_S23	N	03-16-2023	Ground Water	237.5	247.5
J2 Range Northern	BH-734	BH-734-282-287	N	03-16-2023	Water	282	287
J2 Range Northern	FIELDQC	BH-734-GAC-EFF-02	FB	03-16-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-EFF-02	FB	03-16-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-MID1-02	FB	03-16-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-MID1-02	FB	03-16-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-618M2	MW-618M2_S23	N	03-16-2023	Ground Water	190.5	200.5
Central Impact Area	MW-618M1	MW-618M1_S23	N	03-16-2023	Ground Water	238.5	248.5
J2 Range Northern	BH-734	BH-734-272-277	N	03-15-2023	Water	272	277
Central Impact Area	MW-102M2	MW-102M2_S23	N	03-15-2023	Ground Water	237	247
Central Impact Area	MW-102M1	MW-102M1_S23	N	03-15-2023	Ground Water	267	277
Central Impact Area	MW-623M3	MW-623M3_S23	N	03-15-2023	Ground Water	275	285
Central Impact Area	MW-623M2	MW-623M2_S23	N	03-15-2023	Ground Water	291.8	301.8
Central Impact Area	MW-623M1	MW-623M1_S23	N	03-15-2023	Ground Water	340	350
J2 Range Northern	BH-734	BH-734-262-267	N	03-14-2023	Water	262	267
Central Impact Area	MW-176M2	MW-176M2_S23	N	03-14-2023	Ground Water	229	239
Central Impact Area	MW-176M1	MW-176M1_S23	N	03-14-2023	Ground Water	270	280
Central Impact Area	MW-609M2	MW-609M2_S23	N	03-14-2023	Ground Water	182.4	192.4
Central Impact Area	MW-609M1	MW-609M1_S23	N	03-14-2023	Ground Water	210.4	220.4
Central Impact Area	MW-441M2	MW-441M2_S23	N	03-13-2023	Ground Water	109.45	119.45
Central Impact Area	MW-441M1	MW-441M1_S23	N	03-13-2023	Ground Water	204.63	214.63
Central Impact Area	MW-710M1	MW-710M1_S23	N	03-13-2023	Ground Water	247.5	257.5
Central Impact Area	MW-628M2	MW-628M2_S23	MS	03-13-2023	Ground Water	120.8	130.8
Central Impact Area	MW-628M2	MW-628M2_S23	N	03-13-2023	Ground Water	120.8	130.8
Central Impact Area	MW-628M2	MW-628M2_S23	SD	03-13-2023	Ground Water	120.8	130.8
Central Impact Area	MW-628M1	MW-628M1_S23	N	03-13-2023	Ground Water	230.8	240.8
J2 Range Northern	FIELDQC	BH-734-GAC-EFF-01	FB	03-10-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-EFF-01	FB	03-10-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-MID1-01	FB	03-10-2023	Water Quality Control Matrix	0	0
J2 Range Northern	FIELDQC	BH-734-GAC-MID1-01	FB	03-10-2023	Water Quality Control Matrix	0	0
Central Impact Area	MW-699M2	MW-699M2_S23	N	03-09-2023	Ground Water	221	231
J1 Range Southern	J1S-EFF	J1S-EFF-184A	N	03-09-2023	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-184A	N	03-09-2023	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-184A	N	03-09-2023	Process Water	0	0
J2 Range Northern	BH-734	BH-734-222-227	N	03-09-2023	Water	222	227

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 March 2023

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Northern	BH-734	BH-734-222-227-D	FD	03-09-2023	Water	222	227
Central Impact Area	MW-699M1	MW-699M1_S23	N	03-09-2023	Ground Water	261.5	271.5
J3 Range	J3-EFF	J3-EFF-198A	N	03-09-2023	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-198A	N	03-09-2023	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-198A	N	03-09-2023	Process Water	0	0
J3 Range	J3-INF	J3-INF-198A	N	03-09-2023	Process Water	0	0
Central Impact Area	MW-626M2	MW-626M2_S23	N	03-09-2023	Ground Water	237.2	247.2
Central Impact Area	MW-626M1	MW-626M1_S23	N	03-09-2023	Ground Water	282.2	292.2
Central Impact Area	MW-644M2	MW-644M2_S23	N	03-09-2023	Ground Water	230.9	240.9
J2 Range Northern	BH-734	BH-734-212-217	N	03-09-2023	Water	212	217
Central Impact Area	MW-644M1	MW-644M1_S23	N	03-09-2023	Ground Water	275.9	285.9
Central Impact Area	MW-644M1	MW-644M1_S23D	FD	03-09-2023	Ground Water	275.9	285.9
Central Impact Area	MW-323M2	MW-323M2_S23	N	03-08-2023	Ground Water	120	130
Central Impact Area	MW-323M1	MW-323M1_S23	N	03-08-2023	Ground Water	195	205
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-204A	N	03-08-2023	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-204A	N	03-08-2023	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-204A	N	03-08-2023	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-204A	N	03-08-2023	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-80A	N	03-08-2023	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-80A	N	03-08-2023	Process Water	0	0
Central Impact Area	MW-338S	MW-338S_S23	N	03-08-2023	Ground Water	72	82
Demolition Area 1	D1LE-MID1	D1LE-MID1-80A	N	03-08-2023	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-80A	N	03-08-2023	Process Water	0	0
Central Impact Area	MW-338M2	MW-338M2_S23	N	03-08-2023	Ground Water	119	129
Demolition Area 1	D1-EFF	D1-EFF-152A	N	03-08-2023	Process Water	0	0
Northwest Corner	MW-338M2	MW-338M2_S23	N	03-08-2023	Ground Water	119	129
Demolition Area 1	D1-MID-2	D1-MID-2-152A	N	03-08-2023	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-152A	N	03-08-2023	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-152A	N	03-08-2023	Process Water	0	0
Central Impact Area	MW-338M1	MW-338M1_S23	N	03-08-2023	Ground Water	189	199
Northwest Corner	MW-338M1	MW-338M1_S23	N	03-08-2023	Ground Water	189	199
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-174A	N	03-07-2023	Process Water	0	0
J2 Range Northern	BH-734	BH-734-192-197	N	03-07-2023	Water	192	197
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-174A	N	03-07-2023	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-174A	N	03-07-2023	Process Water	0	0
J2 Range Northern	FIELDQC	BH-FRB01-030723	AB	03-07-2023	Water Quality Control Matrix	0	0
J2 Range Northern	BH-734	BH-734-182-187	N	03-06-2023	Water	182	187
Central Impact Area	MW-616M2	MW-616M2_S23	N	03-06-2023	Ground Water	107.1	117.1
Central Impact Area	MW-616M1	MW-616M1_S23	N	03-06-2023	Ground Water	217.1	227.1
Central Impact Area	MW-617M2	MW-617M2_S23	N	03-06-2023	Ground Water	118.3	128.3
Central Impact Area	MW-617M1	MW-617M1_S23	N	03-06-2023	Ground Water	175.8	185.8
Central Impact Area	MW-50M1	MW-50M1_S23	N	03-06-2023	Ground Water	207	217
J2 Range Northern	BH-734	BH-734-162-167	N	03-03-2023	Water	162	167
J2 Range Northern	BH-734	BH-734-152-157	N	03-03-2023	Water	152	157
Central Impact Area	MW-212M1	MW-212M1_S23	N	03-02-2023	Ground Water	333	343
Central Impact Area	CIA2-EFF	CIA2-EFF-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-110A	N	03-02-2023	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 March 2023

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Central Impact Area	CIA2-INF	CIA2-INF-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	MW-608M4	MW-608M4_S23	N	03-02-2023	Ground Water	185.4	195.4
Central Impact Area	CIA1-EFF	CIA1-EFF-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-110A	N	03-02-2023	Process Water	0	0
Central Impact Area	MW-608M3	MW-608M3_S23	N	03-02-2023	Ground Water	220.4	230.4
Central Impact Area	CIA3-EFF	CIA3-EFF-81A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-81A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-81A	N	03-02-2023	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-81A	N	03-02-2023	Process Water	0	0
Central Impact Area	MW-608M2	MW-608M2_S23	N	03-02-2023	Ground Water	253.4	263.4
Central Impact Area	MW-608M1	MW-608M1_S23	N	03-02-2023	Ground Water	267.4	277.4
Central Impact Area	MW-249M2	MW-249M2_S23	N	03-01-2023	Ground Water	174	184
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-198A	N	03-01-2023	Process Water	0	0
Central Impact Area	MW-633M2	MW-633M2_S23	N	03-01-2023	Ground Water	197	207
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-198A	N	03-01-2023	Process Water	0	0
Central Impact Area	MW-633M1	MW-633M1_S23	N	03-01-2023	Ground Water	282	292
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-198A	N	03-01-2023	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-198A	N	03-01-2023	Process Water	0	0
Central Impact Area	MW-687M2	MW-687M2_S23	N	03-01-2023	Ground Water	188	198
Central Impact Area	MW-687M1	MW-687M1_S23	N	03-01-2023	Ground Water	232.6	242.6
J1 Range Northern	J1N-EFF	J1N-EFF-113A	N	03-01-2023	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-113A	N	03-01-2023	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-113A	N	03-01-2023	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-113A	N	03-01-2023	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received March 2023

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-608M4	MW-608M4_S23	185.4	195.4	03-02-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.57		µg/L	0.60		0.037	0.20
Central Impact Area	MW-608M2	MW-608M2_S23	253.4	263.4	03-02-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.073	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-608M1	MW-608M1_S23	267.4	277.4	03-02-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-687M2	MW-687M2_S23	188	198	03-01-2023	SW6850	Perchlorate	0.088	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-23M1	MW-23M1_S23	225	235	02-28-2023	SW6850	Perchlorate	0.60		µg/L	2.0		0.058	0.20
Central Impact Area	MW-23D	MW-23D_S23	272	282	02-28-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.39		µg/L	0.60		0.037	0.20
Central Impact Area	MW-86S	MW-86S_S23	143	153	02-27-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		µg/L	0.60		0.037	0.20
Central Impact Area	MW-86M2	MW-86M2_S23	158	168	02-27-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.69		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-686M2	MW-686M2_S23	194.3	204.3	02-23-2023	SW6850	Perchlorate	0.12	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-686M2	MW-686M2_S23	194.3	204.3	02-23-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-686M1	MW-686M1_S23	243.2	253.2	02-23-2023	SW8330	Picric acid	0.062	J	µg/L	365		0.027	0.20
Central Impact Area	MW-38M4	MW-38M4_S23	132	142	02-23-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-38M3	MW-38M3_S23	170	180	02-23-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.64		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-38M3	MW-38M3_S23	170	180	02-23-2023	SW6850	Perchlorate	0.068	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-184M1	MW-184M1_S23	186	196	02-23-2023	SW6850	Perchlorate	1.0		µg/L	2.0		0.058	0.20
Central Impact Area	MW-184M1	MW-184M1_S23	186	196	02-23-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.2		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-184M1	MW-184M1_S23	186	196	02-23-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.67	J	µg/L	400		0.11	0.20
Central Impact Area	MW-184M1	MW-184M1_S23D	186	196	02-23-2023	SW6850	Perchlorate	1.0		µg/L	2.0		0.058	0.20
Central Impact Area	MW-184M1	MW-184M1_S23D	186	196	02-23-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.3		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-184M1	MW-184M1_S23D	186	196	02-23-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.63	J	µg/L	400		0.11	0.20
Central Impact Area	MW-728M1	MW-728M1_S23	153.4	163.4	02-22-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-728M1	MW-728M1_S23	153.4	163.4	02-22-2023	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-25	MW-25_S23	108	118	02-22-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.7		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-43M1	MW-43M1_S23	223	233	02-21-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.76		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-95M2	MW-95M2_S23	167	177	02-16-2023	SW6850	Perchlorate	0.062	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-95M1	MW-95M1_S23	202	212	02-16-2023	SW6850	Perchlorate	1.9		µg/L	2.0		0.058	0.20
Central Impact Area	MW-95M1	MW-95M1_S23	202	212	02-16-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.17	J	µg/L	400		0.11	0.20
Central Impact Area	MW-95M1	MW-95M1_S23	202	212	02-16-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.5		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-95M1	MW-95M1_S23D	202	212	02-16-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.17	J	µg/L	400		0.11	0.20
Central Impact Area	MW-95M1	MW-95M1_S23D	202	212	02-16-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.5		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-95M1	MW-95M1_S23D	202	212	02-16-2023	SW6850	Perchlorate	1.9		µg/L	2.0		0.058	0.20
Central Impact Area	MW-607M2	MW-607M2_S23	177.4	187.4	02-16-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.7		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-607M2	MW-607M2_S23D	177.4	187.4	02-16-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-607M1	MW-607M1_S23	207.4	217.4	02-16-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.4		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-607M1	MW-607M1_S23D	207.4	217.4	02-16-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.4		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-203M2	MW-203M2_S23	176	186	02-15-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-485M1	MW-485M1_S23	125.32	135.32	02-15-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.2		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-485M1	MW-485M1_S23	125.32	135.32	02-15-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.2		µg/L	400		0.11	0.20
Central Impact Area	MW-485M1	MW-485M1_S23	125.32	135.32	02-15-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.061	J	µg/L	7.3		0.036	0.20
Central Impact Area	MW-485M1	MW-485M1_S23D	125.32	135.32	02-15-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.064	J	µg/L	7.3		0.036	0.20
Central Impact Area	MW-485M1	MW-485M1_S23D	125.32	135.32	02-15-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.3		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-485M1	MW-485M1_S23D	125.32	135.32	02-15-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.1		µg/L	400		0.11	0.20
Central Impact Area	MW-85S	MW-85S_S23	116	126	02-15-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	J	µg/L	0.60		0.037	0.20

J = Estimated Result
MDL = Method Detection Limit
RL = Reporting Limit

MCL/HA= Either the MCL or Lowest Health Advisory Limit
April 05, 2023

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received March 2023

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-477M2	MW-477M2_S23	145.62	155.62	02-14-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.39		µg/L	400		0.11	0.20
Central Impact Area	MW-477M2	MW-477M2_S23	145.62	155.62	02-14-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.2		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-477M2	MW-477M2_S23D	145.62	155.62	02-14-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-477M2	MW-477M2_S23D	145.62	155.62	02-14-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.37	J	µg/L	400		0.11	0.20
Central Impact Area	MW-107M2	MW-107M2_S23	125	135	02-14-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.26	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-40M1	MW-40M1_S23	132.5	142	02-13-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.088	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-90S	MW-90S_S23	118	128	02-13-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.2		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-90S	MW-90S_S23	118	128	02-13-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.15	J	µg/L	400		0.11	0.20
Central Impact Area	MW-90M1	MW-90M1_S23	145	155	02-13-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-90M1	MW-90M1_S23	145	155	02-13-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.058	J	µg/L	7.3		0.036	0.20
Central Impact Area	MW-37M2	MW-37M2_S23	145	155	02-09-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.17	J	µg/L	7.3		0.036	0.20
Central Impact Area	MW-37M2	MW-37M2_S23	145	155	02-09-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.037	0.20
Central Impact Area	OW-1	OW-1_S23	126	136	02-09-2023	SW8330	1,3,5-Trinitrobenzene	0.15	J	µg/L	1090		0.11	0.20
Central Impact Area	OW-1	OW-1_S23	126	136	02-09-2023	SW8330	2,4,6-Trinitrotoluene	3.7		µg/L	2.0	X	0.028	0.20
Central Impact Area	OW-1	OW-1_S23	126	136	02-09-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.56	J	µg/L	0.60		0.037	0.20
Central Impact Area	OW-1	OW-1_S23	126	136	02-09-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.27		µg/L	7.3		0.031	0.20
Central Impact Area	OW-1	OW-1_S23	126	136	02-09-2023	SW8330	2,4-Dinitrotoluene	0.14	J	µg/L	5.0		0.020	0.20
Central Impact Area	OW-1	OW-1_S23	126	136	02-09-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.56		µg/L	7.3		0.036	0.20
Central Impact Area	OW-1	OW-1_S23D	126	136	02-09-2023	SW8330	2,4-Dinitrotoluene	0.14	J	µg/L	5.0		0.020	0.20
Central Impact Area	OW-1	OW-1_S23D	126	136	02-09-2023	SW8330	1,3,5-Trinitrobenzene	0.19	J	µg/L	1090		0.11	0.20
Central Impact Area	OW-1	OW-1_S23D	126	136	02-09-2023	SW8330	2,4,6-Trinitrotoluene	3.8		µg/L	2.0	X	0.028	0.20
Central Impact Area	OW-1	OW-1_S23D	126	136	02-09-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.29		µg/L	7.3		0.031	0.20
Central Impact Area	OW-1	OW-1_S23D	126	136	02-09-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.61	J	µg/L	0.60	X	0.037	0.20
Central Impact Area	OW-1	OW-1_S23D	126	136	02-09-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.54		µg/L	7.3		0.036	0.20
Central Impact Area	OW-2	OW-2_S23	175	185	02-09-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-01S	MW-01S_S23	114	124	02-09-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-01M2	MW-01M2_S23	160	165	02-09-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.4		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-01M2	MW-01M2_S23	160	165	02-09-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.59		µg/L	400		0.11	0.20
Central Impact Area	MW-89M3	MW-89M3_S23	174	184	02-08-2023	SW6850	Perchlorate	0.070	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-89M3	MW-89M3_S23	174	184	02-08-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-89M2	MW-89M2_S23	214	224	02-08-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	6.1		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-89M2	MW-89M2_S23	214	224	02-08-2023	SW6850	Perchlorate	1.7		µg/L	2.0		0.058	0.20
Central Impact Area	MW-89M2	MW-89M2_S23	214	224	02-08-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.1		µg/L	400		0.11	0.20
Central Impact Area	MW-89M2	MW-89M2_S23D	214	224	02-08-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.0		µg/L	400		0.11	0.20
Central Impact Area	MW-89M2	MW-89M2_S23D	214	224	02-08-2023	SW6850	Perchlorate	1.7		µg/L	2.0		0.058	0.20
Central Impact Area	MW-89M2	MW-89M2_S23D	214	224	02-08-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	6.0		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-89M1	MW-89M1_S23	234	244	02-08-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.29		µg/L	0.60		0.037	0.20
Central Impact Area	MW-89M1	MW-89M1_S23	234	244	02-08-2023	SW6850	Perchlorate	0.38		µg/L	2.0		0.058	0.20
Central Impact Area	MW-88M2	MW-88M2_S23	213	223	02-08-2023	SW6850	Perchlorate	1.1		µg/L	2.0		0.058	0.20
Central Impact Area	MW-88M2	MW-88M2_S23	213	223	02-08-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.42		µg/L	0.60		0.037	0.20
Central Impact Area	MW-88M1	MW-88M1_S23	233	243	02-08-2023	SW6850	Perchlorate	0.095	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-88M1	MW-88M1_S23	233	243	02-08-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.25		µg/L	0.60		0.037	0.20
Central Impact Area	MW-87M1	MW-87M1_S23	194	204	02-07-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.037	0.20

J = Estimated Result
MDL = Method Detection Limit
RL = Reporting Limit

MCL/HA= Either the MCL or Lowest Health Advisory Limit
April 05, 2023

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received March 2023

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-87M1	MW-87M1_S23	194	204	02-07-2023	SW6850	Perchlorate	0.74		µg/L	2.0		0.058	0.20
Central Impact Area	MW-42M3	MW-42M3_S23	165.8	176	02-07-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.8		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-42M2	MW-42M2_S23	185.8	196	02-07-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-42M1	MW-42M1_S23	205.8	216	02-07-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.3		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-235M1	MW-235M1_S23	154	164	02-06-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-91S	MW-91S_S23	124	134	02-06-2023	SW8330	1,3,5-Trinitrobenzene	0.21		µg/L	1090		0.11	0.20
Central Impact Area	MW-91S	MW-91S_S23	124	134	02-06-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.27		µg/L	7.3		0.036	0.20
Central Impact Area	MW-91S	MW-91S_S23	124	134	02-06-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.24		µg/L	7.3		0.031	0.20
Central Impact Area	MW-91S	MW-91S_S23	124	134	02-06-2023	SW8330	2,4,6-Trinitrotoluene	2.2		µg/L	2.0	X	0.028	0.20
Central Impact Area	MW-91S	MW-91S_S23	124	134	02-06-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.6	J	µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-91S	MW-91S_S23	124	134	02-06-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.25	J	µg/L	400		0.11	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	1,3,5-Trinitrobenzene	0.22		µg/L	1090		0.11	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	2,4-Dinitrotoluene	0.061	J	µg/L	5.0		0.020	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.29		µg/L	7.3		0.036	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.25		µg/L	7.3		0.031	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.6	J	µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	2,4,6-Trinitrotoluene	2.3		µg/L	2.0	X	0.028	0.20
Central Impact Area	MW-91S	MW-91S_S23D	124	134	02-06-2023	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.28		µg/L	400		0.11	0.20
Central Impact Area	MW-91M1	MW-91M1_S23	170	180	02-06-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		µg/L	0.60	X	0.037	0.20
Central Impact Area	MW-93M2	MW-93M2_S23	145	155	02-06-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.23		µg/L	0.60		0.037	0.20
Central Impact Area	MW-93M1	MW-93M1_S23	185	195	02-06-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW8330	1,3-Dinitrobenzene	0.046	J	µg/L	1.0		0.031	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.34		µg/L	7.3		0.031	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW6850	Perchlorate	0.063	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW8330	2,4,6-Trinitrotoluene	1.3		µg/L	2.0		0.028	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.35		µg/L	7.3		0.036	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW8330	2,4-Dinitrotoluene	0.11	J	µg/L	5.0		0.020	0.20
Central Impact Area	MW-695S	MW-695S_S23	130	140	01-31-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW8330	2,4,6-Trinitrotoluene	1.3		µg/L	2.0		0.028	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.34		µg/L	7.3		0.031	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW8330	1,3-Dinitrobenzene	0.051	J	µg/L	1.0		0.031	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW8330	2,4-Dinitrotoluene	0.10	J	µg/L	5.0		0.020	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW6850	Perchlorate	0.058	J	µg/L	2.0		0.058	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.36		µg/L	7.3		0.036	0.20
Central Impact Area	MW-695S	MW-695S_S23D	130	140	01-31-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-487M2	MW-487M2_S23	195.84	205.84	01-31-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-105M1	MW-105M1_S23	205	215	01-30-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-726S	MW-726S_S23	135.5	145.5	01-30-2023	SW8330	2,4,6-Trinitrotoluene	0.52		µg/L	2.0		0.028	0.20
Central Impact Area	MW-726S	MW-726S_S23	135.5	145.5	01-30-2023	SW8330	2-Amino-4,6-dinitrotoluene	0.26		µg/L	7.3		0.031	0.20
Central Impact Area	MW-726S	MW-726S_S23	135.5	145.5	01-30-2023	SW8330	2,4-Dinitrotoluene	0.058	J	µg/L	5.0		0.020	0.20
Central Impact Area	MW-726S	MW-726S_S23	135.5	145.5	01-30-2023	SW8330	4-Amino-2,6-dinitrotoluene	0.52		µg/L	7.3		0.036	0.20
Central Impact Area	MW-726S	MW-726S_S23	135.5	145.5	01-30-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.037	0.20
Central Impact Area	MW-100M1	MW-100M1_S23	179	189	01-30-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	µg/L	0.60		0.037	0.20

J = Estimated Result
MDL = Method Detection Limit
RL = Reporting Limit

MCL/HA= Either the MCL or Lowest Health Advisory Limit
April 05, 2023

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received March 2023

Area of Concern	Location ID	Field Sample ID	Top Depth (ft bgs)	Bottom Depth (ft bgs)	Date Sampled	Test Method	Analyte	Result Value	Qualifier	Units	MCL/HA	> MCL/HA	MDL	RL
Central Impact Area	MW-729M1	MW-729M1_S23	231.5	241.5	01-30-2023	SW6850	Perchlorate	0.87		µg/L	2.0		0.058	0.20
Central Impact Area	MW-729M1	MW-729M1_S23	231.5	241.5	01-30-2023	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.3		µg/L	0.60	X	0.037	0.20

J = Estimated Result
MDL = Method Detection Limit
RL = Reporting Limit

MCL/HA= Either the MCL or Lowest Health Advisory Limit
April 05, 2023

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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

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KGS 2019 PFAS MW&INF - J1 Range Northern

	Location	J1N-INF2	J1N-INF2	MW-136S	MW-564M1	MW-590M2
	Field Sample ID	J1N-INF2_PFAS19	J1N-INF2_PFAS19R	MW-136S_PFAS19	MW-564M1_PFAS19	MW-590M2_PFAS19
	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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	**4.90**	2.90 U	**1.40 J**	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	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**

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	Location	J1N-INF2	J1N-INF2	MW-136S	MW-564M1	MW-590M2
	Field Sample ID	J1N-INF2_PFAS19	J1N-INF2_PFAS19R	MW-136S_PFAS19	MW-564M1_PFAS19	MW-590M2_PFAS19
	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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KGS 2019 PFAS MW&INF - 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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	0.880 U	0.900 U
Perfluorohexanoic acid (PFHxA)		0.880 U	0.900 U
Perfluorononanoic acid (PFNA)	5.9	1.30 U	**2.80**
Perfluorooctanesulfonamide (PFOSA)		2.60 U	2.70 U
Perfluorooctanesulfonic acid (PFOS)	4	2.60 U	2.70 U
Perfluorooctanoic acid (PFOA)	6	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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**0.00**	**7.10**
§Sum of All Compounds Detected		**3.20**	**8.70**

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KGS 2019 PFAS MW&INF - 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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.90 U	**1.30 J**	2.80 U	2.80 U	**1.10 J**	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	**0.600 J**	0.980 U	0.970 U
Perfluorohexanoic acid (PFHxA)		0.880 U	0.980 U	0.970 U
Perfluorononanoic acid (PFNA)	5.9	1.30 U	**1.10 J**	1.50 U
Perfluorooctanesulfonamide (PFOSA)		2.60 U	2.90 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	4	**1.90 J**	2.90 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	**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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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KGS 2019 PFAS MW&INF - 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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	2.80 U	2.80 U	**12.0**	**12.0**	**12.0**	2.90 U
Perfluorooctanoic acid (PFOA)	6	**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 (PFTrDA)		**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**

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	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	**Screening Limit**	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)	600	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)	39	0.970 U
Perfluorohexanoic acid (PFHxA)		0.970 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U
Perfluorooctanesulfonic acid (PFOS)	4	2.90 U
Perfluorooctanoic acid (PFOA)	6	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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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	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	**Screening Limit**	Results (ng/L)
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**0.00**
§Sum of All Compounds Detected		**0.710**

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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	2.90 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

	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	**Screening Limit**	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
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
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		8.90 U	10.0 U	10.0 U	9.50 U	9.70 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
Perfluorobutanesulfonic acid (PFBS)	600	0.890 U	1.00 U	1.00 U	0.950 U	0.970 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
Perfluorodecanesulfonic acid (PFDS)		1.30 U	1.50 U	1.50 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**
Perfluorododecanoic acid (PFDoA)		1.30 U	1.50 U	**1.20 J**	**0.600 J**	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
Perfluoroheptanoic acid (PFHpA)		1.30 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	39	0.890 U	1.00 U	1.00 U	0.950 U	0.970 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
Perfluorononanoic acid (PFNA)	5.9	**2.60**	**1.50 J**	**1.40 J**	**2.70**	**3.40**	**3.50**
Perfluorooctanesulfonamide (PFOSA)		2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	4	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	1.30 U	1.50 U	1.50 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**
Perfluorotetradecanoic acid (PFTeDA)		2.70 U	3.00 U	3.00 U	2.90 U	2.90 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
Perfluoroundecanoic acid (PFUnA)		1.30 U	**1.00 J**	**13.0**	**6.90**	**5.90**	**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**

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	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	**Screening Limit**	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)	600	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)	39	0.980 U	0.920 U	0.930 U
Perfluorohexanoic acid (PFHxA)		0.980 U	0.920 U	0.930 U
Perfluorononanoic acid (PFNA)	5.9	**2.20**	**0.650 J**	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	4	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**1.28**	**0.670**	**17.9**	**0.00**	**9.55**	**5.61**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**5.12**	**3.89**	**21.0**	**13.7**	**12.4**	**9.27**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**4.68**	**8.76**	**0.00**

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KGS 2020 J2 Ranges SPM Fall - 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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	**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 (PFTrDA)		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**

	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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.70 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

PFAS Summary Report – Groundwater
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	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	**Screening Limit**	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)		9.40 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)	600	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)	39	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)	5.9	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)	4	2.80 U	2.90 U	2.80 U	2.80 U	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

	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	**Screening Limit**	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
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)	600	**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)	39	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)	5.9	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)	4	2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	2.70 U	2.70 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

KGS 2020 J3 Range SPM Fall - 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	**Screening Limit**	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)	600	**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)	39	**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)	5.9	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)	4	2.80 U	2.80 U	**4.90**	**5.00**	**16.0**	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

	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_F20
	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**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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)	600	**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**	**1.50 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)	39	**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**	0.920 U
Perfluorononanoic acid (PFNA)	5.9	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)	4	2.80 U	**1.10 J**	**3.80**	2.80 U	**10.0**	**1.00 J**
Perfluorooctanoic acid (PFOA)	6	1.40 U	**2.10**	**1.10 J**	**0.550 J**	**3.10**	**0.990 J**
Perfluoropentanoic acid (PFPeA)		**1.30 J**	**0.660 J**	**0.440 J**	**0.400 J**	**6.50**	**0.430 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**	**1.99**
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**19.0**	**2.10**	**3.80**	**0.00**	**54.1**	**0.00**

	Location	MW-197M3	MW-198M1	MW-198M2	MW-198M3	MW-198M4	MW-232M1
	Field Sample ID	MW-197M3_F20D	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	**Field Duplicate**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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
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
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.20 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
Perfluorobutanesulfonic acid (PFBS)	600	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluorobutanoic acid (PFBA)		**1.40 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
Perfluorodecanoic acid (PFDA)		0.920 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
Perfluoroheptanesulfonic acid (PFHpS)		0.920 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)	39	1.80 U	0.950 U	0.950 U	1.90 U	**4.40**	0.950 U
Perfluorohexanoic acid (PFHxA)		**0.450 J**	0.950 U	0.950 U	0.950 U	**3.70**	0.950 U
Perfluorononanoic acid (PFNA)	5.9	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)	4	2.80 U	2.80 U	2.90 U	2.80 U	**2.30 J**	2.90 U
Perfluorooctanoic acid (PFOA)	6	**1.10 J**	1.40 U	1.40 U	1.40 U	**2.30**	**0.640 J**
Perfluoropentanoic acid (PFPeA)		**0.440 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 (PFTrDA)		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)		**1.10**	**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**

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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	**Screening Limit**	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)	600	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)	39	1.00 U	0.940 U
Perfluorohexanoic acid (PFHxA)		1.00 U	0.940 U
Perfluorononanoic acid (PFNA)	5.9	1.50 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		3.00 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	4	3.00 U	**15.0**
Perfluorooctanoic acid (PFOA)	6	**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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**27.2**	**4.82**	**6.74**	**7.40**	**16.5**	**1.06**

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	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_F20
	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**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**24.5**	**6.36**	**5.85**	**0.950**	**75.7**	**3.92**

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	Location	MW-197M3	MW-198M1	MW-198M2	MW-198M3	MW-198M4	MW-232M1
	Field Sample ID	MW-197M3_F20D	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	**Field Duplicate**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**3.39**	**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	**Screening Limit**	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**4.82**	**15.8**

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KGS 2021 J2 North SPM Fall - 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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	**1.30 J**	**1.10 J**	2.90 U	3.10 U	2.80 U	2.70 U
Perfluorooctanoic acid (PFOA)	6	**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 (PFTrDA)		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**

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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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	2.90 U	2.90 U	2.80 U	2.90 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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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	329.60 - 339.60	255.85 - 265.85
	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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	2.90 U	2.90 U	2.90 U	3.00 U	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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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	215.83 - 225.08	311.50 - 321.50	236.62 - 246.62	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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	2.80 U	2.70 U	**1.20 J**	2.70 U	2.80 U	2.70 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	3.00 U
Perfluorooctanoic acid (PFOA)	6	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**

	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	**Screening Limit**	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
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
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.30 U	9.40 U	9.40 U	9.30 U	8.90 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
Perfluorobutanesulfonic acid (PFBS)	600	0.930 U	0.940 U	0.940 U	0.930 U	0.890 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
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.40 U	1.30 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
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.40 U	1.40 U	1.30 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
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	39	0.930 U	0.940 U	0.940 U	0.930 U	0.890 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
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.40 U	1.40 U	1.40 U	1.30 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	4	2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.40 U	1.40 U	1.40 U	1.30 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
Perfluorotetradecanoic acid (PFTeDA)		2.80 U	2.80 U	2.80 U	2.80 U	2.70 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.80 U	2.80 U	2.80 U	2.80 U	2.70 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
†PFOS + PFOA (EPA)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	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	**Screening Limit**	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	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	9.60 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.60 U	8.80 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	9.60 U
Perfluorobutanesulfonic acid (PFBS)	600	0.960 U	0.880 U	**12.0**	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	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.30 U	1.40 U	1.40 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	0.960 U
Perfluorododecanoic acid (PFDoA)		1.40 U	1.30 U	1.40 U	1.40 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	0.960 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	39	0.960 U	0.880 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	0.960 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.60 U	2.70 U	2.70 U	2.70 U	2.90 U
Perfluorooctanesulfonic acid (PFOS)	4	2.90 U	2.60 U	2.70 U	2.70 U	2.70 U	2.90 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.960 U	0.880 U	**11.0**	0.900 U	0.900 U	0.960 U
Perfluorotetradecanoic acid (PFTeDA)		2.90 U	2.60 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	2.90 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.30 U	1.40 U	1.40 U	1.30 U	1.40 U
†PFOS + PFOA (EPA)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.70 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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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	329.60 - 339.60	255.85 - 265.85
	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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	215.83 - 225.08	311.50 - 321.50	236.62 - 246.62	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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	**Screening Limit**	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)	600	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)	39	**11.0**
Perfluorohexanoic acid (PFHxA)		**0.900 J**
Perfluorononanoic acid (PFNA)	5.9	1.40 U
Perfluorooctanesulfonamide (PFOSA)		**1.80 J**
Perfluorooctanesulfonic acid (PFOS)	4	**1.00 J**
Perfluorooctanoic acid (PFOA)	6	**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**

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	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	**Screening Limit**	Results (ng/L)
§Sum of All Compounds Detected		**25.2**

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KGS 2021 J3 Range SPM Fall - J3 Range

	Location	90EW0001	90WT0004	J3-EFF	J3-EFF	J3EW0032	J3EWIP1
	Field Sample ID	90EW0001_F21	90WT0004_F21	J3-EFF_4Q21	J3-EFF_F21	J3EW0032_F21	J3EWIP1_F21
	Sampling Depth	83.10 - 143.80	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	102.00 - 152.00	153.00 - 193.00
	Sampling Date	07/13/2021	08/10/2021	10/20/2021	07/13/2021	07/13/2021	07/13/2021
	SDG	320762631	320775331	320807451	320762631	320762631	320762631
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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	20.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.20 U	9.20 U	9.60 U	9.50 U	9.80 U	9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.20 U	9.20 U	9.60 U	9.50 U	9.80 U	9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.20 U	9.20 U	9.60 U	9.50 U	9.80 U	9.40 U
Perfluorobutanesulfonic acid (PFBS)	600	0.920 U	0.920 U	0.960 U	0.950 U	0.980 U	0.940 U
Perfluorobutanoic acid (PFBA)		1.40 U	1.40 U	1.40 U	1.40 U	1.50 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
Perfluorodecanoic acid (PFDA)		0.920 U	0.920 U	0.960 U	0.950 U	0.980 U	0.940 U
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.920 U	0.920 U	0.960 U	0.950 U	0.980 U	0.940 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	39	**0.500 J**	0.920 U	0.960 U	0.950 U	**0.720 J**	**0.520 J**
Perfluorohexanoic acid (PFHxA)		0.920 U	0.920 U	0.960 U	0.950 U	0.980 U	0.940 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorooctanesulfonic acid (PFOS)	4	2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.920 U	0.920 U	0.960 U	0.950 U	0.980 U	0.940 U
Perfluorotetradecanoic acid (PFTeDA)		2.70 U	2.80 U	2.90 U	2.90 U	2.90 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.70 U	2.80 U	2.90 U	2.90 U	2.90 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
†PFOS + PFOA (EPA)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	Location	J3EWIP2	J3-INF	J3-INF	MW-142M2	MW-142S	MW-143M1
	Field Sample ID	J3EWIP2_F21	J3-INF_4Q21	J3-INF_F21	MW-142M2_F21	MW-142S_F21	MW-143M1_F21
	Sampling Depth	150.50 - 170.50	0.00 - 0.00	0.00 - 0.00	140.00 - 150.00	42.00 - 52.00	144.00 - 154.00
	Sampling Date	07/13/2021	10/20/2021	07/13/2021	07/27/2021	07/27/2021	07/26/2021
	SDG	320762631	320807451	320762631	320769671	320769671	320769671
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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 UJ	19.0 UJ	19.0 UJ
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.80 U	9.70 U	9.50 U	9.70 UJ	9.30 UJ	9.60 UJ
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.80 U	9.70 U	9.50 U	9.70 UJ	9.30 UJ	9.60 UJ
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.80 U	9.70 U	9.50 U	9.70 UJ	9.30 UJ	9.60 UJ
Perfluorobutanesulfonic acid (PFBS)	600	0.980 U	0.970 U	0.950 U	0.970 UJ	0.930 UJ	0.960 UJ
Perfluorobutanoic acid (PFBA)		1.50 U	1.50 U	1.40 U	1.50 UJ	1.40 UJ	1.40 UJ
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.50 U	1.40 U	1.50 UJ	1.40 UJ	1.40 UJ
Perfluorodecanoic acid (PFDA)		0.980 U	0.970 U	0.950 U	0.970 UJ	0.930 UJ	0.960 UJ
Perfluorododecanoic acid (PFDoA)		1.50 U	1.50 U	1.40 U	1.50 UJ	1.40 UJ	1.40 UJ
Perfluoroheptanesulfonic acid (PFHpS)		0.980 U	0.970 U	0.950 U	0.970 UJ	0.930 UJ	0.960 UJ
Perfluoroheptanoic acid (PFHpA)		1.50 U	1.50 U	1.40 U	1.50 UJ	1.40 UJ	1.40 UJ
Perfluorohexane sulfonate (PFHxS)	39	**2.80**	**1.00 J**	**1.20 J**	**2.80 J**	0.930 UJ	0.960 UJ
Perfluorohexanoic acid (PFHxA)		0.980 U	0.970 U	0.950 U	0.970 UJ	0.930 UJ	0.960 UJ
Perfluorononanoic acid (PFNA)	5.9	1.50 U	1.50 U	1.40 U	1.50 UJ	1.40 UJ	1.40 UJ
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.90 U	2.80 U	2.90 UJ	2.80 UJ	2.90 UJ
Perfluorooctanesulfonic acid (PFOS)	4	2.90 U	2.90 U	2.80 U	2.90 UJ	2.80 UJ	2.90 UJ
Perfluorooctanoic acid (PFOA)	6	1.50 U	1.50 U	1.40 U	1.50 UJ	**0.510 J**	1.40 UJ
Perfluoropentanoic acid (PFPeA)		0.980 U	0.970 U	0.950 U	0.970 UJ	0.930 UJ	0.960 UJ
Perfluorotetradecanoic acid (PFTeDA)		2.90 U	2.90 U	2.80 U	2.90 UJ	2.80 UJ	2.90 UJ
Perfluorotridecanoic acid (PFTrDA)		2.90 U	2.90 U	2.80 U	2.90 UJ	2.80 UJ	2.90 UJ
Perfluoroundecanoic acid (PFUnA)		1.50 U	1.50 U	1.40 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**

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	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	**Screening Limit**	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)	600	**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)	39	**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)	5.9	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)	4	2.80 U	2.80 U	2.80 UJ	**3.60 J**	2.90 U	**3.90**
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.80 U	2.90 U	3.00 U	**4.80**	**15.0**	**15.0**
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	2.80 U	2.80 U	2.90 U	**5.30 J**	**4.90**	**4.80**
Perfluorooctanoic acid (PFOA)	6	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**

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	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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	2.80 U	**1.70 J**	2.70 U	2.80 U	2.80 U	3.00 U
Perfluorooctanoic acid (PFOA)	6	**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**

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	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	**Screening Limit**	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
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
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.10 U	9.30 U	9.00 U	9.00 U	9.00 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
Perfluorobutanesulfonic acid (PFBS)	600	0.910 U	0.930 U	0.900 U	0.900 U	0.900 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
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.30 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
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.40 U	1.30 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
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	39	0.910 U	0.930 U	**0.550 J**	**1.90**	0.900 U	**0.470 J**
Perfluorohexanoic acid (PFHxA)		0.910 U	0.930 U	0.900 U	0.900 U	0.900 U	0.940 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.40 U	1.40 U	1.30 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
Perfluorooctanesulfonic acid (PFOS)	4	2.70 U	2.80 U	2.70 U	**1.00 J**	**7.00**	2.80 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.40 U	1.40 U	1.30 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
Perfluorotetradecanoic acid (PFTeDA)		2.70 U	2.80 U	2.70 U	2.70 U	2.70 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.70 U	2.80 U	2.70 U	2.70 U	2.70 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
†PFOS + PFOA (EPA)		**0.00**	**0.00**	**0.00**	**1.00**	**7.00**	**0.00**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	2.90 U	**1.60 J**	**5.30**	2.70 U
Perfluorooctanoic acid (PFOA)	6	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**

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	Location	90EW0001	90WT0004	J3-EFF	J3-EFF	J3EW0032	J3EWIP1
	Field Sample ID	90EW0001_F21	90WT0004_F21	J3-EFF_4Q21	J3-EFF_F21	J3EW0032_F21	J3EWIP1_F21
	Sampling Depth	83.10 - 143.80	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	102.00 - 152.00	153.00 - 193.00
	Sampling Date	07/13/2021	08/10/2021	10/20/2021	07/13/2021	07/13/2021	07/13/2021
	SDG	320762631	320775331	320807451	320762631	320762631	320762631
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**	**0.720**	**0.520**

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	Location	J3EWIP2	J3-INF	J3-INF	MW-142M2	MW-142S	MW-143M1
	Field Sample ID	J3EWIP2_F21	J3-INF_4Q21	J3-INF_F21	MW-142M2_F21	MW-142S_F21	MW-143M1_F21
	Sampling Depth	150.50 - 170.50	0.00 - 0.00	0.00 - 0.00	140.00 - 150.00	42.00 - 52.00	144.00 - 154.00
	Sampling Date	07/13/2021	10/20/2021	07/13/2021	07/27/2021	07/27/2021	07/26/2021
	SDG	320762631	320807451	320762631	320769671	320769671	320769671
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**2.80**	**0.00**	**0.00**	**2.80**	**0.00**	**0.00**
§Sum of All Compounds Detected		**2.80**	**1.00**	**1.20**	**2.80**	**0.510**	**0.00**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

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KGS 2022 J MID PFAS - J2 Range Northern

	Location	J2N-MID-1F
	Field Sample ID	J2N-MID-1F-P01
	Sampling Depth	0.00 - 0.00
	Sampling Date	08/08/2022
	SDG	320909141
	Sample Type	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		**2.00 J**
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.930 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.930 U
Perfluorobutanesulfonic acid (PFBS)	600	0.930 U
Perfluorobutanoic acid (PFBA)		**0.220 J**
Perfluorodecanesulfonic acid (PFDS)		1.40 U
Perfluorodecanoic acid (PFDA)		0.930 U
Perfluorododecanoic acid (PFDoA)		0.930 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U
Perfluoroheptanoic acid (PFHpA)		0.930 U
Perfluorohexane sulfonate (PFHxS)	39	0.930 U
Perfluorohexanoic acid (PFHxA)		**1.00 J**
Perfluorononanoic acid (PFNA)	5.9	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	1.40 U
Perfluorooctanoic acid (PFOA)	6	1.40 U
Perfluoropentanoic acid (PFPeA)		**0.790 J**
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**

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	Location	J2N-MID-1F
	Field Sample ID	J2N-MID-1F-P01
	Sampling Depth	0.00 - 0.00
	Sampling Date	08/08/2022
	SDG	320909141
	Sample Type	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)
§Sum of All Compounds Detected		**4.01**

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KGS 2022 J MID PFAS - J3 Range

	Location	J3-MID-1
	Field Sample ID	J3-MID-1-P01
	Sampling Depth	0.00 - 0.00
	Sampling Date	08/08/2022
	SDG	320909141
	Sample Type	**Normal**
PFAS 21 Cmps	**Screening Limit**	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)	600	0.950 U
Perfluorobutanoic acid (PFBA)		0.480 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)	39	0.950 U
Perfluorohexanoic acid (PFHxA)		1.40 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	1.40 U
Perfluorooctanoic acid (PFOA)	6	1.40 U
Perfluoropentanoic acid (PFPeA)		0.480 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**

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	Location	J3-MID-1
	Field Sample ID	J3-MID-1-P01
	Sampling Depth	0.00 - 0.00
	Sampling Date	08/08/2022
	SDG	320909141
	Sample Type	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)
§Sum of All Compounds Detected		**0.00**

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KGS 2022 J2 North PFAS Fall - J2 Range Northern

	Location	J2EW0002	J2N-EFF-F	J2N-INF-F	MW-293M1	MW-330M1	MW-330M1
	Field Sample ID	J2EW0002_P22	J2N-EFF-F_P22	J2N-INF-F_P22	MW-293M1_P22	MW-330M1_P22	MW-330M1_P22D
	Sampling Depth	198.00 - 233.00	0.00 - 0.00	0.00 - 0.00	296.26 - 306.27	313.10 - 323.13	313.10 - 323.13
	Sampling Date	10/11/2022	10/11/2022	10/11/2022	10/06/2022	10/06/2022	10/06/2022
	SDG	320931732	320931732	320931732	320929361	320929361	320929361
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Field Duplicate**
PFAS 21 Cmps	**Screening Limit**	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)		**10.0**	0.990 U	**8.20**	0.950 U	0.970 U	0.960 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.930 U	0.990 U	0.980 U	0.950 U	0.970 U	0.960 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.930 U	0.990 U	0.980 U	0.950 U	0.970 U	0.960 U
Perfluorobutanesulfonic acid (PFBS)	600	0.930 U	0.990 U	0.980 U	0.950 U	0.970 U	0.960 U
Perfluorobutanoic acid (PFBA)		**0.410 J**	0.490 U	**0.390 J**	**0.530 J**	**1.40 J**	**1.30 J**
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	0.990 U	0.980 U	**11.0**	**19.0**	**20.0**
Perfluorododecanoic acid (PFDoA)		0.930 U	0.990 U	0.980 U	**0.830 J**	**1.20 J**	**1.50 J**
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		**1.20 J**	0.990 U	**1.10 J**	0.950 U	**0.950 J**	**0.960 J**
Perfluorohexane sulfonate (PFHxS)	39	**16.0**	0.990 U	**12.0**	0.950 U	0.970 U	0.960 U
Perfluorohexanoic acid (PFHxA)		**1.70 J**	1.50 U	**1.40 J**	1.40 U	**0.650 J**	**0.700 J**
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.50 U	1.50 U	**1.80 J**	**6.40**	**7.20**
Perfluorooctanesulfonamide (PFOSA)		1.40 U	**0.530 J**	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	**2.20 J**	1.50 U	**1.50 J**	1.40 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	**2.90**	1.50 U	**2.30**	1.40 U	1.40 U	**0.600 J**
Perfluoropentanoic acid (PFPeA)		**1.70 J**	0.490 U	**1.10 J**	**0.850 J**	**2.00**	**2.00**
Perfluorotetradecanoic acid (PFTeDA)		1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.50 U	1.50 U	**13.0**	**19.0**	**19.0**
†PFOS + PFOA (EPA)		**5.10**	**0.00**	**3.80**	**0.00**	**0.00**	**0.600**
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**21.1**	**0.00**	**14.3**	**11.0**	**25.4**	**27.2**

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	Location	MW-330M2	MW-330M3	MW-337D	MW-340D	MW-345M1	MW-345M2
	Field Sample ID	MW-330M2_P22	MW-330M3_P22	MW-337D_P22	MW-340D_P22	MW-345M1_P22	MW-345M2_P22
	Sampling Depth	238.01 - 248.04	154.97 - 164.99	310.00 - 320.00	329.60 - 339.60	311.50 - 321.50	236.62 - 246.62
	Sampling Date	10/06/2022	10/06/2022	10/12/2022	10/05/2022	10/05/2022	10/05/2022
	SDG	320929361	320929361	320932701	320929441	320929441	320929441
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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	0.950 U	0.990 U	0.910 U	0.960 U	0.950 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.990 U	0.950 U	0.990 U	0.910 U	0.960 U	0.950 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.990 U	0.950 U	0.990 U	0.910 U	0.960 U	0.950 U
Perfluorobutanesulfonic acid (PFBS)	600	0.990 U	0.950 U	0.990 U	0.910 U	0.960 U	0.950 U
Perfluorobutanoic acid (PFBA)		0.500 U	**0.670 J**	**0.250 J**	0.460 U	0.480 U	**0.360 J**
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		**2.40**	**16.0**	**14.0**	**12.0**	**19.0**	**1.90**
Perfluorododecanoic acid (PFDoA)		0.990 U	**0.770 J**	**0.670 J**	**1.30 J**	**3.40**	0.950 U
Perfluoroheptanesulfonic acid (PFHpS)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		0.990 U	0.950 U	0.990 U	0.910 U	0.960 U	0.950 U
Perfluorohexane sulfonate (PFHxS)	39	0.990 U	0.950 U	0.990 U	0.910 U	0.960 U	0.950 U
Perfluorohexanoic acid (PFHxA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorononanoic acid (PFNA)	5.9	**4.50**	**11.0**	**5.70**	**7.10**	**2.80**	**6.00**
Perfluorooctanesulfonamide (PFOSA)		1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	1.50 U	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		**0.480 J**	**0.370 J**	**0.280 J**	**0.380 J**	**0.380 J**	**0.660 J**
Perfluorotetradecanoic acid (PFTeDA)		1.50 U	1.40 U	1.50 U	1.40 U	**1.30 J**	1.40 U
Perfluorotridecanoic acid (PFTrDA)		1.50 U	1.40 U	1.50 U	1.40 U	**3.30**	1.40 U
Perfluoroundecanoic acid (PFUnA)		**3.40**	**9.50**	**12.0**	**19.0**	**46.0**	**3.10**
†PFOS + PFOA (EPA)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**6.90**	**27.0**	**19.7**	**19.1**	**21.8**	**7.90**

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	Location	J2EW0002	J2N-EFF-F	J2N-INF-F	MW-293M1	MW-330M1	MW-330M1
	Field Sample ID	J2EW0002_P22	J2N-EFF-F_P22	J2N-INF-F_P22	MW-293M1_P22	MW-330M1_P22	MW-330M1_P22D
	Sampling Depth	198.00 - 233.00	0.00 - 0.00	0.00 - 0.00	296.26 - 306.27	313.10 - 323.13	313.10 - 323.13
	Sampling Date	10/11/2022	10/11/2022	10/11/2022	10/06/2022	10/06/2022	10/06/2022
	SDG	320931732	320931732	320931732	320929361	320929361	320929361
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Field Duplicate**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**36.1**	**0.530**	**28.0**	**28.0**	**50.6**	**53.3**

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	Location	MW-330M2	MW-330M3	MW-337D	MW-340D	MW-345M1	MW-345M2
	Field Sample ID	MW-330M2_P22	MW-330M3_P22	MW-337D_P22	MW-340D_P22	MW-345M1_P22	MW-345M2_P22
	Sampling Depth	238.01 - 248.04	154.97 - 164.99	310.00 - 320.00	329.60 - 339.60	311.50 - 321.50	236.62 - 246.62
	Sampling Date	10/06/2022	10/06/2022	10/12/2022	10/05/2022	10/05/2022	10/05/2022
	SDG	320929361	320929361	320932701	320929441	320929441	320929441
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**10.8**	**38.3**	**32.9**	**39.8**	**76.2**	**12.0**

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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	**Screening Limit**	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)	600	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)	39	**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)	5.9	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)	4	1.40 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	1.50 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	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**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**4.30**	**0.00**	**0.00**	**0.00**	**0.00**	**0.600**

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	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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KGS 2022 J2 North PFAS Spring - 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	310.00 - 350.00	310.00 - 350.00	260.00 - 300.00	200.00 - 250.00	295.00 - 335.00	247.00 - 287.00
	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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	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**

	Location	C-7S	J2EW3-MW1-A	J2EW3-MW1-B	J2EW3-MW1-C	J2EW3-MW-2-A	J2EW3-MW-2-B
	Field Sample ID	C-7S_S22	J2EW3-MW1-A_S22	J2EW3-MW1-B_S22	J2EW3-MW1-C_S22	J2EW3-MW-2-A_S22	J2EW3-MW-2-B_S22
	Sampling Depth	199.00 - 239.00	145.66 - 155.66	210.66 - 220.66	245.66 - 255.66	151.16 - 161.16	216.16 - 226.16
	Sampling Date	01/12/2022	01/05/2022	01/05/2022	01/05/2022	01/06/2022	01/06/2022
	SDG	320838831	320837121	320837121	320837121	320836691	320836691
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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	0.930 U	1.00 U	1.00 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.990 U	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.990 U	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
Perfluorobutanesulfonic acid (PFBS)	600	0.990 U	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
Perfluorobutanoic acid (PFBA)		0.490 U	0.490 U	0.490 U	0.460 U	0.500 U	0.510 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)		**2.20**	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
Perfluorododecanoic acid (PFDoA)		**1.70 J**	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
Perfluoroheptanesulfonic acid (PFHpS)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluoroheptanoic acid (PFHpA)		0.990 U	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
Perfluorohexane sulfonate (PFHxS)	39	0.990 U	0.990 U	0.990 U	0.930 U	1.00 U	1.00 U
Perfluorohexanoic acid (PFHxA)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorononanoic acid (PFNA)	5.9	1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)	4	1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)		0.490 U	0.490 U	0.490 U	0.460 U	0.500 U	0.510 U
Perfluorotetradecanoic acid (PFTeDA)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluorotridecanoic acid (PFTrDA)		1.50 U	1.50 U	1.50 U	1.40 U	1.50 U	1.50 U
Perfluoroundecanoic acid (PFUnA)		**13.0**	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**

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	Location	J2EW3-MW-2-C	J2N-EFF-E	J2N-EFF-F	J2N-EFF-G	MW-130D	MW-18M1
	Field Sample ID	J2EW3-MW-2-C_S22	J2N-EFF-E_S22	J2N-EFF-F_S22	J2N-EFF-G_S22	MW-130D_S22	MW-18M1_S22
	Sampling Depth	251.13 - 261.13	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	320.00 - 330.00	171.00 - 176.00
	Sampling Date	01/06/2022	01/10/2022	01/10/2022	01/10/2022	12/29/2021	12/27/2021
	SDG	320836691	320838001	320838001	320838001	320835011	320834481
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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)		0.950 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)		0.950 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.950 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorobutanesulfonic acid (PFBS)	600	**1.30 J**	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorobutanoic acid (PFBA)		**0.380 J**	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)		0.950 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorododecanoic acid (PFDoA)		0.950 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)		0.950 U	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorohexane sulfonate (PFHxS)	39	**1.20 J**	0.970 U	0.960 U	0.950 U	1.00 U	0.990 U
Perfluorohexanoic acid (PFHxA)		**1.70 J**	1.50 U	**1.00 J**	**1.60 J**	1.50 U	1.50 U
Perfluorononanoic acid (PFNA)	5.9	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)	4	1.40 U	1.50 U	1.40 U	1.40 U	**1.00 J**	1.50 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.50 U	1.40 U	1.40 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)		**0.900 J**	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 (PFTrDA)		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**

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	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	296.26 - 306.27	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

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	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_S22
	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**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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	0.990 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	0.990 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.920 U	0.960 U	0.910 U	0.950 U	0.960 U	0.990 U
Perfluorobutanesulfonic acid (PFBS)	600	0.920 U	0.960 U	0.910 U	**0.450 J**	0.960 U	0.990 U
Perfluorobutanoic acid (PFBA)		1.80 U	1.90 U	0.460 U	**1.80 J**	0.480 U	**1.40 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**	**23.0**
Perfluorododecanoic acid (PFDoA)		0.920 U	0.960 U	**3.20**	**8.80**	**0.820 J**	**1.40 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	**0.910 J**
Perfluorohexane sulfonate (PFHxS)	39	0.920 U	0.960 U	0.910 U	0.950 U	0.960 U	0.990 U
Perfluorohexanoic acid (PFHxA)		**1.30 J**	**1.20 J**	1.40 U	**0.560 J**	1.40 U	**0.680 J**
Perfluorononanoic acid (PFNA)	5.9	**0.560 J**	**0.630 J**	1.40 U	1.40 U	1.40 U	**4.20**
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)	4	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	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	**1.70 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	**0.880 J**
Perfluoroundecanoic acid (PFUnA)		**5.80**	**5.80**	**17.0**	**17.0**	**4.70**	**18.0**
†PFOS + PFOA (EPA)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	Location	MW-330M1	MW-330M2	MW-330M3	MW-330M3	MW-337D	MW-337M1
	Field Sample ID	MW-330M1_S22D	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	310.00 - 320.00	243.71 - 253.71
	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	**Field Duplicate**	**Normal**	**Normal**	**Field Duplicate**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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	0.970 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)		0.970 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.970 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U
Perfluorobutanesulfonic acid (PFBS)	600	0.970 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U
Perfluorobutanoic acid (PFBA)		**1.30 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)		**18.0**	**5.10**	**14.0**	**11.0**	**23.0**	**1.00 J**
Perfluorododecanoic acid (PFDoA)		**0.800 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)		**0.870 J**	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U
Perfluorohexane sulfonate (PFHxS)	39	0.970 U	0.970 U	1.00 U	0.980 U	1.00 U	1.00 U
Perfluorohexanoic acid (PFHxA)		**0.580 J**	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U
Perfluorononanoic acid (PFNA)	5.9	**3.50**	**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)	4	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	1.50 U	1.50 U	1.50 U	1.50 U	1.60 U	1.50 U
Perfluoropentanoic acid (PFPeA)		**1.60 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 (PFTrDA)		1.50 U	**0.820 J**	1.50 U	1.50 U	1.60 U	1.50 U
Perfluoroundecanoic acid (PFUnA)		**16.0**	**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**

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	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	311.50 - 321.50	311.50 - 321.50	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	**Screening Limit**	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)	600	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)	39	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)	5.9	**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)	4	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	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**

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	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

	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	**Screening Limit**	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)	600	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)	39	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)	5.9	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)	4	1.40 U	1.50 U	**0.790 J**	**0.590 J**	1.60 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	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 (PFTrDA)		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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	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)	600	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)	39	0.950 U
Perfluorohexanoic acid (PFHxA)		1.40 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	1.40 U
Perfluorooctanoic acid (PFOA)	6	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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	310.00 - 350.00	310.00 - 350.00	260.00 - 300.00	200.00 - 250.00	295.00 - 335.00	247.00 - 287.00
	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	C-7S	J2EW3-MW1-A	J2EW3-MW1-B	J2EW3-MW1-C	J2EW3-MW-2-A	J2EW3-MW-2-B
	Field Sample ID	C-7S_S22	J2EW3-MW1-A_S22	J2EW3-MW1-B_S22	J2EW3-MW1-C_S22	J2EW3-MW-2-A_S22	J2EW3-MW-2-B_S22
	Sampling Depth	199.00 - 239.00	145.66 - 155.66	210.66 - 220.66	245.66 - 255.66	151.16 - 161.16	216.16 - 226.16
	Sampling Date	01/12/2022	01/05/2022	01/05/2022	01/05/2022	01/06/2022	01/06/2022
	SDG	320838831	320837121	320837121	320837121	320836691	320836691
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**	**0.00**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	J2EW3-MW-2-C	J2N-EFF-E	J2N-EFF-F	J2N-EFF-G	MW-130D	MW-18M1
	Field Sample ID	J2EW3-MW-2-C_S22	J2N-EFF-E_S22	J2N-EFF-F_S22	J2N-EFF-G_S22	MW-130D_S22	MW-18M1_S22
	Sampling Depth	251.13 - 261.13	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	320.00 - 330.00	171.00 - 176.00
	Sampling Date	01/06/2022	01/10/2022	01/10/2022	01/10/2022	12/29/2021	12/27/2021
	SDG	320836691	320838001	320838001	320838001	320835011	320834481
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
§Sum of All Compounds Detected		**5.48**	**0.00**	**3.07**	**2.40**	**1.00**	**0.00**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	296.26 - 306.27	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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_S22
	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**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**0.00**	**0.00**	**2.00**	**0.00**	**2.10**	**27.2**
§Sum of All Compounds Detected		**10.4**	**10.0**	**23.1**	**33.1**	**7.62**	**52.2**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	MW-330M1	MW-330M2	MW-330M3	MW-330M3	MW-337D	MW-337M1
	Field Sample ID	MW-330M1_S22D	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	310.00 - 320.00	243.71 - 253.71
	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	**Field Duplicate**	**Normal**	**Normal**	**Field Duplicate**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**21.5**	**9.80**	**20.5**	**17.0**	**42.0**	**5.80**
§Sum of All Compounds Detected		**42.7**	**17.1**	**28.1**	**22.7**	**59.2**	**8.70**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	311.50 - 321.50	311.50 - 321.50	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	Results (ng/L)
‡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 - 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	**Screening Limit**	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)	600	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)	39	0.990 U
Perfluorohexanoic acid (PFHxA)		1.50 U
Perfluorononanoic acid (PFNA)	5.9	1.50 U
Perfluorooctanesulfonamide (PFOSA)		1.50 U
Perfluorooctanesulfonic acid (PFOS)	4	1.50 U
Perfluorooctanoic acid (PFOA)	6	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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	Results (ng/L)
§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	**Screening Limit**	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)	600	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)	39	0.960 U
Perfluorohexanoic acid (PFHxA)		**1.20 J**
Perfluorononanoic acid (PFNA)	5.9	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	**2.30**
Perfluorooctanoic acid (PFOA)	6	**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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	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	**Screening Limit**	Results (ng/L)
§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-EFF	J3-EFF	J3-EFF	J3-INF	J3-INF
	Field Sample ID	J3-EFF_1Q22	J3-EFF_2Q22	J3-EFF_3Q22	J3-EFF_4Q22	J3-INF_1Q22	J3-INF_2Q22
	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	01/24/2022	04/28/2022	07/11/2022	10/11/2022	01/24/2022	04/28/2022
	SDG	320842111	320873411	320899771	320931731	320842111	320873411
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	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)		0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 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)		0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 U
Perfluorobutanesulfonic acid (PFBS)	600	0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 U
Perfluorobutanoic acid (PFBA)		**0.240 J**	0.480 U	0.470 U	0.470 U	**0.250 J**	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)		0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 U
Perfluorododecanoic acid (PFDoA)		0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		0.940 U	0.960 U	0.930 U	0.940 U	0.950 U	0.960 U
Perfluorohexane sulfonate (PFHxS)	39	0.940 U	0.960 U	0.930 U	0.940 U	**1.10 J**	**0.480 J**
Perfluorohexanoic acid (PFHxA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.40 U	1.40 U	1.40 U	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)	4	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.470 U	0.480 U	0.470 U	0.470 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	1.40 U	1.40 U	1.40 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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	J3-INF	J3-INF
	Field Sample ID	J3-INF_3Q22	J3-INF_4Q22
	Sampling Depth	0.00 - 0.00	0.00 - 0.00
	Sampling Date	07/11/2022	10/11/2022
	SDG	320899771	320931731
	Sample Type	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.950 U	0.970 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.950 U	0.970 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.950 U	0.970 U
Perfluorobutanesulfonic acid (PFBS)	600	0.950 U	0.970 U
Perfluorobutanoic acid (PFBA)		0.480 U	0.480 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.50 U
Perfluorodecanoic acid (PFDA)		0.950 U	0.970 U
Perfluorododecanoic acid (PFDoA)		0.950 U	0.970 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.50 U
Perfluoroheptanoic acid (PFHpA)		0.950 U	0.970 U
Perfluorohexane sulfonate (PFHxS)	39	**1.10 J**	**1.10 J**
Perfluorohexanoic acid (PFHxA)		1.40 U	1.50 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.50 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.50 U
Perfluorooctanesulfonic acid (PFOS)	4	1.40 U	1.50 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.50 U
Perfluoropentanoic acid (PFPeA)		0.480 U	0.480 U
Perfluorotetradecanoic acid (PFTeDA)		1.40 U	1.50 U
Perfluorotridecanoic acid (PFTrDA)		1.40 U	1.50 U
Perfluoroundecanoic acid (PFUnA)		1.40 U	1.50 U
†PFOS + PFOA (EPA)		**0.00**	**0.00**
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)		**0.00**	**0.00**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	J3-EFF	J3-EFF	J3-EFF	J3-EFF	J3-INF	J3-INF
	Field Sample ID	J3-EFF_1Q22	J3-EFF_2Q22	J3-EFF_3Q22	J3-EFF_4Q22	J3-INF_1Q22	J3-INF_2Q22
	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	01/24/2022	04/28/2022	07/11/2022	10/11/2022	01/24/2022	04/28/2022
	SDG	320842111	320873411	320899771	320931731	320842111	320873411
	Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**0.240**	**0.00**	**0.00**	**0.00**	**1.35**	**0.480**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	J3-INF	J3-INF
	Field Sample ID	J3-INF_3Q22	J3-INF_4Q22
	Sampling Depth	0.00 - 0.00	0.00 - 0.00
	Sampling Date	07/11/2022	10/11/2022
	SDG	320899771	320931731
	Sample Type	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**1.10**	**1.10**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

KGS 2023 J3 Range PFAS Quarterly - J3 Range

	Location	J3-EFF	J3-INF
	Field Sample ID	J3-EFF_1Q23	J3-INF_1Q23
	Sampling Depth	0.00 - 0.00	0.00 - 0.00
	Sampling Date	02/01/2023	02/01/2023
	SDG	320-96521-1	320-96521-1
	Sample Type	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		0.930 U	0.940 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		1.40 U	1.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		0.930 U	0.940 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		0.930 U	0.940 U
Perfluorobutanesulfonic acid (PFBS)	600	0.930 U	0.940 U
Perfluorobutanoic acid (PFBA)		0.470 U	**0.350 J**
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.930 U	0.940 U
Perfluorododecanoic acid (PFDoA)		0.930 U	0.940 U
Perfluoroheptanesulfonic acid (PFHpS)		1.40 U	1.40 U
Perfluoroheptanoic acid (PFHpA)		0.930 U	0.940 U
Perfluorohexane sulfonate (PFHxS)	39	0.930 U	**1.70 J**
Perfluorohexanoic acid (PFHxA)		1.40 U	1.40 U
Perfluorononanoic acid (PFNA)	5.9	1.40 U	1.40 U
Perfluorooctanesulfonamide (PFOSA)		1.40 U	1.40 U
Perfluorooctanesulfonic acid (PFOS)	4	1.40 U	1.40 U
Perfluorooctanoic acid (PFOA)	6	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		**0.240 J**	**0.280 J**
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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP

	Location	J3-EFF	J3-INF
	Field Sample ID	J3-EFF_1Q23	J3-INF_1Q23
	Sampling Depth	0.00 - 0.00	0.00 - 0.00
	Sampling Date	02/01/2023	02/01/2023
	SDG	320-96521-1	320-96521-1
	Sample Type	**Normal**	**Normal**
PFAS 21 Cmps	**Screening Limit**	Results (ng/L)	Results (ng/L)
§Sum of All Compounds Detected		**0.240**	**2.33**

Notes:

ng/L = nanograms per liter; ug/kg = 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

Bolded and highlighted results indicate detection of PFAS above the 2022 May EPA Tapwater (THQ 0.1)

† 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.
PFHxS represents the reported presence of Perfluorohexanesulfonic acid or Perfluorohexane sulfonate as reported for the project.

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