

**MONTHLY PROGRESS REPORT #289
FOR APRIL 2021**

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

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

The following summary of progress is for the period from 1 to 30 April 2021.

1. SUMMARY OF REMEDIATION ACTIONS

Remediation Actions (RA) Underway at Camp Edwards as of 30 April 2021:

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, Pew Road, Base Boundary, and the Leading Edge include extraction wells, ex-situ treatment processes 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 2.821 billion gallons of water treated and re-injected as of 30 April 2021. No Frank Perkins Road Treatment Facility shutdowns occurred in April.

The Pew Road Mobile Treatment Unit (MTU) was turned off on 08 March 2021 (formally operated at a flow rate of 65 GPM). As of 30 April 2021, with over 672.9 million gallons of water treated and re-injected since the RA.

The Base Boundary MTU continues to operate at a flow rate of 65 gpm. As of 30 April 2021, over 296.6 million gallons of water was treated and re-injected. No Base Boundary MTU shutdowns occurred in April.

The Leading Edge system continues to operate at a flow rate of 100 gpm. As of 30 April 2021, over 247.2 million gallons of water was treated and re-injected. No Leading Edge system shutdowns occurred in April.

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, 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 Treatment Building G continues to operate at a flow rate of 225 gpm. As of 30 April 2021, over 1.356 billion gallons of water have been treated and re-injected. No Northern MTU G shutdowns occurred in April.

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 30 April 2021, over 1.819 billion gallons of water have been treated and re-injected. No Northern MTU E and A shutdowns occurred in April.

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 will enter the vadose zone and infiltrate 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 30 April 2021, over 1.466 billion gallons of water have been treated and re-injected. The following MTU H and I shutdowns occurred in April.

- MTU H turned off at 0745 on 09 April 2021 for maintenance and repairs to the Carbon Filtration System (CFS) due to replace a leaking flange and was restarted at 1000 on 16 April 2021.

MTU J continues to operate at a flow rate of 120 gpm. As of 30 April 2021, over 681.0 million gallons of water have been treated and re-injected. No MTU J shutdowns occurred in April.

MTU K continues to operate at a flow rate of 125 gpm. As of 30 April 2021, over 802.1 million gallons of water have been treated and re-injected. No MTU K shutdowns occurred in April.

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, ex-situ treatment process to remove explosives compounds and perchlorate from the groundwater and use of the existing Fuel Spill-12 (FS-12) infiltration gallery to return treated water to the aquifer.

The J-3 system is currently operating at 255 gpm. As of 30 April 2021, over 1.476 billion gallons of water have been treated and re-injected. The following J-3 Range system shutdowns occurred in April:

- Well 90EW0001 was turned off at 0742 01 February 2021 due to low flow. Pump and pipe string were removed 17 February 2021, and blind flange installed. Downhole camera inspection completed on 04 March 2021 and well redevelopment was completed on 17-18 March 2021. A new drop pipe and well pump were installed on 05 and 07 April 2021. The well was restarted at 1045 on 07 April 2021.
- Extraction wells J3EW0032, J3EWIP1, and J3EWIP2 were turned of at 0735 on 05 April 2021 to perform repairs to 90EW0001 and were restarted at 1045 on 07 April 2021.

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, ex-situ treatment process to remove explosives compounds from the groundwater, and an infiltration trench to return treated water to the aquifer.

The Southern MTU continues to operate at a flow rate of 125 gpm. As of 30 April 2021, over 660.2 million gallons of water have been treated and re-injected. No J-1 Range Southern system shutdowns occurred in April.

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, 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 30 April 2021, over 960.4 million gallons of water have been treated and re-injected. No J-1 Range Northern MTU shutdowns occurred in April.

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 (IX) resin and granular activated carbon (GAC) 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 30 April 2021, over 2.441 billion gallons of water have been treated and re-injected. The following CIA system shutdowns occurred in April.

- 0830 on 13 April 2021 on CIA System 3 to perform a carbon exchange on GAC Vessels #2 and #5 and restarted 0745 on 15 April 2021.

2. SUMMARY OF ACTIONS TAKEN

Operable Unit (OU) Activity As of 30 April 2021

CIA

- IE-Weston mobilized to site.
- Commence and continue staking Ph IV grids.
- Commence and continue surface clear Ph IV grids.
- Continue routine check of CSS cover.
- CIA System 3 GAC Vessels #2 and #5 carbon media exchange on 14 April 2021.
- Inspect CSS liner.
- SPM program groundwater sampling.

Demolition Area 1

- Drill monitoring wells.

Demolition Area 2

- No activity

J-1 Range

- J1 South SPM program groundwater sampling.
- J1 North SPM program groundwater sampling.
- J1 South MTU bag filters were exchanged on 27 April 2021.

J-2 Range

- J2 East MTU J bag filters were exchanged 27 April 2021.

J-3 Range

- J3 Range MTU bag filters were exchanged on 07 April 2021.

L Range

- No activity.

Small Arms Ranges

No activity.

Northwest Corner

- LTM program groundwater sampling.

Training Areas

- Intrusive investigation in Former E Range Geophysical Investigation grids.
- Dawson mobilized to site.

Other

- Collected process water samples from the Central Impact Area (Systems 1 ,2, and 3), Demolition Area 1, J1 Range Northern, J1 Range Southern, J2 Range Eastern, J2 Range Northern, and J3 Range treatment systems.

JBCC IAGWSP Tech Update Meeting Minutes for 15 April 2021

Project and Fieldwork Update

Drilling at the Demolition Area 1 locations will begin on Monday. Data could be available as early as next week. It is likely they will start with the well co-located with MW533-M1 where grain size data will be collected. The broken flange at J-2 East Unit H will be replaced tomorrow. CIA 3 was turned off on Tuesday for a carbon change out that was performed Wednesday without incident. All other treatment systems are up and running as designed. The sampling crews are working in the J-1 Range.

Dawson has returned to the site to finish the Former E Range work, which is about halfway complete. They are setting up offices and placing pin flags and will begin digs next week. They plan to continue uninterrupted until the finish the project, which is anticipated to be in July.

The BEM structure was sampled on April 1st. Data should be available soon. Minor repairs were made to the liner before the structure was refilled and covered.

In the Central Impact Area, Parsons has de-mobbed. They left polygon work and approximately 850 digs. Their last task will be to finalize the 2020 report. USACE is continuing to work out the details of the CDC items, currently they are coordinating with Huntsville. IE-Weston has mobilized to the site and will begin field operations with surface and vegetation clearance and staking grids.

L Range Annual Environmental Monitoring Report Presentation

A presentation was provided on the L Range Annual Environmental Monitoring Report. It was noted that during the reporting period (February 2020 to January 2021), new work included the development of the RDX plume shell. Sampling locations, groundwater monitoring results, and trends were reviewed and discussed. The July 2020 semi-annual event included MW-242M1, MW-595M1/M2, MW-596M1, MW-651M1. RDX was detected in two samples above the risk-based concentration (RBC) of 0.6µg/L. The maximum detected concentrations were 1.82 µg/L (MW-595M1) and 0.68 µg/L (MW-651M1). RDX concentrations at MW-242M1 located along the base boundary continue to decline and have been below the RBC and reporting limit of 0.2 µg/L since July 2019. The January 2021 annual event included eight wells. RDX was detected in one above the RBC and the health advisory of 2 µg/L. The maximum detected concentration: 2.41µg/L (2.47 µg/L – Field Duplicate) was in MW-595M1. The RDX concentrations at the base boundary continued to be below the reporting limit of 0.2 µg/L. It was noted that wells MW-595M1 and MW-650M1 bounding the plume to the south were either non-detect or near the reporting limit.

The new updated RDX plume shell was discussed. The group was reminded that two plume shell presentations were provided at tech meetings earlier this year to discuss the RDX layer-by-layer delineation and the 3D interpolation results. The updated RDX plume shell was created utilizing data from January 1998 through July 2020. This plume shell utilized an exponential decay curve which continues to reduce measured concentrations to slightly less than 2% of its measured concentration after 20 years of groundwater travel. Previous plume shells used a quadratic equation to fit measured data, and this curve reduced initial measured concentrations by 55% after 4.5 years of groundwater travel. Measured concentrations were then held constant at 45% of its initial measured value, neglecting further dispersion/sorption and decay which

continually acts to reduce plume concentrations. Appendix A of the annual report provides the full documentation of the model plume shell development.

Comparison to Decision Document criteria was discussed. Based on the updated plume shell, RDX is predicted to be below the RBC (0.6 µg/L) by 2031 and below background levels (0.25 µg/L) by 2053. Ninety percent of the RDX mass will have attenuated below 0.25 µg/L by 2040, consistent with the Decision Document. The remaining ten percent (less than 1.4 grams) will take an additional 13 years to attenuate as it migrates through the relatively low hydraulic conductivity materials. The Decision Document predicted that RDX would attenuate below the 2 µg/L health advisory by 2013, the RBC level by 2027 and reporting limits by 2040. The model estimated RDX mass in the L Range plume in greater than 0.6 µg/L as of July 2020 is 0.02 lbs., at the time of the Decision Document (2010), 0.242 lbs. Approximately 10 percent of the mass remains above the RBC.

No modifications are recommended to the chemical monitoring program at this time. EPA and MassDEP comments on the report are pending.

Action Items

The action items were discussed and updated.

JBCC IAGWSP Tech Update Meeting Minutes for 29 April 2021

Project and Fieldwork Update

Drilling at the Demolition Area 1 locations is underway. The rig met refusal at 240' at the first location BH-730 (the well co-located with MW533-M1). Data will be available soon and a screen setting call was scheduled for Tuesday May 4th. The rig has moved to the upgradient location (BH731). They are currently at 121' and they started collecting samples. The target depth for the location is 290'. They should be completed at this location mid-next week and then will move to install screens at the first location. The broken flange at J-2 East Unit H has been fixed. There was no breakthrough in March. The J-2 North infiltration gallery (on the west side of Wood Road) is not accepting enough water. Contractors are planning to run a camera to perform a video inspection. All other treatment systems are up and running as designed. The sampling crews have completed sampling in the CIA with the exception of one residential location which is used seasonally. It will be sampled once the homeowner returns for the summer. They completed the majority of J-1 south and are currently sampling in J-1 north.

Dawson has returned to the site to finish the Former E Range work, which is about halfway complete. They have completed discrete targets, polygons and obstructions in 65 grids to date. Two MEC items have been found since the last tech meeting, 1 37mm projectile and 1 3.5" HEAT rocket. To date, 43 MEC have been found: 27 3.5" rockets, 1 4.2" illumination mortar, 5 60mm mortars, 4 40mm practice grenades, 1 fuze from 60mm, 1 75mm projectile, 3 x 0.3lb supplemental charge, and 1 37mm projectile. In addition, a total of 57 20mm and 3 30mm projectiles need to be vented in the BEM. They plan to continue uninterrupted until they finish the project, which is anticipated to be in July.

In the Central Impact Area, IE-Weston has mobilized to the site on April 19th and began field operations by staking grids. They have completed initial surface sweeps in Survey Units 1 and 2 in advance of vegetation clearance. They are continuing in Survey Unit 3. Today they excavated

5' X 5' X 1' grid under a cracked open item. USACE is continuing to work out the details of getting a contractor in place to destroy the CDC items, currently they are coordinating with Huntsville.

Action Items

The action items were discussed and updated.

JBCC Cleanup Team Meeting

The JBCC Cleanup Team (JBCCCT) meeting was conducted virtually on March 24, 2021. Presentation materials can be found on the IAGWSP web site at <https://jbcc-iagwsp.org/iagwsp/community/impact/presentations/>. The Cleanup Team meeting discussed 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 1 to 30 April 2021. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 to 30 April 2021. These results are compared to the Maximum Contaminant Levels/Health Advisory (MCL/HA) values for respective analytes. Explosives and perchlorate are the primary contaminants of concern (COC) at Camp Edwards. Table 3 summarizes sampling of influent and groundwater samples for per- and polyfluoroalkyl substances (PFAS) from 1 June 2019 to present.

The twelve OUs under investigation and cleanup at Camp Edwards are the Central Impact Area, Demolition Area 1, Demolition Area 2, Former A Range, J-1 Range, J-2 Range, J-3 Range, L Range, Northwest Corner, Small Arms Ranges, Training Area, and Western Boundary. 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. 288 for March 2021	12 April 2021
• Agency Draft L Range 2021 Environmental Monitoring Report	09 April 2021
• J3 Range 2020 Draft EMR RCL	09 April 2021
• Small Arms Ranges Draft Soil Removal Project Summary Report RCL Project Note	30 April 2021
• Small Arms Ranges Revised Soil Removal Activities CWR	30 April 2021
• Appendix A-C, Small Arms Ranges Revised Soil Removal Activities CWR	30 April 2021

5. SCHEDULED ACTIONS

The following actions and/or documents were being prepared or revised in April 2021 and will be in progress in May 2021.

- J-2 2020 Annual Environmental Monitoring Report MOR on RCL
- J-3 2020 Annual Environmental Monitoring Report, agency feedback/approval on RCL
- L-Range Draft Annual Environmental Monitoring Report
- Central Impact Area Source Removal Draft Annual Report RCL to MassDEP Comments
- J-3 Range PFAS Project Note
- Central impact Area continue staking, surface clearing, and vegetation clearing for Ph IV grids.
- Demolition Area 1 monitoring well drilling.
- IRA Status and Completion Report
- Small Arms Ranges Revised Completion of Work Report and response to comments
- J-2 Range, Phase-2, Addendum to Post-DD Confirmation Geophysical and Soil Investigation Findings Project Note
- J-3 Range Post-DD Confirmation Geophysical and Soil Investigation Findings Revised Final Project Note

- Central Impact Area Draft 2020 Source Removal Annual Report
- Northwest Corner Demonstration of Compliance Draft Report MOR to RCL
- Agency Comments on the CIA Source Area QAPP

TABLE 1
Sampling Progress: 1 to 30 April 2021

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Demolition Area 1	BH-731	BH-731-GW-221-231	N	04/30/2021	GW Profile	221	231
Demolition Area 1	BH-731	BH-731-GW-211-221	N	04/30/2021	GW Profile	211	221
Demolition Area 1	BH-731	BH-731-GW-201-211	N	04/30/2021	GW Profile	201	211
Demolition Area 1	BH-731	BH-731-GW-191-201	N	04/30/2021	GW Profile	191	201
Demolition Area 1	BH-731	BH-731-GW-181-191	N	04/30/2021	GW Profile	181	191
Demolition Area 1	BH-731	BH-731-GW-171-181D	FD	04/29/2021	GW Profile	171	181
Demolition Area 1	BH-731	BH-731-GW-171-181	N	04/29/2021	GW Profile	171	181
Demolition Area 1	BH-731	BH-731-GW-161-171	N	04/29/2021	GW Profile	161	171
Demolition Area 1	BH-731	BH-731-GW-151-161	N	04/29/2021	GW Profile	151	161
J1 Range Northern	MW-606M2	MW-606M2_S21	N	04/29/2021	Ground Water	193.2	203.2
J1 Range Northern	MW-606M1	MW-606M1_S21	N	04/29/2021	Ground Water	233.3	243.3
Demolition Area 1	BH-731	BH-731-GW-141-151	N	04/29/2021	GW Profile	141	151
J1 Range Northern	MW-401M3	MW-401M3_S21	N	04/29/2021	Ground Water	228.5	238.5
Demolition Area 1	BH-731	BH-731-GW-131-141	N	04/29/2021	GW Profile	131	141
J1 Range Northern	MW-401M1	MW-401M1_S21	N	04/29/2021	Ground Water	256.1	266.1
Demolition Area 1	BH-731	BH-731-GW-121-131	N	04/29/2021	GW Profile	121	131
Demolition Area 1	BH-731	BH-731-GW-111-121	N	04/29/2021	GW Profile	111	121
J1 Range Northern	MW-689M2	MW-689M2_S21	N	04/28/2021	Ground Water	231.4	241.4
J1 Range Northern	MW-689M1	MW-689M1_S21	N	04/28/2021	Ground Water	253.5	263.5
J1 Range Northern	MW-688M2	MW-688M2_S21	N	04/28/2021	Ground Water	227.8	237.8
J1 Range Northern	MW-688M1	MW-688M1_S21	N	04/28/2021	Ground Water	255.2	265.2
J1 Range Northern	MW-549M2	MW-549M2_S21	N	04/27/2021	Ground Water	187.3	197.3
J1 Range Northern	MW-549M1	MW-549M1_S21	N	04/27/2021	Ground Water	227.4	237.4
J1 Range Northern	MW-549M1	MW-549M1_S21D	FD	04/27/2021	Ground Water	227.4	237.4
Demolition Area 1	BH-730	BH-730-GW-226-236	N	04/27/2021	GW Profile	226	236
J1 Range Northern	MW-605M2	MW-605M2_S21	N	04/27/2021	Ground Water	182.2	192.2
J1 Range Northern	MW-605M1	MW-605M1_S21	N	04/27/2021	Ground Water	220.2	230.2
Demolition Area 1	BH-730	BH-730-GW-216-226	N	04/27/2021	GW Profile	216	226
J1 Range Southern	MW-592M2	MW-592M2_S21	N	04/26/2021	Ground Water	158	168
Demolition Area 1	BH-730	BH-730-GW-206-216	N	04/26/2021	GW Profile	206	216
J1 Range Southern	MW-592M1	MW-592M1_S21	N	04/26/2021	Ground Water	201	211
J1 Range Southern	MW-670M2	MW-670M2_S21	N	04/26/2021	Ground Water	198.5	208.5
J1 Range Southern	MW-670M1	MW-670M1_S21	N	04/26/2021	Ground Water	220.5	230.5
Demolition Area 1	BH-730	BH-730-GW-196-206D	FD	04/26/2021	GW Profile	196	206
Demolition Area 1	BH-730	BH-730-GW-196-206	N	04/26/2021	GW Profile	196	206
Demolition Area 1	BH-730	BH-730-GW-186-196	N	04/23/2021	GW Profile	186	196
Demolition Area 1	BH-730	BH-730-GW-176-186	N	04/23/2021	GW Profile	176	186
J1 Range Southern	MW-402M2	MW-402M2_S21	N	04/22/2021	Ground Water	155.24	165.27
Demolition Area 1	BH-730	BH-730-GW-166-176	N	04/22/2021	GW Profile	166	176
J1 Range Southern	MW-402M1	MW-402M1_S21	N	04/22/2021	Ground Water	190.14	200.13
J1 Range Southern	MW-400M2	MW-400M2_S21	N	04/22/2021	Ground Water	138.9	148.9
J1 Range Southern	MW-400M1	MW-400M1_S21	N	04/22/2021	Ground Water	192.76	202.75
Demolition Area 1	BH-730	BH-730-GW-156-166	N	04/22/2021	GW Profile	156	166
Demolition Area 1	BH-730	BH-730-GW-146-156	N	04/22/2021	GW Profile	146	156
Demolition Area 1	BH-730	BH-730-GW-136-146	N	04/21/2021	GW Profile	136	146
J1 Range Southern	MW-524M1	MW-524M1_S21	N	04/21/2021	Ground Water	148	158
Demolition Area 1	BH-730	BH-730-GW-126-136D	FD	04/21/2021	GW Profile	126	136
Demolition Area 1	BH-730	BH-730-GW-126-136	N	04/21/2021	GW Profile	126	136
J1 Range Southern	MW-591M2	MW-591M2_S21	N	04/21/2021	Ground Water	165	175
J1 Range Southern	MW-591M1	MW-591M1_S21	N	04/21/2021	Ground Water	200	210
Demolition Area 1	BH-730	BH-730-GW-116-126	N	04/21/2021	GW Profile	116	126
J1 Range Southern	MW-646M2	MW-646M2_S21	N	04/21/2021	Ground Water	168	178
Demolition Area 1	BH-730	BH-730-GW-106-116	N	04/21/2021	GW Profile	106	116
J1 Range Southern	MW-646M1	MW-646M1_S21	N	04/21/2021	Ground Water	198	208
Demolition Area 1	BH-730	BH-730-GW-96-106	N	04/21/2021	GW Profile	96	106
Demolition Area 1	BH-730	BH-730-GW-86-96	N	04/20/2021	GW Profile	86	96
J1 Range Southern	MW-722M2	MW-722M2_S21	N	04/20/2021	Ground Water	93.9	103.9
J1 Range Southern	MW-722M1	MW-722M1_S21	N	04/20/2021	Ground Water	114.2	124.2
J1 Range Southern	MW-722M1	MW-722M1_S21D	FD	04/20/2021	Ground Water	114.2	124.2

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 to 30 April 2021

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J1 Range Southern	MW-647M2	MW-647M2_S21	N	04/20/2021	Ground Water	189.3	199.3
J1 Range Southern	MW-647M1	MW-647M1_S21	N	04/20/2021	Ground Water	211.3	221.3
J1 Range Southern	J1S-EW1-INF	J1S-EW1-INF_S21	N	04/15/2021	Process Water	0	0
J1 Range Southern	J1S-EW2-INF	J1S-EW2-INF_S21	N	04/15/2021	Process Water	0	0
Central Impact Area	MW-608M4	MW-608M4_S21	N	04/14/2021	Ground Water	185.4	195.4
Central Impact Area	MW-608M3	MW-608M3_S21	N	04/14/2021	Ground Water	220.4	230.4
Central Impact Area	MW-608M2	MW-608M2_S21	N	04/14/2021	Ground Water	253.4	263.4
Central Impact Area	MW-608M2	MW-608M2_S21D	FD	04/14/2021	Ground Water	253.4	263.4
Central Impact Area	MW-608M1	MW-608M1_S21	N	04/14/2021	Ground Water	267.4	277.4
J1 Range Southern	MW-720M2	MW-720M2_S21	N	04/13/2021	Ground Water	126.2	136.2
J1 Range Southern	MW-720M1	MW-720M1_S21	N	04/13/2021	Ground Water	146.6	156.6
J1 Range Southern	MW-721M2	MW-721M2_S21	N	04/13/2021	Ground Water	138.5	148.5
J1 Range Southern	MW-721M1	MW-721M1_S21	N	04/13/2021	Ground Water	168.1	178.1
Central Impact Area	MW-344M2	MW-344M2_S21	N	04/12/2021	Ground Water	145	155
Central Impact Area	MW-344M2	MW-344M2_S21D	FD	04/12/2021	Ground Water	145	155
Northwest Corner	MW-278S	MW-278S_S21	N	04/12/2021	Ground Water	80	90
Northwest Corner	MW-278M2	MW-278M2_S21	N	04/12/2021	Ground Water	97	102
Northwest Corner	MW-279M2	MW-279M2_S21	N	04/12/2021	Ground Water	83	88
Central Impact Area	MW-270D	MW-270D_S21	N	04/08/2021	Ground Water	132	137
J3 Range	J3-EFF	J3-EFF-175A	N	04/08/2021	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-175A	N	04/08/2021	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-175A	N	04/08/2021	Process Water	0	0
J3 Range	J3-INF	J3-INF-175A	N	04/08/2021	Process Water	0	0
Central Impact Area	MW-284M2	MW-284M2_S21	N	04/08/2021	Ground Water	45	55
Central Impact Area	MW-284M2	MW-284M2_S21	N	04/08/2021	Ground Water	45	55
Northwest Corner	MW-284M2	MW-284M2_S21	N	04/08/2021	Ground Water	45	55
Northwest Corner	MW-284M2	MW-284M2_S21	N	04/08/2021	Ground Water	45	55
J1 Range Southern	J1S-EFF	J1S-EFF-161A	N	04/08/2021	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-161A	N	04/08/2021	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-161A	N	04/08/2021	Process Water	0	0
Central Impact Area	MW-284M1	MW-284M1_S21	N	04/08/2021	Ground Water	115	125
Northwest Corner	MW-284M1	MW-284M1_S21	N	04/08/2021	Ground Water	115	125
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-181A	N	04/08/2021	Process Water	0	0
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-181A	N	04/08/2021	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-181A	N	04/08/2021	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-181A	N	04/08/2021	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-57A	N	04/08/2021	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-57A	N	04/08/2021	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-57A	N	04/08/2021	Process Water	0	0
Central Impact Area	MW-108M4	MW-108M4_S21	N	04/08/2021	Ground Water	240	250
Demolition Area 1	D1LE-INF	D1LE-INF-57A	N	04/08/2021	Process Water	0	0
Demolition Area 1	D1-EFF	D1-EFF-129A	N	04/08/2021	Process Water	0	0
Central Impact Area	MW-108M1	MW-108M1_S21	N	04/08/2021	Ground Water	297	307
Demolition Area 1	D1-MID-2	D1-MID-2-129A	N	04/08/2021	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-129A	N	04/08/2021	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-129A	N	04/08/2021	Process Water	0	0
Central Impact Area	MW-123M2	MW-123M2_S21	N	04/07/2021	Ground Water	236	246
Central Impact Area	MW-123M1	MW-123M1_S21	N	04/07/2021	Ground Water	291	301
Central Impact Area	MW-51M2	MW-51M2_S21	N	04/06/2021	Ground Water	203	213
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-175A	N	04/06/2021	Process Water	0	0
Central Impact Area	MW-51M1	MW-51M1_S21	N	04/06/2021	Ground Water	234	244
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-175A	N	04/06/2021	Process Water	0	0
Central Impact Area	MW-51D	MW-51D_S21	N	04/06/2021	Ground Water	264	274

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 to 30 April 2021

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	J2N-MID-2E	J2N-MID-2E-175A	N	04/06/2021	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-175A	N	04/06/2021	Process Water	0	0
J1 Range Northern	J1N-EFF	J1N-EFF-90A	N	04/06/2021	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-90A	N	04/06/2021	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-90A	N	04/06/2021	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-90A	N	04/06/2021	Process Water	0	0
Central Impact Area	MW-614M2	MW-614M2_S21	N	04/05/2021	Ground Water	215	225
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-151A	N	04/05/2021	Process Water	0	0
Central Impact Area	MW-614M1	MW-614M1_S21	N	04/05/2021	Ground Water	275	285
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-151A	N	04/05/2021	Process Water	0	0
Central Impact Area	MW-615M2	MW-615M2_S21	N	04/05/2021	Ground Water	200	210
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-151A	N	04/05/2021	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-151A	N	04/05/2021	Process Water	0	0
Central Impact Area	MW-615M1	MW-615M1_S21	N	04/05/2021	Ground Water	260	270
Central Impact Area	MW-615M1	MW-615M1_S21D	FD	04/05/2021	Ground Water	260	270
Central Impact Area	MW-178M1	MW-178M1_S21	N	04/01/2021	Ground Water	257	267
Central Impact Area	MW-103M2	MW-103M2_S21	N	04/01/2021	Ground Water	282	292
Central Impact Area	CIA2-EFF	CIA2-EFF-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	MW-103M1	MW-103M1_S21	N	04/01/2021	Ground Water	298	308
Central Impact Area	CIA2-INF	CIA2-INF-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA1-EFF	CIA1-EFF-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	MW-628M2	MW-628M2_S21	N	04/01/2021	Ground Water	120.8	130.8
Central Impact Area	CIA1-MID1	CIA1-MID1-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-87A	N	04/01/2021	Process Water	0	0
Central Impact Area	MW-628M1	MW-628M1_S21	N	04/01/2021	Ground Water	230.8	240.8
Central Impact Area	CIA3-EFF	CIA3-EFF-58A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-58A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-58A	N	04/01/2021	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-58A	N	04/01/2021	Process Water	0	0

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received April 2021

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-628M1	MW-628M1_S21	230.8	240.8	04/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.50		µg/L	0.60		0.034	0.20
Central Impact Area	MW-102M2	MW-102M2_S21	237	247	03/31/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.067	J	µg/L	400		0.036	0.20
Central Impact Area	MW-102M2	MW-102M2_S21	237	247	03/31/2021	SW6850	Perchlorate	0.32		µg/L	2.0		0.030	0.20
Central Impact Area	MW-102M2	MW-102M2_S21	237	247	03/31/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.40		µg/L	0.60		0.034	0.20
Central Impact Area	MW-102M1	MW-102M1_S21	267	277	03/31/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.36		µg/L	0.60		0.034	0.20
Central Impact Area	MW-209M2	MW-209M2_S21	220	230	03/31/2021	SW6850	Perchlorate	0.27		µg/L	2.0		0.030	0.20
Central Impact Area	MW-209M1	MW-209M1_S21	240	250	03/31/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.44		µg/L	400		0.036	0.20
Central Impact Area	MW-209M1	MW-209M1_S21	240	250	03/31/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.2		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-209M1	MW-209M1_S21	240	250	03/31/2021	SW6850	Perchlorate	3.0		µg/L	2.0	X	0.030	0.20
Central Impact Area	MW-209M1	MW-209M1_S21D	240	250	03/31/2021	SW6850	Perchlorate	3.1		µg/L	2.0	X	0.030	0.20
Central Impact Area	MW-623M2	MW-623M2_S21	291.8	301.8	03/30/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.069	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-623M1	MW-623M1_S21	340	350	03/30/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.071	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-323M1	MW-323M1_S21	195	205	03/29/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.37		µg/L	0.60		0.034	0.20
Central Impact Area	MW-338S	MW-338S_S21	72	82	03/29/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.044	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-338M2	MW-338M2_S21	119	129	03/29/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.10	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-441M2	MW-441M2_S21	109.5	119.5	03/25/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.13	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-441M1	MW-441M1_S21	204.6	214.6	03/25/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.056	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-149M1	MW-149M1_S21	237.5	247.5	03/25/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.45		µg/L	0.60		0.034	0.20
Central Impact Area	MW-23M1	MW-23M1_S21	225	235	03/25/2021	SW6850	Perchlorate	0.48		µg/L	2.0		0.030	0.20
Central Impact Area	MW-23D	MW-23D_S21	272	282	03/25/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.65		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-625M1	MW-625M1_S21	260	270	03/24/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.61		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-624M1	MW-624M1_S21	284	294	03/24/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.044	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-710M1	MW-710M1_S21	247.5	257.5	03/23/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-699M1	MW-699M1_S21	261.5	271.5	03/23/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.88		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-609M2	MW-609M2_S21	182.39	192.39	03/23/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-609M1	MW-609M1_S21	210.39	220.39	03/23/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.18	J	µg/L	400		0.036	0.20
Central Impact Area	MW-609M1	MW-609M1_S21	210.39	220.39	03/23/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.4		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-609M1	MW-609M1_S21D	210.39	220.39	03/23/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.17	J	µg/L	400		0.036	0.20
Central Impact Area	MW-609M1	MW-609M1_S21D	210.39	220.39	03/23/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	5.4		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-616M1	MW-616M1_S21	217.1	227.1	03/22/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.34		µg/L	0.60		0.034	0.20
Central Impact Area	MW-617M1	MW-617M1_S21	175.8	185.8	03/22/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.30		µg/L	0.60		0.034	0.20
Central Impact Area	MW-88M2	MW-88M2_S21	213	223	03/17/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.15	J	µg/L	400		0.036	0.20
Central Impact Area	MW-88M2	MW-88M2_S21	213	223	03/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.42		µg/L	0.60		0.034	0.20
Central Impact Area	MW-88M2	MW-88M2_S21	213	223	03/17/2021	SW6850	Perchlorate	1.8		µg/L	2.0		0.030	0.20
Central Impact Area	MW-88M2	MW-88M2_S21D	213	223	03/17/2021	SW6850	Perchlorate	1.8		µg/L	2.0		0.030	0.20
Central Impact Area	MW-88M1	MW-88M1_S21	233	243	03/17/2021	SW6850	Perchlorate	0.18	J	µg/L	2.0		0.030	0.20
Central Impact Area	MW-88M1	MW-88M1_S21	233	243	03/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.92		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-89M3	MW-89M3_S21	174	184	03/17/2021	SW6850	Perchlorate	0.060	J	µg/L	2.0		0.030	0.20
Central Impact Area	MW-89M3	MW-89M3_S21	174	184	03/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.11	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-89M2	MW-89M2_S21	214	224	03/17/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.1		µg/L	400		0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S21	214	224	03/17/2021	SW6850	Perchlorate	2.5		µg/L	2.0	X	0.030	0.20
Central Impact Area	MW-89M2	MW-89M2_S21	214	224	03/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	8.0		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-89M2	MW-89M2_S21D	214	224	03/17/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.1		µg/L	400		0.036	0.20
Central Impact Area	MW-89M2	MW-89M2_S21D	214	224	03/17/2021	SW6850	Perchlorate	2.5		µg/L	2.0	X	0.030	0.20

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

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received April 2021

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-89M2	MW-89M2_S21D	214	224	03/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	7.8		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-89M1	MW-89M1_S21	234	244	03/17/2021	SW6850	Perchlorate	0.21		µg/L	2.0		0.030	0.20
Central Impact Area	MW-89M1	MW-89M1_S21	234	244	03/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.44		µg/L	0.60		0.034	0.20
Central Impact Area	MW-208M1	MW-208M1_S21	195	205	03/16/2021	SW6850	Perchlorate	0.14	J	µg/L	2.0		0.030	0.20
Central Impact Area	MW-618M1	MW-618M1_S21	238.5	248.5	03/16/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-618M1	MW-618M1_S21	238.5	248.5	03/16/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.19	J	µg/L	400		0.036	0.20
Central Impact Area	MW-43M1	MW-43M1_S21	223	233	03/11/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.88		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-607M2	MW-607M2_S21	177.4	187.4	03/11/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.7		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-607M2	MW-607M2_S21D	177.4	187.4	03/11/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.7		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-607M1	MW-607M1_S21	207.4	217.4	03/11/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	3.4		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-95M2	MW-95M2_S21	167	177	03/10/2021	SW6850	Perchlorate	0.070	J	µg/L	2.0		0.030	0.20
Central Impact Area	MW-95M1	MW-95M1_S21	202	212	03/10/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.25		µg/L	400		0.036	0.20
Central Impact Area	MW-95M1	MW-95M1_S21	202	212	03/10/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-95M1	MW-95M1_S21	202	212	03/10/2021	SW6850	Perchlorate	2.1		µg/L	2.0	X	0.030	0.20
Central Impact Area	MW-86S	MW-86S_S21	143	153	03/10/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.10	J	µg/L	400		0.036	0.20
Central Impact Area	MW-86S	MW-86S_S21	143	153	03/10/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.42		µg/L	0.60		0.034	0.20
Central Impact Area	MW-86M2	MW-86M2_S21	158	168	03/10/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.051	J	µg/L	400		0.036	0.20
Central Impact Area	MW-86M2	MW-86M2_S21	158	168	03/10/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.44		µg/L	0.60		0.034	0.20
Central Impact Area	MW-629M1	MW-629M1_S21	216.9	226.9	03/09/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.26		µg/L	400		0.036	0.20
Central Impact Area	MW-638M2	MW-638M2_S21	204.2	214.2	03/09/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.053	J	µg/L	400		0.036	0.20
Central Impact Area	MW-638M2	MW-638M2_S21	204.2	214.2	03/09/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.77		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-203M2	MW-203M2_S21	176	186	03/08/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.055	J	µg/L	400		0.036	0.20
Central Impact Area	MW-203M2	MW-203M2_S21	176	186	03/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.65		µg/L	0.60	X	0.034	0.20
Central Impact Area	MW-687M2	MW-687M2_S21	188	198	03/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.034	0.20
Central Impact Area	MW-686M2	MW-686M2_S21	194.3	204.3	03/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4		µg/L	0.60	X	0.034	0.20

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

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 Demolition Area 1

Location	D1-INF	FPR-2-INF	MW-258M1	MW-663D	PR-INF
Field Sample ID	D1-INF_PFAS19	FPR-2-INF_PFAS19	MW-258M1_PFAS19	MW-663D_PFAS19	PR-INF_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	109.00 - 119.00	240.60 - 250.60	0.00 - 0.00
Sampling Date	06/24/2019	06/25/2019	06/19/2019	06/24/2019	06/25/2019
SDG	320517141	320517141	320515981	320517141	320517141
Sample Type	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	20.0 U	20.0 U	20.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
Perfluorobutanesulfonic acid (PFBS)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.910 U	0.950 U	0.980 U	2.20	0.980 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorohexane sulfonate (PFHxS)	0.910 U	0.950 U	0.980 U	0.980 U	2.00 U
Perfluorohexanoic acid (PFHxA)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.50 U	1.00 J	1.50 U
Perfluorooctane sulfonate (PFOS)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorooctanesulfonamide (PFOSA)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluoropentanoic acid (PFPeA)	0.910 U	0.950 U	0.980 U	0.460 J	0.980 U
Perfluorotetradecanoic acid (PFTeDA)	2.70 U	2.80 U	2.90 U	3.00 U	2.90 U
Perfluorotridecanoic acid (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
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	3.20	0.00
§Sum of All Compounds Collected	0.00	0.00	0.00	4.86	0.00

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 J1 Range Northern

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

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 J2 Range Eastern

Location	J2E-INF-I	J2E-INF-J	J2E-INF-K	MW-307M3	MW-307M3	MW-368M1
Field Sample ID	J2E-INF-I_PFAS19	J2E-INF-J_PFAS19	J2E-INF-K_PFAS19	MW-307M3_PFAS19	MW-307M3_PFAS19D	MW-368M1_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	125.80 - 135.82	125.80 - 135.82	237.35 - 247.35
Sampling Date	06/20/2019	06/20/2019	06/20/2019	06/18/2019	06/18/2019	06/18/2019
SDG	320515981	320515981	320515981	320514662	320514662	320514662
Sample Type	Normal	Normal	Normal	Normal	Field Duplicate	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	19.0 U	20.0 U	18.0 U	19.0 U	17.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.70 U	9.30 U	9.80 U	9.00 U	9.60 U	8.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.70 U	9.30 U	9.80 U	9.00 U	9.60 U	8.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.70 U	9.30 U	9.80 U	9.00 U	9.60 U	8.50 U
Perfluorobutanesulfonic acid (PFBS)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorobutanoic acid (PFBA)	1.50 U	1.40 U	1.50 U	1.80 U	1.90 U	1.70 U
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	1.30 U
Perfluorodecanoic acid (PFDA)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	1.40 J
Perfluorododecanoic acid (PFDoA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	0.450 J
Perfluoroheptanesulfonic acid (PFHpS)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluoroheptanoic acid (PFHpA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	1.30 U
Perfluorohexane sulfonate (PFHxS)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorohexanoic acid (PFHxA)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorononanoic acid (PFNA)	1.50 U	1.40 U	1.50 U	0.880 J	0.730 J	0.650 J
Perfluorooctane sulfonate (PFOS)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorooctanoic acid (PFOA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	1.30 U
Perfluoropentanoic acid (PFPeA)	0.970 U	0.930 U	0.980 U	0.900 U	0.960 U	0.850 U
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	2.80 U	2.90 U	2.70 U	2.90 U	2.60 U
Perfluoroundecanoic acid (PFUnA)	1.50 U	1.40 U	1.50 U	1.30 U	1.40 U	4.90
†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.880	0.730	2.05
§Sum of All Compounds Collected	0.00	0.00	0.00	0.880	0.730	7.40

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 J2 Range Eastern

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

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 J2 Range Northern

Location	J2EW0001	J2EW0002	J2N-INF-E	J2N-INF-F	J2N-INF-F	J2N-INF-G
Field Sample ID	J2EW0001_PFAS19	J2EW0002_PFAS19	J2N-INF-E_PFAS19	J2N-INF-F_PFAS19	J2N-INF-F_PFAS19R	J2N-INF-G_PFAS19
Sampling Depth	179.00 - 234.00	198.00 - 233.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Sampling Date	11/20/2019	11/20/2019	06/18/2019	06/18/2019	07/30/2019	07/30/2019
SDG	320565491	320565491	320514662	320514662	320528231	320528231
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	40.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	19.0 U	20.0 U	9.30 U	9.30 U	9.60 U	9.70 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.60 U	10.0 U	9.30 U	9.30 U	9.60 U	9.70 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.60 U	10.0 U	9.30 U	9.30 U	9.60 U	9.70 U
Perfluorobutanesulfonic acid (PFBS)	0.960 U	1.00 U	0.930 U	0.930 U	0.960 U	1.40 J
Perfluorobutanoic acid (PFBA)	1.40 U	1.50 U	1.40 U	1.90 U	1.40 U	1.50 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.960 U	1.00 U	0.930 U	0.930 U	0.960 U	0.970 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)	0.960 U	0.370 J	0.930 U	0.400 J	0.500 J	0.970 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.00 J	1.40 U	0.940 J	1.00 J	1.50 U
Perfluorohexane sulfonate (PFHxS)	0.960 U	11.0	0.930 U	9.90	9.00	1.90 U
Perfluorohexanoic acid (PFHxA)	0.960 U	1.30 J	0.930 U	1.20 J	1.30 J	2.30
Perfluorononanoic acid (PFNA)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
Perfluorooctane sulfonate (PFOS)	2.90 U	1.30 J	2.80 U	2.80 U	1.10 J	2.90 U
Perfluorooctanesulfonamide (PFOSA)	2.90 U	3.00 U	2.80 U	2.80 U	2.90 U	2.90 U
Perfluorooctanoic acid (PFOA)	1.40 U	1.50 J	1.40 U	1.70 J	1.50 J	1.50 U
Perfluoropentanoic acid (PFPeA)	0.960 U	0.910 J	0.930 U	0.840 J	1.00 J	1.20 J
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	3.00 U	2.80 U	2.80 U	2.90 U	2.90 U
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	3.00 U	2.80 U	2.80 U	2.90 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.50 U	1.40 U	1.40 U	1.40 U	1.50 U
†PFOS + PFOA (EPA)	0.00	2.80	0.00	1.70	2.60	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	14.8	0.00	12.5	12.6	0.00
§Sum of All Compounds Collected	0.00	17.4	0.00	15.0	15.4	4.90

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 J2 Range Northern

	Location	MW-234M2	MW-313M1	MW-587M2
Field Sample ID		MW-234M2_PFAS19	MW-313M1_PFAS19	MW-587M2_PFAS19
Sampling Depth		110.00 - 120.00	255.40 - 265.40	220.00 - 230.00
Sampling Date		06/17/2019	06/19/2019	06/19/2019
SDG		320514661	320515981	320515981
Sample Type	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	20.0 U	19.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	8.80 U	9.80 U	9.70 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.80 U	9.80 U	9.70 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.80 U	9.80 U	9.70 U	
Perfluorobutanesulfonic acid (PFBS)	0.880 U	0.980 U	0.970 U	
Perfluorobutanoic acid (PFBA)	1.80 U	0.700 J	1.50 U	
Perfluorodecanesulfonic acid (PFDS)	1.30 U	1.50 U	1.50 U	
Perfluorodecanoic acid (PFDA)	0.880 U	1.20 J	0.970 U	
Perfluorododecanoic acid (PFDoA)	1.30 U	1.50 U	1.50 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.880 U	0.980 U	0.970 U	
Perfluoroheptanoic acid (PFHpA)	1.30 U	1.50 U	1.50 U	
Perfluorohexane sulfonate (PFHxS)	0.600 J	0.980 U	0.970 U	
Perfluorohexanoic acid (PFHxA)	0.880 U	0.980 U	0.970 U	
Perfluorononanoic acid (PFNA)	1.30 U	1.10 J	1.50 U	
Perfluorooctane sulfonate (PFOS)	1.90 J	2.90 U	2.90 U	
Perfluorooctanesulfonamide (PFOSA)	2.60 U	2.90 U	2.90 U	
Perfluorooctanoic acid (PFOA)	0.550 J	1.50 U	1.50 U	
Perfluoropentanoic acid (PFPeA)	0.880 U	0.680 J	0.970 U	
Perfluorotetradecanoic acid (PFTeDA)	2.60 U	2.90 U	2.90 U	
Perfluorotridecanoic acid (PFTrDA)	2.60 U	2.90 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	1.30 U	1.40 J	1.50 U	
	†PFOS + PFOA (EPA)	2.45	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	3.05	2.30	0.00
	§Sum of All Compounds Collected	3.05	5.08	0.00

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 J3 Range

Location	J3-INF	J3-INF	MW-163S	MW-163S	MW-163S	MW-227M2
Field Sample ID	J3-INF_PFAS19	J3-INF_PFAS19D	MW-163S_PFAS19	MW-163S_PFAS19D	MW-163S_PFAS19R	MW-227M2_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	38.00 - 48.00	38.00 - 48.00	38.00 - 48.00	110.00 - 120.00
Sampling Date	06/17/2019	06/17/2019	06/18/2019	06/18/2019	07/30/2019	06/19/2019
SDG	320514661	320514661	320514662	320514662	320528231	320515981
Sample Type	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	17.0 U	17.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.40 U	9.20 U	8.60 U	8.60 U	9.30 U	9.60 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.40 U	9.20 U	8.60 U	8.60 U	9.30 U	9.60 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.40 U	9.20 U	8.60 U	8.60 U	9.30 U	9.60 U
Perfluorobutanesulfonic acid (PFBS)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluorobutanoic acid (PFBA)	1.90 U	1.80 U	1.70 U	1.70 U	0.560 J	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluorododecanoic acid (PFDoA)	1.70 J	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	1.50 J	1.50 J	0.690 J	0.610 J	1.90 U	0.540 J
Perfluorohexanoic acid (PFHxA)	0.940 U	0.920 U	0.410 J	0.860 U	0.930 U	0.960 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
Perfluorooctane sulfonate (PFOS)	2.80 U	2.80 U	12.0	12.0	12.0	2.90 U
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.60 U	2.60 U	2.80 U	2.90 U
Perfluorooctanoic acid (PFOA)	0.520 J	1.40 U	1.70	1.60 J	1.30 J	1.40 U
Perfluoropentanoic acid (PFPeA)	0.940 U	0.920 U	0.860 U	0.860 U	0.930 U	0.960 U
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.60 U	2.60 U	2.80 U	2.90 U
Perfluorotridecanoic acid (PFTTrDA)	1.40 J	2.80 U	2.60 U	2.60 U	2.80 U	2.90 U
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.30 U	1.30 U	1.40 U	1.40 U
†PFOS + PFOA (EPA)	0.520	0.00	13.7	13.6	13.3	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	2.02	1.50	14.4	14.2	13.3	0.540
§Sum of All Compounds Collected	5.12	1.50	14.8	14.2	13.9	0.540

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 J3 Range

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

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 KGS 2020 J1 Ranges SPM Fall
 J1 Range Northern

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

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 J1 Range Northern

	Location	MW-303M3	MW-326M1	MW-326M2	MW-326M3	MW-346M1	MW-346M2
	Field Sample ID	MW-303M3_F20	MW-326M1_F20	MW-326M2_F20	MW-326M3_F20	MW-346M1_F20	MW-346M2_F20
	Sampling Depth	139.74 - 149.69	250.01 - 260.01	196.27 - 206.28	165.24 - 175.26	0.00 - 0.00	0.00 - 0.00
	Sampling Date	12/08/2020	12/09/2020	12/09/2020	12/09/2020	12/02/2020	12/02/2020
	SDG	320677701	320678771	320678771	320678771	320675551	320675551
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	20.0 U	20.0 U	19.0 U	19.0 U	19.0 U	
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)	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)	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)	2.60	1.50 J	1.40 J	2.70	3.40	3.50	
Perfluorooctane sulfonate (PFOS)	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U	
Perfluorooctanesulfonamide (PFOSA)	2.70 U	3.00 U	3.00 U	2.90 U	2.90 U	2.80 U	
Perfluorooctanoic acid (PFOA)	1.30 U	1.50 U	1.50 U	1.40 U	1.40 U	1.40 U	
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 (PFTTrDA)	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)	4.20	2.45	6.80	6.20	5.90	5.90
	§Sum of All Compounds Collected	5.12	3.89	21.0	13.7	12.4	9.27

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 KGS 2020 J1 Ranges SPM Fall
 J1 Range Northern

	Location	MW-346M3	MW-346M4	MW-58S
	Field Sample ID	MW-346M3_F20	MW-346M4_F20	MW-58S_F20
	Sampling Depth	0.00 - 0.00	0.00 - 0.00	100.00 - 110.00
	Sampling Date	12/02/2020	12/02/2020	12/07/2020
	SDG	320675551	320675551	320677691
	Sample Type	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		20.0 U	18.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.80 U	9.20 U	9.30 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.80 U	9.20 U	9.30 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.80 U	9.20 U	9.30 U
Perfluorobutanesulfonic acid (PFBS)		0.980 U	0.920 U	0.930 U
Perfluorobutanoic acid (PFBA)		1.50 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.730 J	1.70 J	0.930 U
Perfluorododecanoic acid (PFDoA)		1.50 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.980 U	0.920 U	0.930 U
Perfluoroheptanoic acid (PFHpA)		1.50 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.980 U	0.920 U	0.930 U
Perfluorohexanoic acid (PFHxA)		0.980 U	0.920 U	0.930 U
Perfluorononanoic acid (PFNA)		2.20	0.650 J	1.40 U
Perfluorooctane sulfonate (PFOS)		2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonamide (PFOSA)		2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.50 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.750 J	0.410 J	0.930 U
Perfluorotetradecanoic acid (PFTeDA)		2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (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)	2.93	2.35	0.00
	§Sum of All Compounds Collected	4.68	8.76	0.00

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 J2 Range Northern

Location	J2EW0002	J2EW0002	J2EW2-MW2-B	J2EW2-MW2-C	MW-293M2	MW-293M2
Field Sample ID	J2EW0002_F20	J2EW0002_F20D	J2EW2-MW2-B_F20	J2EW2-MW2-C_F20	MW-293M2_F20	MW-293M2_F20D
Sampling Depth	198.00 - 233.00	198.00 - 233.00	209.79 - 219.79	243.83 - 253.81	196.42 - 206.42	196.42 - 206.42
Sampling Date	09/10/2020	09/10/2020	09/09/2020	09/09/2020	08/27/2020	08/27/2020
SDG	320645641	320645641	320645661	320645661	320641331	320641331
Sample Type	Normal	Field Duplicate	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	20.0 U	19.0 U	19.0 U	19.0 U	18.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.90 U	9.50 U	9.40 U	9.70 U	9.20 U	9.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.90 U	9.50 U	9.40 U	9.70 U	9.20 U	9.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.90 U	9.50 U	9.40 U	9.70 U	9.20 U	9.50 U
Perfluorobutanesulfonic acid (PFBS)	0.990 U	0.950 U	0.940 U	0.970 U	3.40	3.60
Perfluorobutanoic acid (PFBA)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)	1.50 U	1.40 U	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.990 U	0.950 U	0.940 U	0.970 U	4.90	4.50
Perfluorododecanoic acid (PFDoA)	1.50 U	1.40 U	1.40 U	1.50 U	3.50	3.60
Perfluoroheptanesulfonic acid (PFHpS)	0.990 U	0.950 U	0.940 U	0.970 U	0.920 U	0.950 U
Perfluoroheptanoic acid (PFHpA)	0.930 J	0.910 J	1.40 U	1.50 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)	9.80	9.30	0.940 U	0.970 U	0.920 U	0.950 U
Perfluorohexanoic acid (PFHxA)	1.10 J	1.10 J	0.940 U	0.970 U	0.920 U	0.950 U
Perfluorononanoic acid (PFNA)	1.50 U	1.40 U	1.40 U	1.50 U	2.00	1.50 J
Perfluorooctane sulfonate (PFOS)	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonamide (PFOSA)	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)	1.70 J	1.70 J	1.40 U	1.50 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)	1.10 J	1.20 J	0.940 U	0.970 U	0.460 J	0.410 J
Perfluorotetradecanoic acid (PFTeDA)	3.00 U	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (PFTTrDA)	3.00 U	2.80 U	2.80 U	2.90 U	1.50 J	1.90 J
Perfluoroundecanoic acid (PFUnA)	1.50 U	1.40 U	1.40 U	1.50 U	25.0	28.0
†PFOS + PFOA (EPA)	1.70	1.70	0.00	0.00	0.00	0.00
‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	12.4	11.9	0.00	0.00	6.90	6.00
§Sum of All Compounds Collected	14.6	14.2	0.00	0.00	40.8	43.5

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 J2 Range Northern

	Location	MW-300M1	MW-300M2	MW-300M3	MW-302M2	MW-305M1	MW-348M2
	Field Sample ID	MW-300M1_F20	MW-300M2_F20	MW-300M3_F20	MW-302M2_F20	MW-305M1_F20	MW-348M2_F20
	Sampling Depth	293.03 - 303.02	197.23 - 207.23	135.31 - 145.31	194.35 - 204.43	202.82 - 212.82	206.54 - 216.54
	Sampling Date	09/08/2020	09/08/2020	09/08/2020	08/27/2020	08/31/2020	08/31/2020
	SDG	320644781	320644781	320644781	320641331	320642421	320642421
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	19.0 U	18.0 U	19.0 U	18.0 U	18.0 U	20.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.50 U	9.00 U	9.40 U	9.20 U	9.10 U	9.80 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.50 U	9.00 U	9.40 U	9.20 U	9.10 U	9.80 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.50 U	9.00 U	9.40 U	9.20 U	9.10 U	9.80 U	
Perfluorobutanesulfonic acid (PFBS)	0.950 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	0.550 J	1.40 U	1.40 U	1.00 J	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorodecanoic acid (PFDA)	3.10	3.60	1.50 J	2.80	2.40	2.50	
Perfluorododecanoic acid (PFDoA)	0.800 J	1.10 J	0.610 J	1.70 J	1.40 U	2.20	
Perfluoroheptanesulfonic acid (PFHpS)	0.950 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluorohexane sulfonate (PFHxS)	1.90 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluorohexanoic acid (PFHxA)	0.950 U	0.900 U	0.940 U	0.920 U	0.910 U	0.980 U	
Perfluorononanoic acid (PFNA)	3.90	2.30	0.960 J	1.00 J	1.40 J	1.50 U	
Perfluorooctane sulfonate (PFOS)	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluorooctanesulfonamide (PFOSA)	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluorooctanoic acid (PFOA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.50 U	
Perfluoropentanoic acid (PFPeA)	0.580 J	0.430 J	0.940 U	1.40 J	0.910 U	1.20 J	
Perfluorotetradecanoic acid (PFTeDA)	2.90 U	2.70 U	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.90 U	0.880 J	2.80 U	2.80 U	2.70 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	8.50	9.20	4.80	22.0	1.40 J	8.10	
	‡PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	7.00	5.90	2.46	3.80	3.80	2.50
	§Sum of All Compounds Collected	16.9	17.5	8.42	28.9	5.20	15.0

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 J2 Range Northern

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

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 J2 Range Northern

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

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 J2 Range Northern

	Location	MW-631M2	MW-632M1	MW-632M2	MW-632M2	MW-640M1	MW-640M2
	Field Sample ID	MW-631M2_F20	MW-632M1_F20	MW-632M2_F20	MW-632M2_F20D	MW-640M1_F20	MW-640M2_F20
	Sampling Depth	200.10 - 210.10	254.50 - 264.50	229.50 - 239.50	229.50 - 239.50	246.00 - 256.00	216.00 - 226.00
	Sampling Date	08/26/2020	09/03/2020	09/03/2020	09/03/2020	09/03/2020	09/03/2020
	SDG	320641331	320643511	320643511	320643511	320643511	320643511
	Sample Type	Normal	Normal	Normal	Field Duplicate	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
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)		8.50	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U
Perfluorobutanoic acid (PFBA)		1.70 J	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)		0.920 U	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.920 U	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		1.80 U	0.940 U	0.900 U	0.960 U	0.360 J	0.930 U
Perfluorohexanoic acid (PFHxA)		5.40	0.940 U	0.900 U	0.960 U	0.940 U	0.930 U
Perfluorononanoic acid (PFNA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctane sulfonate (PFOS)		2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U
Perfluorooctanesulfonamide (PFOSA)		2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoropentanoic acid (PFPeA)		1.90	0.450 J	0.900 U	0.960 U	0.630 J	0.930 U
Perfluorotetradecanoic acid (PFTeDA)		2.80 U	2.80 U	2.70 U	2.90 U	2.80 U	2.80 U
Perfluorotridecanoic acid (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
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	0.00	0.00	0.00	0.00	0.360	0.00
	§Sum of All Compounds Collected	17.5	0.450	0.00	0.00	0.990	0.00

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 J2 Range Northern

	Location	MW-703M1	MW-703M2	MW-704M1	MW-704M2
	Field Sample ID	MW-703M1_F20	MW-703M2_F20	MW-704M1_F20	MW-704M2_F20
	Sampling Depth	248.00 - 258.00	224.10 - 234.10	244.00 - 254.00	217.80 - 227.80
	Sampling Date	08/31/2020	08/31/2020	09/01/2020	09/01/2020
	SDG	320642421	320642421	320642411	320642411
	Sample Type	Normal	Normal	Normal	Normal
PFAS 21 Cmps		Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		18.0 U	18.0 U	19.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.10 U	9.20 U	9.70 U	9.20 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.10 U	9.20 U	9.70 U	9.20 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.10 U	9.20 U	9.70 U	9.20 U
Perfluorobutanesulfonic acid (PFBS)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluorobutanoic acid (PFBA)		1.40 U	1.40 U	1.40 J	1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluorodecanoic acid (PFDA)		3.20	1.60 J	1.50 J	1.90
Perfluorododecanoic acid (PFDoA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluoroheptanoic acid (PFHpA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluorohexane sulfonate (PFHxS)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluorohexanoic acid (PFHxA)		0.910 U	0.920 U	0.970 U	0.920 U
Perfluorononanoic acid (PFNA)		1.80	0.900 J	1.50 U	0.890 J
Perfluorooctane sulfonate (PFOS)		2.70 U	2.70 U	2.90 U	2.80 U
Perfluorooctanesulfonamide (PFOSA)		1.30 J	2.20 J	2.90 U	2.80 U
Perfluorooctanoic acid (PFOA)		1.40 U	1.40 U	1.50 U	1.40 U
Perfluoropentanoic acid (PFPeA)		0.650 J	0.830 J	1.10 J	0.400 J
Perfluorotetradecanoic acid (PFTeDA)		2.70 U	2.70 U	2.90 U	2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.70 U	2.70 U	2.90 U	2.80 U
Perfluoroundecanoic acid (PFUnA)		0.650 J	1.40 U	1.00 J	1.40 U
	†PFOS + PFOA (EPA)	0.00	0.00	0.00	0.00
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	5.00	2.50	1.50	2.79
	§Sum of All Compounds Collected	7.60	5.53	5.00	3.19

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 J3 Range

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

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 J3 Range

	Location	MW-193S	MW-196M1	MW-196S	MW-197M1	MW-197M2	MW-197M3
	Field Sample ID	MW-193S_F20	MW-196M1_F20	MW-196S_F20	MW-197M1_F20	MW-197M2_F20	MW-197M3_F20D
	Sampling Depth	32.50 - 37.50	45.00 - 50.00	32.00 - 37.00	120.00 - 125.00	80.20 - 85.20	60.20 - 65.20
	Sampling Date	07/16/2020	07/23/2020	07/23/2020	07/20/2020	07/20/2020	07/20/2020
	SDG	320627321	320630121	320630121	320629171	320629171	320629171
	Sample Type	Normal	Normal	Normal	Normal	Normal	Field Duplicate
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	18.0 U	18.0 U	19.0 U	19.0 U	18.0 U	
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U	
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U	
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U	
Perfluorobutanesulfonic acid (PFBS)	2.20	0.920 U	0.900 U	0.940 U	1.80 J	0.920 U	
Perfluorobutanoic acid (PFBA)	1.20 J	1.80 U	1.80 U	1.40 U	4.90	1.40 J	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U	
Perfluorodecanoic acid (PFDA)	0.920 U	0.550 J	0.900 U	0.940 U	0.930 U	0.920 U	
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U	
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.920 U	0.900 U	0.940 U	0.930 U	0.920 U	
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.30 U	1.40 U	4.00	1.40 U	
Perfluorohexane sulfonate (PFHxS)	19.0	1.00 J	0.900 U	1.90 U	37.0	1.80 U	
Perfluorohexanoic acid (PFHxA)	0.830 J	0.950 J	0.510 J	0.940 U	8.40	0.450 J	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U	
Perfluorooctane sulfonate (PFOS)	2.80 U	1.10 J	3.80	2.80 U	10.0	2.80 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	2.80 U	
Perfluorooctanoic acid (PFOA)	1.40 U	2.10	1.10 J	0.550 J	3.10	1.10 J	
Perfluoropentanoic acid (PFPeA)	1.30 J	0.660 J	0.440 J	0.400 J	6.50	0.440 J	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	2.80 U	
Perfluorotridecanoic acid (PFTrDA)	2.80 U	2.80 U	2.70 U	2.80 U	2.80 U	2.80 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	0.00	3.20	4.90	0.550	13.1	1.10
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	19.0	4.75	4.90	0.550	54.1	1.10
	§Sum of All Compounds Collected	24.5	6.36	5.85	0.950	75.7	3.39

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2020 J3 Range SPM Fall
 J3 Range

	Location	MW-197M3	MW-198M1	MW-198M2	MW-198M3	MW-198M4	MW-232M1
	Field Sample ID	MW-197M3_F20	MW-198M1_F20	MW-198M2_F20	MW-198M3_F20	MW-198M4_F20	MW-232M1_F20
	Sampling Depth	60.20 - 65.20	150.00 - 155.00	120.00 - 125.00	100.00 - 105.00	70.00 - 75.00	77.50 - 82.50
	Sampling Date	07/20/2020	07/15/2020	07/15/2020	07/15/2020	07/15/2020	07/16/2020
	SDG	320629171	320627321	320627321	320627321	320627321	320627321
	Sample Type	Normal	Normal	Normal	Normal	Normal	Normal
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U	9.50 U
Perfluorobutanesulfonic acid (PFBS)	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluorobutanoic acid (PFBA)	1.50 J	1.40 U	0.740 J	0.740 J	6.50	2.20	
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U	0.950 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.40 U	1.40 U	1.80 J	1.40 U	
Perfluorohexane sulfonate (PFHxS)	1.80 U	0.950 U	0.950 U	1.90 U	4.40	0.950 U	
Perfluorohexanoic acid (PFHxA)	0.920 U	0.950 U	0.950 U	0.950 U	3.70	0.950 U	
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U
Perfluorooctane sulfonate (PFOS)	1.00 J	2.80 U	2.90 U	2.80 U	2.30 J	2.90 U	
Perfluorooctanesulfonamide (PFOSA)	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U	
Perfluorooctanoic acid (PFOA)	0.990 J	1.40 U	1.40 U	1.40 U	2.30	0.640 J	
Perfluoropentanoic acid (PFPeA)	0.430 J	0.460 J	0.950 U	0.950 U	2.80	0.420 J	
Perfluorotetradecanoic acid (PFTeDA)	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U	
Perfluorotridecanoic acid (PFTTrDA)	2.80 U	2.80 U	2.90 U	2.80 U	2.80 U	2.90 U	
Perfluoroundecanoic acid (PFUnA)	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	1.40 U	
	†PFOS + PFOA (EPA)	1.99	0.00	0.00	0.00	4.60	0.640
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	1.99	0.00	0.00	0.00	10.8	0.640
	§Sum of All Compounds Collected	3.92	0.460	0.740	0.740	23.8	3.26

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2020 J3 Range SPM Fall
 J3 Range

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

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
 KGS 2021 J2 Ranges SPM Spring
 J2 Range Northern

	Location	J2EW0002
	Field Sample ID	J2EW0002_521
	Sampling Depth	198.00 - 233.00
	Sampling Date	01/13/2021
	SDG	320689351
	Sample Type	Normal
PFAS 21 Cmps		Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)		7.40 J
8:2 Fluorotelomer sulfonate (8:2 FTS)		9.40 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)		9.40 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)		9.40 U
Perfluorobutanesulfonic acid (PFBS)		0.940 U
Perfluorobutanoic acid (PFBA)		1.40 U
Perfluorodecanesulfonic acid (PFDS)		1.40 U
Perfluorodecanoic acid (PFDA)		0.940 U
Perfluorododecanoic acid (PFDoA)		1.40 U
Perfluoroheptanesulfonic acid (PFHpS)		0.430 J
Perfluoroheptanoic acid (PFHpA)		0.860 J
Perfluorohexane sulfonate (PFHxS)		11.0
Perfluorohexanoic acid (PFHxA)		0.900 J
Perfluorononanoic acid (PFNA)		1.40 U
Perfluorooctane sulfonate (PFOS)		1.00 J
Perfluorooctanesulfonamide (PFOSA)		1.80 J
Perfluorooctanoic acid (PFOA)		1.80 J
Perfluoropentanoic acid (PFPeA)		1.90 U
Perfluorotetradecanoic acid (PFTeDA)		2.80 U
Perfluorotridecanoic acid (PFTrDA)		2.80 U
Perfluoroundecanoic acid (PFUnA)		1.40 U
	†PFOS + PFOA (EPA)	2.80
	‡PFOS + PFOA + PFDA + PFHpA + PFHxS + PFNA (MassDEP)	14.7
	§Sum of All Compounds Collected	25.2

PFAS Summary Report – Groundwater Joint Base Cape Cod, IAGWSP

Notes:

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

The LOQ value will be used to report non-detects when blank contamination occurs

Bolded results indicate detections of PFAS

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

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

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

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

§ PFAS compounds used in the summation of all analytes are listed in the above table