MONTHLY PROGRESS REPORT #291
FOR JUNE 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 June 2021.

1. SUMMARY OF REMEDIATION ACTIONS

Remediation Actions (RA) Underway at Camp Edwards as of 02 July 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, 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 2.837 billion gallons of water treated and re-injected as of 02 July 2021. No Frank Perkins Road Treatment Facility shutdowns occurred in June.

The Base Boundary MTU continues to operate at a flow rate of 65 gpm. As of 02 July 2021, over 302.5 million gallons of water was treated and re-injected. No Base Boundary MTU shutdowns occurred in June.

The Leading Edge system continues to operate at a flow rate of 100 gpm. As of 02 July 2021, over 256.3 million gallons of water was treated and re-injected. No Leading Edge system shutdowns occurred in June.

The Pew Road Mobile Treatment Unit (MTU) was turned off on 08 March 2021 (formally 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, 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 02 July 2021, over 1.842 billion gallons of water have been treated and re-injected. No MTU E and F shutdowns occurred in June.

The Northern Treatment Building G continues to operate at a flow rate of 225 gpm. As of 02 July 2021, over 1.377 billion gallons of water have been treated and re-injected. No Northern MTU G shutdowns occurred in June.

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 02 July 2021, over 1.488 billion gallons of water have been treated and re-injected. No MTU H and I shutdowns occurred in June.

MTU J continues to operate at a flow rate of 120 gpm. As of 02 July 2021, over 691.9 million gallons of water have been treated and re-injected. No MTU J shutdowns occurred in June.

MTU K continues to operate at a flow rate of 125 gpm. As of 02 July 2021, over 813.4 million gallons of water have been treated and re-injected. No MTU K shutdowns occurred in June.

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 02 July 2021, over 1.496 billion gallons of water have been treated and re-injected. The following J-3 Range system shutdowns occurred in June.

- 1557 on 27 May 2021 due to FS-12 communications issues and the system was restarted at 0733 on 03 June 2021
- 1040 on 15 June 2021 due to an FS-12 shutdown and was restarted at 1222 on 15 June 2021.
- 1535 on 29 June 2021 due to an FS-12 energy curtailment agreement and was restarted at 0748 on 30 June 20201.
- 1437 on 30 June 2021 due to an FS-12 energy curtailment agreement and was restarted at 0741 on 01 July 20201.

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 02 July 2021, over 671.5 million gallons of water have been treated and re-injected. The following J-1 Range Southern system shutdowns occurred in June.

- 0208 on 23 June 2021 due to a suspected power supply interruption (no alarm) and was restarted at 0740 on 23 June 2021.

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 02 July 2021, over 982.5 million gallons of water have been treated and re-injected. The following J-1 Range Northern MTU shutdowns occurred in June.

- J1NEW0002 shut down at 0826 on 06 June 2021 due to a VFD fault and was restarted at 0828 on 07 June 2021.
- J1NEW0002 shut down at 0900 on 18 June 2021 due to a VFD fault and was restarted at 1000 on 18 June 2021.
- J1NEW0002 shut down at 1000 on 20 June 2021 due to a VFD fault and was restarted at 0800 on 21 June 2021.
- J1NEW0002 shut down at 1035 on 22 June 2021 due to a VFD fault and was restarted at 0751 on 23 June 2021.
- 0815 on 28 June 2021 to exchange bag filters and was restarted at 0920 on 28 June 2021.

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 02 July 2021, over 2.508 billion gallons of water have been treated and re-injected. The following CIA system shutdowns occurred in June.

- 0740 on 01 June 2021, CIA System 1, to perform a carbon exchange on GAC Vessels #3 and #6 and restarted 0825 on 03 June 2021.

2. SUMMARY OF ACTIONS TAKEN

Operable Unit (OU) Activity As of 30 June 2021

CIA
- Perform DGM survey.
- Routine check of CSS cover.
- Complete QC and QA Seeding.
- Routine processing of MD
- SPM program groundwater sampling.

Demolition Area 1
- Develop monitoring wells.
- SPM program groundwater sampling (EW-432 (D1-EW-502) was operated for sampling on 07 June 2021.
- Replaced Frank Perkins bag filters on 07 June 2021.

Demolition Area 2
- No activity.

J-1 Range
- No activity.

J-2 Range
- No activity.

J-3 Range
- Replaced bag filters on 03 June and 01 July 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.

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 10 June 2021

Project and Fieldwork Update

The drill crew completed installation of the wells at Demolition Area 1 and well development. They are waiting for the pumps to come in. The J-3 Range system went down due to a communication issue with AFCEC's FS-12 system. J-1N system went down on Sunday due to a VFD fault which is usually due to an electrical pulse, it was brought back online Monday morning. Groundwater sampling is underway at Demolition Area 1 and is expected to last for quite a while.

Dawson continues to do intrusive investigations in the grids at the Former E Range. They only worked Monday this week due to range firing Tuesday, Wednesday and Friday. They performed vegetation regrowth cutting in the remaining grids. They will resume on Monday of next week with intrusive operations. To date, 79 of the 121 grids have been completed. Since the last technical update meeting they found two MEC items, both 40mm practice grenades. A total of 47 MEC items have been found to date: 27 3.5 inch rockets, one 4.2 inch, mortar, five 60mm mortars, eight 40mm practice grenades and one fuse from a 60mm mortar, one 75mm three .3 pound supplemental charges and one 37mm projectile. They have also uncovered total of 61 20mm and 7 30mm practice projectiles that are ND but they need to be destroyed in the BEM so they can be disposed of as MEC properly. Crews are still scheduled to finish in early August with all of the intrusive investigations. BEM and BIPs are also scheduled for August. This summer IAGWSP is going to be coordinating additional Impact Area road improvements Plans have been submitted to Natural Heritage and they are in the review process.

In the Central Impact Area, IE-Weston have completed the vegetation and surface clearance for the 15 acres that are on contract and are now doing DGM. They completed DGM in Survey Unit 1 and are currently in Survey Unit 2. They are going to bring in a second piece of equipment. In early July, they are going to begin digging the Parsons digs that were leftover. They are going to start with discrete digs then move to polygons.

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 next meeting is scheduled for 28 July 2021. 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 June 2021. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 1 to 30 June 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. 290 for May2021 — 10 June 2021
- Final J-2 Range Eastern and Northern 2020 Environmental Monitoring Report, — 01 June 2021
- Accident Prevention Plan-Source Response for Unexploded Ordnance at the Central Impact Area, JBCC — 04 June 2021
- Agency Draft Small Arms Ranges 2021 Annual Environmental Monitoring Report — 04 June 2021
- Draft J-3 Additional PFAS Sampling — 28 June 2021

5. SCHEDULED ACTIONS

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

- CIA Revised Draft 2020 Source Removal Annual Report
- CIA Source Area QAPP.
- IRA Status and Completion Report
- J-2 Range, Phase-2, Addendum to Post-DD Confirmation Geophysical and Soil Investigation Findings Project Note
- J-3 2020 Annual Environmental Monitoring Report
- J-3 Range PFAS Project Note RCL to EPA
- J-3 Range Post-DD Confirmation Geophysical and Soil Investigation Findings Revised Final Project Note
- L-Range Draft Annual Environmental Monitoring Report
- Northwest Corner Demonstration of Compliance Draft Report MOR to RCL
- Small Arms Ranges Revised Completion of Work Report

TABLE 1
Sampling Progress: 1 to 30 June 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	MW-641M2	MW-641M2_S21	N	06/29/2021	Ground Water	86.2	96.2
Demolition Area 1	MW-641M1	MW-641M1_S21	N	06/29/2021	Ground Water	113.2	123.2
Demolition Area 1	MW-642M2	MW-642M2_S21	N	06/29/2021	Ground Water	77.3	87.3
Demolition Area 1	MW-642M1	MW-642M1_S21	N	06/29/2021	Ground Water	104.3	114.3
Demolition Area 1	MW-559M2	MW-559M2_S21	N	06/29/2021	Ground Water	87	97
Demolition Area 1	MW-559M1	MW-559M1_S21	N	06/29/2021	Ground Water	135.6	145.6
Demolition Area 1	MW-542M1	MW-542M1_S21	N	06/28/2021	Ground Water	144	154
Demolition Area 1	MW-700M2	MW-700M2_S21	N	06/28/2021	Ground Water	147.7	157.7
Demolition Area 1	MW-700M1	MW-700M1_S21	N	06/28/2021	Ground Water	197.9	207.9
Demolition Area 1	MW-433	MW-433_S21	N	06/28/2021	Ground Water	180.2	190.2
Demolition Area 1	MW-659M2	MW-659M2_S21	N	06/24/2021	Ground Water	85	95
Demolition Area 1	MW-659M1	MW-659M1_S21	N	06/24/2021	Ground Water	120	130
Demolition Area 1	MW-571M2	MW-571M2_S21	N	06/24/2021	Ground Water	74	84
Demolition Area 1	MW-571M1	MW-571M1_S21	N	06/24/2021	Ground Water	114	124
Demolition Area 1	MW-569M2	MW-569M2_S21	N	06/24/2021	Ground Water	84	94
Demolition Area 1	MW-569M1	MW-569M1_S21	N	06/24/2021	Ground Water	114	124
Demolition Area 1	MW-611M2	MW-611M2_S21	N	06/23/2021	Ground Water	91	101
Demolition Area 1	MW-611M1	MW-611M1_S21	N	06/23/2021	Ground Water	141	151
Demolition Area 1	MW-611M1	MW-611M1_S21D	FD	06/23/2021	Ground Water	141	151
Demolition Area 1	MW-610M2	MW-610M2_S21	N	06/23/2021	Ground Water	85	95
Demolition Area 1	MW-610M1	MW-610M1_S21	N	06/23/2021	Ground Water	110	120
Demolition Area 1	MW-598M2	MW-598M2_S21	N	06/23/2021	Ground Water	88	98
Demolition Area 1	MW-598M1	MW-598M1_S21	N	06/23/2021	Ground Water	122	132
Demolition Area 1	MW-173M2	MW-173M2_S21	N	06/22/2021	Ground Water	208	218
Demolition Area 1	MW-173M1	MW-173M1_S21	N	06/22/2021	Ground Water	243	253
Demolition Area 1	MW-558M2	MW-558M2_S21	N	06/22/2021	Ground Water	98	108
Demolition Area 1	MW-558M1	MW-558M1_S21	N	06/22/2021	Ground Water	134	144
Demolition Area 1	MW-556M2	MW-556M2_S21	N	06/22/2021	Ground Water	111	121
Demolition Area 1	MW-556M1	MW-556M1_S21	N	06/22/2021	Ground Water	153	163
Demolition Area 1	MW-221M1	MW-221M1_S21	N	06/21/2021	Ground Water	221	231
Demolition Area 1	MW-664M2	MW-664M2_S21	N	06/21/2021	Ground Water	218.5	228.5
Demolition Area 1	MW-664M1	MW-664M1_S21	N	06/21/2021	Ground Water	248.5	258.5
Demolition Area 1	MW-698M1	MW-698M1_S21	N	06/21/2021	Ground Water	212.4	222.4
Demolition Area 1	MW-697M1	MW-697M1_S21	N	06/21/2021	Ground Water	243	253
Demolition Area 1	MW-248M3	MW-248M3_S21	N	06/21/2021	Ground Water	143	153
Demolition Area 1	MW-248M2	MW-248M2_S21	N	06/21/2021	Ground Water	178	188
Demolition Area 1	MW-248M1	MW-248M1_S21	N	06/21/2021	Ground Water	216.3	226.3
Demolition Area 1	MW-597M2	MW-597M2_S21	N	06/17/2021	Ground Water	118	128
Demolition Area 1	MW-597M1	MW-597M1_S21	N	06/17/2021	Ground Water	148	158
Demolition Area 1	MW-543M2	MW-543M2_S21	N	06/17/2021	Ground Water	91.8	101.8
Demolition Area 1	MW-543M1	MW-543M1_S21	N	06/17/2021	Ground Water	127	137
Demolition Area 1	MW-546M2	MW-546M2_S21	N	06/17/2021	Ground Water	100	110
Demolition Area 1	MW-546M1	MW-546M1_S21	N	06/17/2021	Ground Water	140	150
Demolition Area 1	MW-353M2	MW-353M2_S21	N	06/16/2021	Ground Water	57	67
Demolition Area 1	MW-353M1	MW-353M1_S21	N	06/16/2021	Ground Water	107	117
Demolition Area 1	MW-544M3	MW-544M3_S21	N	06/16/2021	Ground Water	77.5	87.5
Demolition Area 1	MW-544M2	MW-544M2_S21	N	06/16/2021	Ground Water	112	122
Demolition Area 1	MW-544M1	MW-544M1_S21	N	06/16/2021	Ground Water	162	172
Demolition Area 1	MW-544M1	MW-544M1_S21D	FD	06/16/2021	Ground Water	162	172
Demolition Area 1	MW-532M2	MW-532M2_S21	N	06/16/2021	Ground Water	138	148
Demolition Area 1	MW-532M1	MW-532M1_S21	N	06/16/2021	Ground Water	168	178
Demolition Area 1	MW-352M1	MW-352M1_S21	N	06/15/2021	Ground Water	115	125
Demolition Area 1	MW-545M4	MW-545M4_S21	N	06/15/2021	Ground Water	72	82
Demolition Area 1	MW-545M3	MW-545M3_S21	N	06/15/2021	Ground Water	101.5	111.5
Demolition Area 1	MW-545M2	MW-545M2_S21	N	06/15/2021	Ground Water	142	152
Demolition Area 1	MW-545M2	MW-545M2_S21D	FD	06/15/2021	Ground Water	142	152
Demolition Area 1	MW-545M1	MW-545M1_S21	N	06/15/2021	Ground Water	162	172
Demolition Area 1	MW-533M1	MW-533M1_S21	N	06/14/2021	Ground Water	160	170
Demolition Area 1	MW-533M1	MW-533M1_S21D	FD	06/14/2021	Ground Water	160	170
Demolition Area 1	MW-531M1	MW-531M1_S21	N	06/14/2021	Ground Water	138	148

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 to 30 June 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	MW-531M1	MW-531M1_S21D	FD	06/14/2021	Ground Water	138	148
Demolition Area 1	MW-696M1	MW-696M1_S21	N	06/14/2021	Ground Water	175.2	185.2
Demolition Area 1	MW-258M3	MW-258M3_S21	N	06/14/2021	Ground Water	77	82
Demolition Area 1	MW-258M2	MW-258M2_S21	N	06/14/2021	Ground Water	87	92
Demolition Area 1	MW-258M1	MW-258M1_S21	N	06/14/2021	Ground Water	109	119
Demolition Area 1	MW-662D	MW-662D_S21	N	06/08/2021	Ground Water	202.3	212.3
Demolition Area 1	MW-225M3	MW-225M3_S21	N	06/08/2021	Ground Water	125	135
Central Impact Area	CIA2-EFF	CIA2-EFF-89A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-89A	N	06/08/2021	Process Water	0	0
Demolition Area 1	MW-225M2	MW-225M2_S21	N	06/08/2021	Ground Water	145	155
Central Impact Area	CIA2-MID1	CIA2-MID1-89A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-89A	N	06/08/2021	Process Water	0	0
Demolition Area 1	MW-225M1	MW-225M1_S21	N	06/08/2021	Ground Water	175	185
Central Impact Area	CIA1-EFF	CIA1-EFF-89A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA1-MID2	CIA1-MID2-89A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-89A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-89A	N	06/08/2021	Process Water	0	0
Demolition Area 1	MW-240M2	MW-240M2_S21	N	06/08/2021	Ground Water	125	135
Demolition Area 1	MW-240M1	MW-240M1_S21	N	06/08/2021	Ground Water	198	208
Central Impact Area	CIA3-EFF	CIA3-EFF-60A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-60A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-60A	N	06/08/2021	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-60A	N	06/08/2021	Process Water	0	0
Demolition Area 1	MW-663D	MW-663D_S21	N	06/07/2021	Ground Water	240.6	250.6
Demolition Area 1	MW-663D	MW-663D_S21D	FD	06/07/2021	Ground Water	240.6	250.6
Demolition Area 1	MW-231M2	MW-231M2_S21	N	06/07/2021	Ground Water	165.5	175.5
J3 Range	J3-EFF	J3-EFF-177A	N	06/07/2021	Process Water	0	0
J3 Range	J3-MID-2	J3-MID-2-177A	N	06/07/2021	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-177A	N	06/07/2021	Process Water	0	0
J3 Range	J3-INF	J3-INF-177A	N	06/07/2021	Process Water	0	0
Demolition Area 1	MW-231M1	MW-231M1_S21	N	06/07/2021	Ground Water	210.5	220.5
Demolition Area 1	MW-432	MW-432_S21	N	06/07/2021	Ground Water	88	188
Demolition Area 1	MW-661D	MW-661D_S21	N	06/03/2021	Ground Water	251.6	261.6
J1 Range Southern	J1S-EFF	J1S-EFF-163A	N	06/03/2021	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-163A	N	06/03/2021	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-163A	N	06/03/2021	Process Water	0	0
Demolition Area 1	MW-211M2	MW-211M2_S21	N	06/03/2021	Ground Water	175	185
Demolition Area 1	MW-211M1	MW-211M1_S21	N	06/03/2021	Ground Water	200	210
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-153A	N	06/03/2021	Process Water	0	0
Demolition Area 1	MW-341M3	MW-341M3_S21	N	06/03/2021	Ground Water	209.5	219.5
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-153A	N	06/03/2021	Process Water	0	0
Demolition Area 1	MW-341M2	MW-341M2_S21	N	06/03/2021	Ground Water	264.5	269.5
Demolition Area 1	MW-341M2	MW-341M2_S21D	FD	06/03/2021	Ground Water	264.5	269.5
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-153A	N	06/03/2021	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-153A	N	06/03/2021	Process Water	0	0
Demolition Area 1	MW-341M1	MW-341M1_S21	N	06/03/2021	Ground Water	289.5	299.5
Demolition Area 1	MW-165M2	MW-165M2_S21	N	06/02/2021	Ground Water	124.5	134.5
Demolition Area 1	MW-165M1	MW-165M1_S21	N	06/02/2021	Ground Water	184.5	194.5
Demolition Area 1	MW-274	MW-274_S21	N	06/02/2021	Ground Water	109	199
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-183A	N	06/02/2021	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 1 to 30 June 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	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-183A	N	06/02/2021	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-183A	N	06/02/2021	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-183A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-59A	N	06/02/2021	Process Water	0	0
Demolition Area 1	XX9514	XX9514_S21	N	06/02/2021	Ground Water	102	112
Demolition Area 1	XX9514	XX9514_S21D	FD	06/02/2021	Ground Water	102	112
Demolition Area 1	D1LE-MID2	D1LE-MID2-59A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-59A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-59A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1-EFF	D1-EFF-131A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-131A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-131A	N	06/02/2021	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-131A	N	06/02/2021	Process Water	0	0
Demolition Area 1	MW-210M2	MW-210M2_S21	N	06/01/2021	Ground Water	156	166
Demolition Area 1	MW-210M1	MW-210M1_S21	N	06/01/2021	Ground Water	201	211
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-177A	N	06/01/2021	Process Water	0	0
Demolition Area 1	MW-431	MW-431_S21	N	06/01/2021	Ground Water	88	188
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-177A	N	06/01/2021	Process Water	0	0
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-177A	N	06/01/2021	Process Water	0	0
J1 Range Northern	J1N-EFF	J1N-EFF-92A	N	06/01/2021	Process Water	0	0
Demolition Area 1	EW-658	EW-658_S21	N	06/01/2021	Ground Water	96	136
J1 Range Northern	J1N-MID2	J1N-MID2-92A	N	06/01/2021	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-92A	N	06/01/2021	Process Water	0	0
J1 Range Northern	J1N-INF2	J1N-INF2-92A	N	06/01/2021	Process Water	0	0
Demolition Area 1	MW-73S	MW-73S_S21	N	06/01/2021	Ground Water	52.2	61.7

N = Normal Sample
FD = Field Duplicate

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received June 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	CIA2-EFF	CIA2-EFF-89A	0	0	06/08/2021	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.086	0.20
Central Impact Area	CIA2-MID2	CIA2-MID2-89A	0	0	06/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.034	0.20
Central Impact Area	CIA2-MID1	CIA2-MID1-89A	0	0	06/08/2021	SW6850	Perchlorate	0.15	J	µg/L	2.0		0.086	0.20
Central Impact Area	CIA2-INF	CIA2-INF-89A	0	0	06/08/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.098	J	µg/L	400		0.036	0.20
Central Impact Area	CIA2-INF	CIA2-INF-89A	0	0	06/08/2021	SW6850	Perchlorate	0.34		µg/L	2.0		0.086	0.20
Central Impact Area	CIA2-INF	CIA2-INF-89A	0	0	06/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.0		µg/L	0.60	X	0.034	0.20
Central Impact Area	CIA1-MID2	CIA1-MID2-89A	0	0	06/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.049	J	µg/L	0.60		0.034	0.20
Central Impact Area	CIA1-INF	CIA1-INF-89A	0	0	06/08/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.060	J	µg/L	400		0.036	0.20
Central Impact Area	CIA1-INF	CIA1-INF-89A	0	0	06/08/2021	SW6850	Perchlorate	0.50		µg/L	2.0		0.086	0.20
Central Impact Area	CIA1-INF	CIA1-INF-89A	0	0	06/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.68		µg/L	0.60	X	0.034	0.20
Central Impact Area	CIA3-INF	CIA3-INF-60A	0	0	06/08/2021	SW6850	Perchlorate	0.13	J	µg/L	2.0		0.086	0.20
Central Impact Area	CIA3-INF	CIA3-INF-60A	0	0	06/08/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.69		µg/L	0.60	X	0.034	0.20
J3 Range	J3-EFF	J3-EFF-177A	0	0	06/07/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.080	J	µg/L	400		0.036	0.20
J3 Range	J3-EFF	J3-EFF-177A	0	0	06/07/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	J	µg/L	0.60		0.034	0.20
J3 Range	J3-EFF	J3-EFF-177A	0	0	06/07/2021	SW6850	Perchlorate	0.22		µg/L	2.0		0.086	0.20
J3 Range	J3-MID-2	J3-MID-2-177A	0	0	06/07/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.11	J	µg/L	400		0.036	0.20
J3 Range	J3-MID-2	J3-MID-2-177A	0	0	06/07/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.034	0.20
J3 Range	J3-MID-1	J3-MID-1-177A	0	0	06/07/2021	SW6850	Perchlorate	0.18	J	µg/L	2.0		0.086	0.20
J3 Range	J3-INF	J3-INF-177A	0	0	06/07/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.14	J	µg/L	400		0.036	0.20
J3 Range	J3-INF	J3-INF-177A	0	0	06/07/2021	SW6850	Perchlorate	0.51		µg/L	2.0		0.086	0.20
J3 Range	J3-INF	J3-INF-177A	0	0	06/07/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.034	0.20
J1 Range Southern	J1S-EFF	J1S-EFF-163A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.034	0.20
J1 Range Southern	J1S-MID	J1S-MID-163A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.034	0.20
J1 Range Southern	J1S-INF-2	J1S-INF-2-163A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.15	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-INF-K	J2E-INF-K-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-153A	0	0	06/03/2021	SW6850	Perchlorate	0.11	J	µg/L	2.0		0.086	0.20
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-153A	0	0	06/03/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.24		µg/L	400		0.036	0.20
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.11	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-153A	0	0	06/03/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.19	J	µg/L	400		0.036	0.20
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-153A	0	0	06/03/2021	SW6850	Perchlorate	0.099	J	µg/L	2.0		0.086	0.20
J2 Range Eastern	J2E-INF-J	J2E-INF-J-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.094	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-INF-J	J2E-INF-J-153A	0	0	06/03/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.12	J	µg/L	400		0.036	0.20
J2 Range Eastern	J2E-INF-J	J2E-INF-J-153A	0	0	06/03/2021	SW6850	Perchlorate	0.92		µg/L	2.0		0.086	0.20
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-153A	0	0	06/03/2021	SW6850	Perchlorate	0.097	J	µg/L	2.0		0.086	0.20
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.083	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-153A	0	0	06/03/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.053	J	µg/L	400		0.036	0.20
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-153A	0	0	06/03/2021	SW6850	Perchlorate	0.34		µg/L	2.0		0.086	0.20
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-153A	0	0	06/03/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.10	J	µg/L	400		0.036	0.20
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.19	J	µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-INF-I	J2E-INF-I-153A	0	0	06/03/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.095	J	µg/L	400		0.036	0.20

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

MCL/HA= Either the MCL or Lowest Health Advisory Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received June 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
J2 Range Eastern	J2E-INF-I	J2E-INF-I-153A	0	0	06/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		µg/L	0.60		0.034	0.20
J2 Range Eastern	J2E-INF-I	J2E-INF-I-153A	0	0	06/03/2021	SW6850	Perchlorate	1.1		µg/L	2.0		0.086	0.20
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-183A	0	0	06/02/2021	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.086	0.20
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-183A	0	0	06/02/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.034	0.20
Demolition Area 1	FPR-2-INF	FPR-2-INF-183A	0	0	06/02/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.10	J	µg/L	400		0.036	0.20
Demolition Area 1	FPR-2-INF	FPR-2-INF-183A	0	0	06/02/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.034	0.20
Demolition Area 1	D1LE-INF	D1LE-INF-59A	0	0	06/02/2021	SW6850	Perchlorate	0.15	J	µg/L	2.0		0.086	0.20
Demolition Area 1	D1-MID-2	D1-MID-2-131A	0	0	06/02/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.036	J	µg/L	0.60		0.034	0.20
Demolition Area 1	D1-INF	D1-INF-131A	0	0	06/02/2021	SW6850	Perchlorate	0.55		µg/L	2.0		0.086	0.20
J2 Range Northern	J2N-INF-G	J2N-INF-G-177A	0	0	06/01/2021	SW6850	Perchlorate	0.28		µg/L	2.0		0.086	0.20
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-177A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.076	J	µg/L	0.60		0.034	0.20
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-177A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.085	J	µg/L	0.60		0.034	0.20
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-177A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.081	J	µg/L	0.60		0.034	0.20
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-177A	0	0	06/01/2021	SW6850	Perchlorate	2.2		µg/L	2.0	X	0.086	0.20
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-177A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.056	J	µg/L	0.60		0.034	0.20
J1 Range Northern	J1N-EFF	J1N-EFF-92A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.034	0.20
J1 Range Northern	J1N-EFF	J1N-EFF-92A	0	0	06/01/2021	SW6850	Perchlorate	0.28		µg/L	2.0		0.086	0.20
J1 Range Northern	J1N-MID2	J1N-MID2-92A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.18	J	µg/L	0.60		0.034	0.20
J1 Range Northern	J1N-MID1	J1N-MID1-92A	0	0	06/01/2021	SW6850	Perchlorate	0.26		µg/L	2.0		0.086	0.20
J1 Range Northern	J1N-INF2	J1N-INF2-92A	0	0	06/01/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.034	0.20
J1 Range Northern	J1N-INF2	J1N-INF2-92A	0	0	06/01/2021	SW6850	Perchlorate	0.69		µg/L	2.0		0.086	0.20
Demolition Area 1	MW-19S	MW-19S_S21	52.7	62.7	05/27/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.067	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-19S	MW-19S_S21	52.7	62.7	05/27/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.71		µg/L	400		0.036	0.20
Demolition Area 1	MW-19S	MW-19S_S21	52.7	62.7	05/27/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		µg/L	0.60	X	0.034	0.20
Demolition Area 1	MW-19S	MW-19S_S21	52.7	62.7	05/27/2021	SW8330	2-Amino-4,6-dinitrotoluene	0.036	J	µg/L	7.3		0.020	0.20
Demolition Area 1	MW-19S	MW-19S_S21D	52.7	62.7	05/27/2021	SW8330	2-Amino-4,6-dinitrotoluene	0.038	J	µg/L	7.3		0.020	0.20
Demolition Area 1	MW-19S	MW-19S_S21D	52.7	62.7	05/27/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.066	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-19S	MW-19S_S21D	52.7	62.7	05/27/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.73		µg/L	400		0.036	0.20
Demolition Area 1	MW-19S	MW-19S_S21D	52.7	62.7	05/27/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.0		µg/L	0.60	X	0.034	0.20
Demolition Area 1	MW-31S	MW-31S_S21	98	103	05/27/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.13	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-31S	MW-31S_S21	98	103	05/27/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.96		µg/L	400		0.036	0.20
Demolition Area 1	MW-31S	MW-31S_S21	98	103	05/27/2021	SW8330	1,3,5-Trinitrobenzene	0.14	J	µg/L	1090		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S21	98	103	05/27/2021	SW8330	2-Amino-4,6-dinitrotoluene	0.14	J	µg/L	7.3		0.020	0.20
Demolition Area 1	MW-31S	MW-31S_S21	98	103	05/27/2021	SW8330	2,4,6-Trinitrotoluene	0.67		µg/L	2.0		0.041	0.20
Demolition Area 1	MW-31S	MW-31S_S21	98	103	05/27/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		µg/L	0.60	X	0.034	0.20
Demolition Area 1	MW-31S	MW-31S_S21D	98	103	05/27/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.11	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-31S	MW-31S_S21D	98	103	05/27/2021	SW8330	2-Amino-4,6-dinitrotoluene	0.14	J	µg/L	7.3		0.020	0.20
Demolition Area 1	MW-31S	MW-31S_S21D	98	103	05/27/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.6		µg/L	0.60	X	0.034	0.20
Demolition Area 1	MW-31S	MW-31S_S21D	98	103	05/27/2021	SW8330	1,3,5-Trinitrobenzene	0.13	J	µg/L	1090		0.023	0.20
Demolition Area 1	MW-31S	MW-31S_S21D	98	103	05/27/2021	SW8330	2,4,6-Trinitrotoluene	0.67		µg/L	2.0		0.041	0.20
Demolition Area 1	MW-31S	MW-31S_S21D	98	103	05/27/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.97		µg/L	400		0.036	0.20
Demolition Area 1	MW-31M	MW-31M_S21	113	123	05/27/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.031	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-31M	MW-31M_S21	113	123	05/27/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.1		µg/L	400		0.036	0.20
Demolition Area 1	MW-31M	MW-31M_S21	113	123	05/27/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2.1		µg/L	0.60	X	0.034	0.20

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

MCL/HA= Either the MCL or Lowest Health Advisory Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received June 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
Demolition Area 1	MW-78M2	MW-78M2_S21	115	125	05/26/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.15	J	µg/L	0.60		0.034	0.20
Demolition Area 1	MW-129M1	MW-129M1_S21	136	146	05/25/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.034	J	µg/L	0.60		0.034	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21	120	130	05/24/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.049	J	µg/L	0.60		0.034	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21	120	130	05/24/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.078	J	µg/L	400		0.036	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21	120	130	05/24/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.13	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21	120	130	05/24/2021	SW8330	2-Amino-4,6-dinitrotoluene	0.18	J	µg/L	7.3		0.020	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21D	120	130	05/24/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.053	J	µg/L	0.60		0.034	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21D	120	130	05/24/2021	SW8330	4-Amino-2,6-dinitrotoluene	0.10	J	µg/L	7.3		0.027	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21D	120	130	05/24/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.079	J	µg/L	400		0.036	0.20
Demolition Area 1	MW-77M2	MW-77M2_S21D	120	130	05/24/2021	SW8330	2-Amino-4,6-dinitrotoluene	0.15	J	µg/L	7.3		0.020	0.20
Demolition Area 2	MW-262M1	MW-262M1_S21	226	236	05/20/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.093	J	µg/L	0.60		0.034	0.20
Demolition Area 2	MW-404M2	MW-404M2_S21	200.04	210.04	05/20/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		µg/L	0.60		0.034	0.20
Demolition Area 2	MW-404M2	MW-404M2_S21	200.04	210.04	05/20/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.070	J	µg/L	400		0.036	0.20
Demolition Area 2	MW-404M2	MW-404M2_S21D	200.04	210.04	05/20/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.064	J	µg/L	400		0.036	0.20
Demolition Area 2	MW-404M2	MW-404M2_S21D	200.04	210.04	05/20/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.22		µg/L	0.60		0.034	0.20
Demolition Area 2	MW-404M1	MW-404M1_S21	219.48	229.48	05/20/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.22		µg/L	0.60		0.034	0.20
Demolition Area 2	MW-259M1	MW-259M1_S21	189	199	05/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.31		µg/L	0.60		0.034	0.20
Demolition Area 2	MW-380M2	MW-380M2_S21	205.66	215.66	05/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.15	J	µg/L	0.60		0.034	0.20
Demolition Area 2	MW-380M1	MW-380M1_S21	226.55	236.55	05/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.047	J	µg/L	0.60		0.034	0.20
Demolition Area 2	MW-16S	MW-16S_S21	125	135	05/17/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.11	J	µg/L	0.60		0.034	0.20
Demolition Area 2	MW-161S	MW-161S_S21	145.5	155.5	05/13/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.086	J	µg/L	400		0.036	0.20
Demolition Area 2	MW-161S	MW-161S_S21	145.5	155.5	05/13/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.59		µg/L	0.60		0.034	0.20
Demolition Area 2	MW-161S	MW-161S_S21D	145.5	155.5	05/13/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.096	J	µg/L	400		0.036	0.20
Demolition Area 2	MW-161S	MW-161S_S21D	145.5	155.5	05/13/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.62		µg/L	0.60	X	0.034	0.20
Demolition Area 2	MW-160S	MW-160S_S21	137.5	147.5	05/13/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.30		µg/L	0.60		0.034	0.20
Demolition Area 2	MW-311M1	MW-311M1_S21	222	232	05/13/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.12	J	µg/L	0.60		0.034	0.20
Demolition Area 2	MW-573M2	MW-573M2_S21	155.4	165.4	05/12/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.16	J	µg/L	0.60		0.034	0.20
Demolition Area 2	MW-572M1	MW-572M1_S21	164.9	174.9	05/11/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.065	J	µg/L	0.60		0.034	0.20
J1 Range Northern	MW-245M2	MW-245M2_S21	204	214	05/10/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	24.2		µg/L	0.60	X	0.068	0.40
J1 Range Northern	MW-245M2	MW-245M2_S21	204	214	05/10/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	5.8		µg/L	400		0.036	0.20
J1 Range Northern	MW-245M2	MW-245M2_S21	204	214	05/10/2021	SW6850	Perchlorate	10.5		µg/L	2.0	X	0.030	0.20
J1 Range Northern	MW-245M2	MW-245M2_S21D	204	214	05/10/2021	SW6850	Perchlorate	11.3		µg/L	2.0	X	0.030	0.20
J1 Range Northern	MW-245M2	MW-245M2_S21D	204	214	05/10/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	23.7		µg/L	0.60	X	0.068	0.40
J1 Range Northern	MW-245M2	MW-245M2_S21D	204	214	05/10/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	5.7		µg/L	400		0.036	0.20
J1 Range Northern	MW-303M2	MW-303M2_S21	235.09	245.1	05/10/2021	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.030	0.20
J1 Range Northern	MW-303M2	MW-303M2_S21	235.09	245.1	05/10/2021	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	3.2		µg/L	400		0.036	0.20
J1 Range Northern	MW-303M2	MW-303M2_S21	235.09	245.1	05/10/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	4.7		µg/L	0.60	X	0.034	0.20
J1 Range Northern	MW-566M1	MW-566M1_S21	232	242	05/06/2021	SW6850	Perchlorate	1.1		µg/L	2.0		0.030	0.20
J1 Range Northern	J1N-INF1B	J1N-INF1B_S21	0	0	05/06/2021	SW6850	Perchlorate	1.2		µg/L	2.0		0.030	0.20
J1 Range Northern	J1N-INF1B	J1N-INF1B_S21	0	0	05/06/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.21		µg/L	0.60		0.034	0.20
J1 Range Northern	J1N-INF1A	J1N-INF1A_S21	0	0	05/06/2021	SW6850	Perchlorate	0.17	J	µg/L	2.0		0.030	0.20
J1 Range Southern	MW-669M2	MW-669M2_S21	201.7	211.7	05/05/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.27		µg/L	0.60		0.034	0.20
J1 Range Southern	MW-669M1	MW-669M1_S21	223.7	233.7	05/05/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.85		µg/L	0.60	X	0.034	0.20
J1 Range Southern	MW-669M1	MW-669M1_S21D	223.7	233.7	05/05/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.57		µg/L	0.60		0.034	0.20

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

MCL/HA= Either the MCL or Lowest Health Advisory Limit

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received June 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
J1 Range Northern	MW-567M1	MW-567M1_S21	215.5	225.5	05/04/2021	SW6850	Perchlorate	1.2		µg/L	2.0		0.030	0.20
J1 Range Northern	MW-541M1	MW-541M1_S21	210	220	05/04/2021	SW6850	Perchlorate	0.23		µg/L	2.0		0.030	0.20
J1 Range Northern	MW-430M2	MW-430M2_S21	188.41	198.41	05/04/2021	SW6850	Perchlorate	0.097	J	µg/L	2.0		0.030	0.20
J1 Range Northern	MW-430M1	MW-430M1_S21	245.23	255.23	05/04/2021	SW6850	Perchlorate	0.059	J	µg/L	2.0		0.030	0.20
J2 Range Northern	J2N-INF-G	J2N-INF-G-176A	0	0	05/03/2021	SW6850	Perchlorate	0.26		µg/L	2.0		0.030	0.20
J1 Range Northern	MW-590M2	MW-590M2_S21	238	248	05/03/2021	SW6850	Perchlorate	3.3		µg/L	2.0	X	0.030	0.20
J1 Range Northern	MW-590M2	MW-590M2_S21D	238	248	05/03/2021	SW6850	Perchlorate	3.4		µg/L	2.0	X	0.030	0.20
J1 Range Northern	MW-590M1	MW-590M1_S21	258	268	05/03/2021	SW6850	Perchlorate	0.039	J	µg/L	2.0		0.030	0.20
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-176A	0	0	05/03/2021	SW6850	Perchlorate	0.082	J	µg/L	2.0		0.030	0.20
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-176A	0	0	05/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.087	J	µg/L	0.60		0.034	0.20
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-176A	0	0	05/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.082	J	µg/L	0.60		0.034	0.20
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-176A	0	0	05/03/2021	SW6850	Perchlorate	0.039	J	µg/L	2.0		0.030	0.20
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-176A	0	0	05/03/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.085	J	µg/L	0.60		0.034	0.20
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-176A	0	0	05/03/2021	SW6850	Perchlorate	2.0		µg/L	2.0	X	0.030	0.20
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-176A	0	0	05/03/2021	SW6850	Perchlorate	0.046	J	µg/L	2.0		0.030	0.20
J1 Range Northern	MW-584M1	MW-584M1_S21	248	258	05/03/2021	SW6850	Perchlorate	1.3		µg/L	2.0		0.030	0.20
J1 Range Northern	MW-689M2	MW-689M2_S21	231.4	241.4	04/28/2021	SW6850	Perchlorate	0.078	J	µg/L	2.0		0.030	0.20
J1 Range Northern	MW-689M1	MW-689M1_S21	253.5	263.5	04/28/2021	SW6850	Perchlorate	0.34		µg/L	2.0		0.030	0.20
J1 Range Northern	MW-688M1	MW-688M1_S21	255.2	265.2	04/28/2021	SW6850	Perchlorate	0.29		µg/L	2.0		0.030	0.20
J1 Range Northern	MW-549M2	MW-549M2_S21	187.3	197.3	04/27/2021	SW6850	Perchlorate	0.054	J	µg/L	2.0		0.030	0.20
J1 Range Northern	MW-549M1	MW-549M1_S21	227.4	237.4	04/27/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.072	J	µg/L	0.60		0.034	0.20
J1 Range Northern	MW-549M1	MW-549M1_S21	227.4	237.4	04/27/2021	SW6850	Perchlorate	3.3		µg/L	2.0	X	0.030	0.20
J1 Range Northern	MW-549M1	MW-549M1_S21D	227.4	237.4	04/27/2021	SW6850	Perchlorate	3.2		µg/L	2.0	X	0.030	0.20
J1 Range Northern	MW-605M2	MW-605M2_S21	182.2	192.2	04/27/2021	SW6850	Perchlorate	0.047	J	µg/L	2.0		0.030	0.20
J1 Range Northern	MW-605M1	MW-605M1_S21	220.2	230.2	04/27/2021	SW6850	Perchlorate	0.053	J	µg/L	2.0		0.030	0.20
J1 Range Southern	MW-592M1	MW-592M1_S21	201	211	04/26/2021	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.050	J	µg/L	0.60		0.034	0.20

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

Location	D1-INF	FPR-2-INF	MW-258M1	MW-663D	PR-INF
Field Sample ID	D1-INF_PFAS19	FPR-2-INF_PFAS19	MW-258M1_PFAS19	MW-663D_PFAS19	PR-INF_PFAS19
Sampling Depth	0.00 - 0.00	0.00 - 0.00	109.00 - 119.00	240.60 - 250.60	0.00 - 0.00
Sampling Date	06/24/2019	06/25/2019	06/19/2019	06/24/2019	06/25/2019
SDG	320517141	320517141	320515981	320517141	320517141
Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	19.0 U	20.0 U	20.0 U	20.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.10 U	9.50 U	9.80 U	9.80 U	9.80 U
Perfluorobutanesulfonic acid (PFBS)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluorobutanoic acid (PFBA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.910 U	0.950 U	0.980 U	**2.20**	0.980 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.50 U	1.50 U	1.50 U
Perfluorohexane sulfonate (PFHxS)	0.910 U	0.950 U	0.980 U	0.980 U	2.00 U
Perfluorohexanoic acid (PFHxA)	0.910 U	0.950 U	0.980 U	0.980 U	0.980 U
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.50 U	**1.00 J**	1.50 U
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**

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

Location	J1N-INF2	J1N-INF2	MW-136S	MW-564M1	MW-590M2
Field Sample ID	J1N-INF2_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	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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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	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 (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**
‡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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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	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 (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**
‡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**
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	20.0 U	19.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	8.80 U	9.80 U	9.70 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	8.80 U	9.80 U	9.70 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	8.80 U	9.80 U	9.70 U
Perfluorobutanesulfonic acid (PFBS)	0.880 U	0.980 U	0.970 U
Perfluorobutanoic acid (PFBA)	1.80 U	**0.700 J**	1.50 U
Perfluorodecanesulfonic acid (PFDS)	1.30 U	1.50 U	1.50 U
Perfluorodecanoic acid (PFDA)	0.880 U	**1.20 J**	0.970 U
Perfluorododecanoic acid (PFDoA)	1.30 U	1.50 U	1.50 U
Perfluoroheptanesulfonic acid (PFHpS)	0.880 U	0.980 U	0.970 U
Perfluoroheptanoic acid (PFHpA)	1.30 U	1.50 U	1.50 U
Perfluorohexane sulfonate (PFHxS)	**0.600 J**	0.980 U	0.970 U
Perfluorohexanoic acid (PFHxA)	0.880 U	0.980 U	0.970 U
Perfluorononanoic acid (PFNA)	1.30 U	**1.10 J**	1.50 U
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**

PFAS Summary Report – Groundwater
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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	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 (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**
‡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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KGS 2019 PFAS MW&INF
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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
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 (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)	**0.360**	**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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
KGS 2020 J1 Ranges SPM Fall
J1 Range Northern

Location	MW-303M3	MW-326M1	MW-326M2	MW-326M3	MW-346M1	MW-346M2
Field Sample ID	MW-303M3_F20	MW-326M1_F20	MW-326M2_F20	MW-326M3_F20	MW-346M1_F20	MW-346M2_F20
Sampling Depth	139.74 - 149.69	250.01 - 260.01	196.27 - 206.28	165.24 - 175.26	0.00 - 0.00	0.00 - 0.00
Sampling Date	12/08/2020	12/09/2020	12/09/2020	12/09/2020	12/02/2020	12/02/2020
SDG	320677701	320678771	320678771	320678771	320675551	320675551
Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
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 (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)	**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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
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	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 (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**
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
KGS 2020 J2 Ranges SPM Fall
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)
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 (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**
‡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**

PFAS Summary Report – Groundwater
Joint Base Cape Cod, IAGWSP
KGS 2020 J2 Ranges SPM Fall
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)
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 (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**
‡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)
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)	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 (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**
‡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)
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 (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**	**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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Location	MW-193S	MW-196M1	MW-196S	MW-197M1	MW-197M2	MW-197M3
Field Sample ID	MW-193S_F20	MW-196M1_F20	MW-196S_F20	MW-197M1_F20	MW-197M2_F20	MW-197M3_F20D
Sampling Depth	32.50 - 37.50	45.00 - 50.00	32.00 - 37.00	120.00 - 125.00	80.20 - 85.20	60.20 - 65.20
Sampling Date	07/16/2020	07/23/2020	07/23/2020	07/20/2020	07/20/2020	07/20/2020
SDG	320627321	320630121	320630121	320629171	320629171	320629171
Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Field Duplicate**
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
6:2 Fluorotelomer sulfonate (6:2 FTS)	18.0 U	18.0 U	18.0 U	19.0 U	19.0 U	18.0 U
8:2 Fluorotelomer sulfonate (8:2 FTS)	9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U
N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U
N-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	9.20 U	9.20 U	9.00 U	9.40 U	9.30 U	9.20 U
Perfluorobutanesulfonic acid (PFBS)	**2.20**	0.920 U	0.900 U	0.940 U	**1.80 J**	0.920 U
Perfluorobutanoic acid (PFBA)	**1.20 J**	1.80 U	1.80 U	1.40 U	**4.90**	**1.40 J**
Perfluorodecanesulfonic acid (PFDS)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluorodecanoic acid (PFDA)	0.920 U	**0.550 J**	0.900 U	0.940 U	0.930 U	0.920 U
Perfluorododecanoic acid (PFDoA)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
Perfluoroheptanesulfonic acid (PFHpS)	0.920 U	0.920 U	0.900 U	0.940 U	0.930 U	0.920 U
Perfluoroheptanoic acid (PFHpA)	1.40 U	1.40 U	1.30 U	1.40 U	**4.00**	1.40 U
Perfluorohexane sulfonate (PFHxS)	**19.0**	**1.00 J**	0.900 U	1.90 U	**37.0**	1.80 U
Perfluorohexanoic acid (PFHxA)	**0.830 J**	**0.950 J**	**0.510 J**	0.940 U	**8.40**	**0.450 J**
Perfluorononanoic acid (PFNA)	1.40 U	1.40 U	1.30 U	1.40 U	1.40 U	1.40 U
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**

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Location	MW-197M3	MW-198M1	MW-198M2	MW-198M3	MW-198M4	MW-232M1
Field Sample ID	MW-197M3_F20	MW-198M1_F20	MW-198M2_F20	MW-198M3_F20	MW-198M4_F20	MW-232M1_F20
Sampling Depth	60.20 - 65.20	150.00 - 155.00	120.00 - 125.00	100.00 - 105.00	70.00 - 75.00	77.50 - 82.50
Sampling Date	07/20/2020	07/15/2020	07/15/2020	07/15/2020	07/15/2020	07/16/2020
SDG	320629171	320627321	320627321	320627321	320627321	320627321
Sample Type	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**	**Normal**
PFAS 21 Cmps	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)	Results (ng/L)
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)	0.920 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
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)	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
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 (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)	**1.99**	**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