

**MONTHLY PROGRESS REPORT #332
FOR NOVEMBER 2024**

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

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

The following summary of progress is for the period from 01 to 30 November 2024.

1. SUMMARY OF REMEDIATION ACTIONS

Remediation Actions (RA) Underway at Camp Edwards as of 29 November 2024:

Demolition Area 1 Comprehensive Groundwater RA

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

The Frank Perkins Road Treatment Facility has been optimized as part of the Environmental and System Performance Monitoring (ESPM) program at Demolition Area 1. The treatment facility continues to operate at a flow rate of 175 gallons per minute (gpm), with over 3.131 billion gallons of water treated and re-injected as of 29 November 2024. The following Frank Perkins Road system shutdowns occurred in November:

- 0402 on 21 November 2024 due to a power outage and was restarted at 0805 on 21 November 2024.

The Base Boundary Mobile Treatment Unit (MTU) continues to operate at a flow rate of 65 gpm. As of 29 November 2024, over 418.3 million gallons of water were treated and re-injected. No Base Boundary system shutdowns occurred in November.

The flow rate at the Leading-Edge system was increased from 100 gpm to 125 gpm on 26 September 2024 based on regulatory agency concurrence with the 26 September 2024 Demolition Area 1 Extraction Well 5 (EW-5) Optimization presentation. As of 29 November 2024, over 432.1 million gallons of water were treated and re-injected. No Leading Edge system shutdowns occurred in November.

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

J-2 Range Groundwater RA

Northern

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

The Northern MTUs E and F continue to operate at a flow rate of 250 gpm. As of 29 November 2024, over 2.267 billion gallons of water have been treated and re-injected. No MTU E and F system shutdowns occurred in November.

The Northern Treatment Building G continues to operate at a flow rate of 225 gpm. As of 29 November 2024, over 1.768 billion gallons of water have been treated and re-injected. No MTU G system shutdowns occurred in November.

Eastern

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

The MTUs H and I continue to operate at a flow rate of 250 gpm. As of 29 November 2024, over 1.913 billion gallons of water have been treated and re-injected. The following MTU H and I system shutdowns occurred in November:

- 0330 on 11 November 2024 due to a power outage. There was a broken insulator and a blown fuse on the power pole on Wood Road. BETCO and Fernandes Line Construction were onsite on 14 November 2024 to perform repairs and MTUs H and I were restarted at 0820 on 14 November 2024.

MTU J typically operates at a flow rate of 120 gpm. As of 29 November 2024, over 896.2 million gallons of water have been treated and re-injected. The following MTU J shutdowns occurred in November:

- 0330 on 11 November 2024 due to a power outage and was restarted at 0856 on 12 November 2024.
- 0729 on 14 November 2024 to perform repairs on the Wood Road power pole and was restarted at 0850 on 14 November 2024.
- 0735 on 27 November 2024 to replace a leaking fire fighter valve on the effluent line and was restarted at 0755 on 27 November 2024.

MTU K continues to operate at a flow rate of 125 gpm. As of 29 November 2024, over 1.026 billion gallons of water have been treated and re-injected. The following MTU K shutdowns occurred in November:

- 0330 on 11 November 2024 due to a power outage and was restarted at 0834 on 12 November 2024.
- 0730 on 14 November 2024 to perform repairs on the Wood Road power pole and was restarted at 0835 on 14 November 2024.

J-3 Range Groundwater RA

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

The J-3 system is currently operating at a flow rate of 255 gpm. As of 29 November 2024, over 1.899 billion gallons of water have been treated and re-injected. The following J-3 system shutdowns occurred in November:

- 0330 on 11 November 2024 due to a power outage and was restarted at 0914 on 12 November 2024.

J-1 Range Groundwater RA

Southern

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

The Southern MTU has been optimized as part of the ESPM program at J-1 Range Southern. The on-base extraction well J1SEW0001 was turned off with regulatory approval on 31 January 2017 (formerly operated at a flow of 35 gpm), and flow was increased from 90 gpm to 125 gpm at the Leading-Edge extraction well J1SEW0002. The Leading-Edge extraction well continues to operate at a flow rate of 125 gpm. As of 29 November 2024, over 832.8 million gallons of water have been treated and re-injected. The following J-1 Range Southern MTU shutdowns occurred in November:

- 0330 on 11 November 2024 due to a power outage and was restarted at 0753 on 12 November 2024.
- 0722 on 14 November 2024 to perform repairs on the Wood Road power pole and was restarted at 0837 on 14 November 2024.
- 0810 on 18 November 2024 to replace a leaking influent valve on the bag filter #1 housing and was restarted at 0838 on 18 November 2024.

Northern

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

The Northern MTU continues to operate at a total system flow rate of 250 gpm. The flow rates at for the two extraction wells at J-1 Northern were modified on 28 October 2024 based on regulatory agency concurrence with the J-1 Range Northern Data Presentation for January 2023 to December 2023. The flow rate at J1NEW0001 was reduced from 125 gpm to 85 gpm

and the flow rate at J1NEW0002 was increased from 125 gpm to 165 gpm. As of 29 November 2024, over 1.425 billion gallons of water have been treated and re-injected. No J-1 Range Northern MTU shutdowns occurred in November.

Central Impact Area RA

The Central Impact Area (CIA) Groundwater treatment system consists of removal and treatment of groundwater to minimize downgradient migration of explosives compounds and perchlorate. The ETR system includes the following components: three extraction wells, an ex-situ treatment process consisting of an ion exchange resin and granular activated carbon media to treat explosives compounds, and three infiltration galleries to return treated water to the aquifer. The CIA systems 1, 2, and 3 continue to run at a combined total flow rate of 750 gpm. As of 29 November 2024, over 3.800 billion gallons of water have been treated and re-injected. No CIA system shutdowns occurred in November.

2. SUMMARY OF ACTIONS TAKEN

Operable Unit (OU) Activity as of 29 November 2024:

CIA

- Source Area investigations
 - Conducted routine visual checks of Consolidated Shot Structure (CSS) soil cover and surface area around the perimeter of the CSS
-

Demolition Area 1

- No activity.

Demolition Area 2

- No activity.

J-1 Range

- Groundwater sampling within the J-1 Range Northern SPM Program.
- Groundwater hydraulic monitoring within the J-1 Northern SPM Program.
- Groundwater sampling within the J-1 Range Southern SPM Program.
- Bag filters changed at the J-1 Range Northern treatment system on 12 November 2024.
- Bag filters changed at the J-1 Range Southern treatment system on 18 November 2024.

J-2 Range

- Bag filters changed at J-2 Range Eastern MTU K on 26 November 2024.

J-3 Range

- No activity

L Range

- No activity

Small Arms Ranges

- No activity

Northwest Corner

- No activity

Training Areas

- No activity

Impact Area Roads

- No activity

Other

- Collected process water samples from Central Impact Area, Demolition Area 1, J-1 Range Northern, J-1 Range Southern, J-2 Range Eastern, J-2 Range Northern, and J-3 Range treatment systems.

JBCC Impact Area Groundwater Study Program (IAGWSP) Tech Update Meeting Minutes for 14 November 2024

Project and Fieldwork Update

Darrin Smith (USACE) stated that KGS sampling team completed the annual System Performance Monitoring (SPM) event at J-1 South (54 screens). Crews are now conducting SPM sampling at J-1 North (84 screens). After completion of that (likely in mid-December), crews will conduct semi-annual SPM sampling at the Central Impact Area and Demolition Area 1.

The November monthly treatment system sampling was conducted from 11/4/24–11/7/24. October sampling results showed no exceedances so no carbon changeouts are needed at this time.

Per agency approval on 10/24/24, the pumping rates at J-1 North were increased from 125 gallons per minute (gpm) to 165 gpm. The pumping rate at EW-1 was decreased from 125 gpm to 85 gpm.

The systems at J-1 South, J-2 East, and J-3 were tripped due to a power outage on 11/11/24. All systems were restarted with the exception of the J-2 East H&I systems, which are still down due to a blown fuse and cracked insulators. Those are being replaced today and restart is expected by this afternoon.

Gina Kaso (USACE) stated that there are no operations in the Central Impact Area (CIA). A draft CIA Source Removal Annual Report will be sent to the agencies before the end of the year. Ms. Kaso (USACE) noted that previous EPA contract reviewers did not seem to understand the program's purpose or objectives, incorrectly associating the work with the Military Munitions Response Program/munitions removal. Shawn Cody (IAGWSP) suggested

that a briefing for the agency contractors could be done before they review this next report. Ms. Kaso (USACE) will work with the USACE contractors (Weston) to coordinate a presentation prior to submission of the report.

Document and Project Tracking

Mr. Dvorak (USACE) reviewed the list of deliverables (provided in advance of the meeting).

J-2 East J2EW0005 Packering Update

Ryan Hupfer (USACE) provided an update on the packer installed at J2EW0005 (EW-5). He oriented the attendees to the site location and pointed out the areas of contamination (defined as Zones 1, 2, 3). He noted that the majority of the remaining contamination is located in Zone 2. The highest concentrations of perchlorate and RDX were measured at MW-368M1 in Zone 2 (at approximately -60 below sea level (msl). On average, the concentrations of perchlorate were at, or slightly above, 20 parts per billion (ppb) and concentrations of RDX have been ranging from 5-8 ppb. The concentrations in MW-368M2 have been consistently declining significantly.

Before packering, EW-5 operated at 250 gpm with two screened intervals: a shallow screen at -28.14 to -39.14 ft msl (205 to 216 ft bgs) and a deep screen at -68.14 to -82.14 ft msl (245 to 259 ft bgs). Optimization using the packering method was recommended as part of the 2022 Environmental Monitoring Report.

A packer was installed May 1–3, 2024 to extract groundwater only from the deep screen to focus on deeper groundwater extraction and optimize contaminant removal. Mr. Hupfer (USACE) displayed pictures and a graphic to show the installation of the packering. Mr. Hupfer (USACE) described the process of installing a packer in a well, which took several hours. He noted that hand cranks were used to get the packering done tightly for a watertight seal.

Hydraulic monitoring was performed to assess the impacts of the packering. Pre- (4/25/24) and post-packering (5/10/24) water levels were collected at 14 wells screens: MW-368 (3 screens), MW-335 (3 screens), J2MW-01 (3 screens), J2MW-02 (3 screens), and MW-324 (2 screens).

Mr. Hupfer (USACE) reported that the packering was successful. Changes in vertical hydraulic gradients and influent concentrations indicate that the packering changed hydraulic flow in the deeper zone and the vertical gradients became more negative in the lower zone. The packering is focusing groundwater extraction in the lower portion of the aquifer, as intended.

Perchlorate and RDX influent concentrations were reviewed at the J-2 East H and I systems to assess the groundwater extraction impacts of the packering. Post-packering, the perchlorate concentrations went from 0.7 ppb to 1.5 ppb. RDX concentrations went from just below the reporting limits to 0.25 (on average). Mr. Hupfer (USACE) stated that this suggests the isolated flow will be successful at capturing higher influent concentrations and removing higher concentration mass.

Elliott Jacobs (MassDEP) commented that he watched the packering installation. He stated that the hydraulic analysis and influent concentrations indicate improvement on the capture zone for

deeper contamination. He is interested to see the results of the next sampling round to assess whether the packering was actually successful at capturing deeper contamination. Mr. Hupfer (USACE) stated that groundwater concentrations and elevations will continue to be monitored at the MW-368 cluster, and at other well clusters located near EW-5, to assess cleanup and hydraulic control of the plumes.

JBCC Cleanup Team Meeting

The next JBCC Cleanup Team (JBCCCT) has yet to be scheduled (previous meeting was 13 November 2024). Meeting details and presentation materials from previous meetings can be found on the IAGWSP web site at <http://jbcc-iagwsp.org/community/impact/presentations/>. The Cleanup Team meeting discusses late breaking news and responses to action items, as well as updates from the IAGWSP and the Installation Restoration Program (IRP). The JBCCCT meetings provide a forum for community input regarding issues related to both the IRP and the IAGWSP.

3. SUMMARY OF DATA RECEIVED

Table 1 summarizes sampling for all media from 01 to 30 November 2024. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 01 to 30 November 2024. 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 the validated detections of per- and polyfluoroalkyl substances (PFAS) for influent and groundwater results analyzed by EPA draft Method 1633 and received from 01 to 30 November 2024. Table 3 PFAS results are compared to the Regional Screening Levels (RSLs) published by EPA in November 2023.

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

4. SUBMITTED DELIVERABLES

Deliverables submitted during the reporting period include the following:

- Draft J-1 Range Southern Environmental Monitoring Report for January 2023 through December 2023 01 November 2024
- Response to Comments on the Draft J-2 Range Northern Environmental Monitoring Report for November 2022 through October 2023 01 November 2024
- Final – Revision 1 2021 Source Removal Annual Report at the Central Impact Area 07 November 2024
- Final L Range Environmental Monitoring Report for March 2023 through February 2024 12 November 2024
- Monthly Progress Report No. 331 for September 2024 13 November 2024
- Final J-1 Range Northern Environmental Monitoring Report for January 2021 through December 2022 18 November 2024
- Impact Area Groundwater Study Program Draft Comprehensive PFAS Report 22 November 2024

5. SCHEDULED ACTIONS

The following actions and/or documents are being prepared in September 2024.

- Response to Comments on the Five-Year Review
- Draft Small Arms Range Environmental Monitoring Report for July 2023 through June 2024
- Draft Central Impact Area Environmental Monitoring Report for July 2023 through June 2024
- Draft Demolition Area 1 Environmental Monitoring Report for July 2023 through June 2024
- Comment Resolution for the J-3 Range Environmental Monitoring Report for September 2022 through August 2023
- Final J-2 Range Eastern Environmental Monitoring Report for November 2022 through October 2023
- Comment Resolution for the J-2 Range Northern Environmental Monitoring Report for November 2022 through October 2023
- Response to Comments on the J-1 Range Southern Environmental Monitoring Report for January 2023 to December 2023
- Draft Demolition Area 2 PFAS Technical Memorandum
- Final Central Impact Area 2021 Source Removal Annual Report Addendum

TABLE 1
Sampling Progress: 01 to 30 November 2024

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J1 Range Northern	MW-547M2	MW-547M2_F24	N	11/26/2024	Ground Water	178	188
J1 Range Northern	MW-547M1	MW-547M1_F24	N	11/26/2024	Ground Water	237	247
J1 Range Northern	MW-349M2	MW-349M2_F24	N	11/26/2024	Ground Water	194.9	204.9
J1 Range Northern	MW-349M1	MW-349M1_F24	N	11/26/2024	Ground Water	228.6	238.6
J1 Range Northern	MW-349M1	MW-349M1_F24D	FD	11/26/2024	Ground Water	228.6	238.6
J1 Range Northern	MW-346M4	MW-346M4_F24	N	11/25/2024	Ground Water	140	150
J1 Range Northern	MW-346M3	MW-346M3_F24	N	11/25/2024	Ground Water	175.3	185.3
J1 Range Northern	MW-346M2	MW-346M2_F24	N	11/25/2024	Ground Water	205.3	215.3
J1 Range Northern	MW-346M1	MW-346M1_F24	N	11/25/2024	Ground Water	244.7	254.7
J1 Range Northern	MW-346M1	MW-346M1_F24D	FD	11/25/2024	Ground Water	244.7	254.7
J1 Range Northern	MW-564M1	MW-564M1_F24	N	11/21/2024	Ground Water	227	237
J1 Range Northern	MW-564M1	MW-564M1_F24D	FD	11/21/2024	Ground Water	227	237
J1 Range Northern	MW-563M1	MW-563M1_F24	N	11/21/2024	Ground Water	215	225
J1 Range Northern	MW-656M2	MW-656M2_F24	N	11/21/2024	Ground Water	222.1	232.1
J1 Range Northern	MW-656M1	MW-656M1_F24	N	11/21/2024	Ground Water	244.1	254.1
J1 Range Northern	MW-245M2	MW-245M2_F24	N	11/19/2024	Ground Water	204	214
J1 Range Northern	MW-245M2	MW-245M2_F24D	FD	11/19/2024	Ground Water	204	214
J1 Range Northern	MW-245M1	MW-245M1_F24	N	11/19/2024	Ground Water	244	254
J1 Range Northern	MW-326M3	MW-326M3_F24	N	11/19/2024	Ground Water	165.24	175.26
J1 Range Northern	MW-326M2	MW-326M2_F24	N	11/19/2024	Ground Water	196.27	206.28
J1 Range Northern	MW-326M1	MW-326M1_F24	N	11/19/2024	Ground Water	250.01	260.01
J1 Range Northern	MW-549M2	MW-549M2_F24	MS	11/18/2024	Ground Water	187.3	197.3
J1 Range Northern	MW-549M2	MW-549M2_F24	N	11/18/2024	Ground Water	187.3	197.3
J1 Range Northern	MW-549M2	MW-549M2_F24	SD	11/18/2024	Ground Water	187.3	197.3
J1 Range Northern	MW-549M1	MW-549M1_F24	N	11/18/2024	Ground Water	227.4	237.4
J1 Range Northern	MW-253M1	MW-253M1_F24	N	11/18/2024	Ground Water	265.4	275.4
J1 Range Northern	MW-315M2	MW-315M2_F24	N	11/18/2024	Ground Water	195.72	205.72
J1 Range Northern	MW-315M1	MW-315M1_F24	N	11/18/2024	Ground Water	245.49	255.49
J1 Range Northern	MW-369M1	MW-369M1_F24	N	11/14/2024	Ground Water	254.07	264.07
J1 Range Northern	MW-220M1	MW-220M1_F24	MS	11/14/2024	Ground Water	248	258
J1 Range Northern	MW-220M1	MW-220M1_F24	N	11/14/2024	Ground Water	248	258
J1 Range Northern	MW-220M1	MW-220M1_F24	SD	11/14/2024	Ground Water	248	258
J1 Range Northern	MW-265M3	MW-265M3_F24	N	11/14/2024	Ground Water	200	210
J1 Range Northern	MW-265M2	MW-265M2_F24	N	11/14/2024	Ground Water	225	235
J1 Range Northern	MW-265M1	MW-265M1_F24	N	11/14/2024	Ground Water	265	275
J1 Range Northern	MW-306M2	MW-306M2_F24	N	11/13/2024	Ground Water	164.69	174.69
J1 Range Northern	MW-306M1	MW-306M1_F24	N	11/13/2024	Ground Water	184.88	194.88
J1 Range Northern	MW-306D	MW-306D_F24	N	11/13/2024	Ground Water	291.66	301.66
J1 Range Northern	MW-187M1	MW-187M1_F24	N	11/13/2024	Ground Water	160	170
J1 Range Northern	MW-187D	MW-187D_F24	N	11/13/2024	Ground Water	306	316
J1 Range Northern	MW-689M2	MW-689M2_F24	N	11/12/2024	Ground Water	231.4	241.4
J1 Range Northern	MW-689M1	MW-689M1_F24	N	11/12/2024	Ground Water	253.5	263.5
J1 Range Northern	MW-688M2	MW-688M2_F24	MS	11/12/2024	Ground Water	227.8	237.8
J1 Range Northern	MW-688M2	MW-688M2_F24	N	11/12/2024	Ground Water	227.8	237.8
J1 Range Northern	MW-688M2	MW-688M2_F24	SD	11/12/2024	Ground Water	227.8	237.8
J1 Range Northern	MW-688M1	MW-688M1_F24	N	11/12/2024	Ground Water	255.2	265.2
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-218A	N	11/07/2024	Process Water	0	0
J2 Range Northern	J2N-MID-2G	J2N-MID-2G-218A	N	11/07/2024	Process Water	0	0
J1 Range Northern	MW-567M1	MW-567M1_F24	N	11/07/2024	Ground Water	215.5	225.5
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-218A	N	11/07/2024	Process Water	0	0
J2 Range Northern	J2N-INF-G	J2N-INF-G-218A	N	11/07/2024	Process Water	0	0
J1 Range Northern	MW-657M2	MW-657M2_F24	N	11/07/2024	Ground Water	208.3	218.3
J1 Range Northern	MW-657M1	MW-657M1_F24	N	11/07/2024	Ground Water	240.3	250.3
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-218A	N	11/07/2024	Process Water	0	0
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-218A	N	11/07/2024	Process Water	0	0
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-218A	N	11/07/2024	Process Water	0	0
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-218A	N	11/07/2024	Process Water	0	0
J1 Range Northern	MW-605M2	MW-605M2_F24	N	11/07/2024	Ground Water	182.2	192.2
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-218A	N	11/07/2024	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 30 November 2024

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-218A	N	11/07/2024	Process Water	0	0
J1 Range Northern	J1N-EFF	J1N-EFF-133A	N	11/07/2024	Process Water	0	0
J1 Range Northern	J1N-MID2	J1N-MID2-133A	N	11/07/2024	Process Water	0	0
J1 Range Northern	J1N-MID1	J1N-MID1-133A	N	11/07/2024	Process Water	0	0
J1 Range Northern	MW-605M1	MW-605M1_F24	N	11/07/2024	Ground Water	220.2	230.2
J1 Range Northern	J1N-INF2	J1N-INF2-133A	N	11/07/2024	Process Water	0	0
J1 Range Northern	MW-286M2	MW-286M2_F24	N	11/06/2024	Ground Water	205	215
J1 Range Northern	MW-286M1	MW-286M1_F24	N	11/06/2024	Ground Water	259	269
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-INF-K	J2E-INF-K-194A	N	11/06/2024	Process Water	0	0
J1 Range Northern	MW-370M3	MW-370M3_F24	N	11/06/2024	Ground Water	174.96	184.96
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-INF-J	J2E-INF-J-194A	N	11/06/2024	Process Water	0	0
J1 Range Northern	MW-370M2	MW-370M2_F24	N	11/06/2024	Ground Water	215.54	225.54
J1 Range Northern	MW-370M1	MW-370M1_F24	N	11/06/2024	Ground Water	245.62	255.62
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-194A	N	11/06/2024	Process Water	0	0
J2 Range Eastern	J2E-INF-I	J2E-INF-I-194A	N	11/06/2024	Process Water	0	0
J1 Range Southern	J1S-EFF	J1S-EFF-204A	N	11/05/2024	Process Water	0	0
J1 Range Southern	J1S-MID	J1S-MID-204A	N	11/05/2024	Process Water	0	0
J1 Range Southern	J1S-INF-2	J1S-INF-2-204A	N	11/05/2024	Process Water	0	0
J3 Range	J3-EFF	J3-EFF-218A	N	11/05/2024	Process Water	0	0
J1 Range Northern	MW-164M2	MW-164M2_F24	N	11/05/2024	Ground Water	157	167
J3 Range	J3-MID-2	J3-MID-2-218A	N	11/05/2024	Process Water	0	0
J3 Range	J3-MID-1	J3-MID-1-218A	N	11/05/2024	Process Water	0	0
J3 Range	J3-INF	J3-INF-218A	N	11/05/2024	Process Water	0	0
J1 Range Northern	MW-164M1	MW-164M1_F24	N	11/05/2024	Ground Water	227	237
J2 Range Eastern	MW-164M1	MW-164M1_F24	N	11/05/2024	Ground Water	227	237
J2 Range Northern	MW-164M1	MW-164M1_F24	N	11/05/2024	Ground Water	227	237
Central Impact Area	CIA2-EFF	CIA2-EFF-130A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA2-MID2	CIA2-MID2-130A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA2-MID1	CIA2-MID1-130A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA2-INF	CIA2-INF-130A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA1-EFF	CIA1-EFF-130A	N	11/05/2024	Process Water	0	0
J1 Range Northern	MW-303M3	MW-303M3_F24	N	11/05/2024	Ground Water	139.74	149.69
Central Impact Area	CIA1-MID2	CIA1-MID2-130A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA1-MID1	CIA1-MID1-130A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA1-INF	CIA1-INF-130A	N	11/05/2024	Process Water	0	0
J1 Range Northern	MW-303M2	MW-303M2_F24	N	11/05/2024	Ground Water	235.09	245.1
J1 Range Northern	MW-303M2	MW-303M2_F24D	FD	11/05/2024	Ground Water	235.09	245.1
Central Impact Area	CIA3-EFF	CIA3-EFF-101A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA3-MID2	CIA3-MID2-101A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA3-MID1	CIA3-MID1-101A	N	11/05/2024	Process Water	0	0
Central Impact Area	CIA3-INF	CIA3-INF-101A	N	11/05/2024	Process Water	0	0
J1 Range Northern	MW-303M1	MW-303M1_F24	N	11/05/2024	Ground Water	299.07	309.07
J1 Range Northern	MW-166M3	MW-166M3_F24	N	11/04/2024	Ground Water	125	135
J1 Range Northern	MW-166M3	MW-166M3_F24D	FD	11/04/2024	Ground Water	125	135
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-224A	N	11/04/2024	Process Water	0	0
J1 Range Northern	MW-166M2	MW-166M2_F24	N	11/04/2024	Ground Water	150	160
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-224A	N	11/04/2024	Process Water	0	0
Demolition Area 1	FPR2-POST-IX-A	FPR2-POST-IX-A-224A	N	11/04/2024	Process Water	0	0
Demolition Area 1	FPR-2-INF	FPR-2-INF-224A	N	11/04/2024	Process Water	0	0

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 30 November 2024

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J1 Range Northern	MW-166M1	MW-166M1_F24	N	11/04/2024	Ground Water	218	223
Demolition Area 1	D1-EFF	D1-EFF-172A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1-MID-2	D1-MID-2-172A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1-MID-1	D1-MID-1-172A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1-INF	D1-INF-172A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1LE-EFF	D1LE-EFF-100A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1LE-MID2	D1LE-MID2-100A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1LE-MID1	D1LE-MID1-100A	N	11/04/2024	Process Water	0	0
Demolition Area 1	D1LE-INF	D1LE-INF-100A	N	11/04/2024	Process Water	0	0
J1 Range Southern	DP-389	DP-389_F24	N	11/04/2024	Ground Water	157.7	162.7

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received November 2024

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 Northern	J2EW2-MW2-C	J2EW2-MW2-C_F24	243.83	253.81	10/08/2024	SW6850	Perchlorate	0.058	J	µg/L	2.0		0.047	0.20
J2 Range Northern	J2EW3-MW-2-B	J2EW3-MW-2-B_F24	216.16	226.16	10/08/2024	SW6850	Perchlorate	0.050	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-293M2	MW-293M2_F24	196.42	206.42	10/03/2024	SW6850	Perchlorate	0.054	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-296M1	MW-296M1_F24	255.08	265.08	10/03/2024	SW6850	Perchlorate	0.078	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-330M1	MW-330M1_F24	313.1	323.13	10/02/2024	SW6850	Perchlorate	0.95		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-612M1	MW-612M1_F24	297	307	10/01/2024	SW6850	Perchlorate	0.061	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-632M1	MW-632M1_F24	254.5	264.5	09/26/2024	SW6850	Perchlorate	0.18	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-318M2	MW-318M2_F24	205.8	215.82	09/26/2024	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-318M1	MW-318M1_F24	305.79	315.81	09/26/2024	SW6850	Perchlorate	0.17	J	µg/L	2.0		0.047	0.20
J2 Range Northern	J2EW3-MW1-C	J2EW3-MW1-C_F24	245.66	255.66	09/25/2024	SW6850	Perchlorate	0.068	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-313M2	MW-313M2_F24	215.46	225.49	09/25/2024	SW6850	Perchlorate	0.058	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-313M1	MW-313M1_F24	255.42	265.42	09/25/2024	SW6850	Perchlorate	0.91		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-313M1	MW-313M1_F24D	255.42	265.42	09/25/2024	SW6850	Perchlorate	0.91		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-331M2	MW-331M2_F24	195.27	205.27	09/24/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.054	J	µg/L	0.60		0.043	0.20
J2 Range Northern	MW-331M1	MW-331M1_F24	235.41	245.41	09/24/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.094	J	µg/L	0.60		0.043	0.20
J2 Range Northern	J2EW2-MW3-B	J2EW2-MW3-B_F24	212.65	222.65	09/24/2024	SW6850	Perchlorate	1.4		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-348M2	MW-348M2_F24	206.54	216.54	09/24/2024	SW6850	Perchlorate	2.1		µg/L	2.0	X	0.047	0.20
J2 Range Northern	MW-620M1	MW-620M1_F24	268.6	278.6	09/23/2024	SW6850	Perchlorate	0.099	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-587M2	MW-587M2_F24	220	230	09/19/2024	SW6850	Perchlorate	3.4		µg/L	2.0	X	0.047	0.20
J2 Range Northern	MW-587M2	MW-587M2_F24D	220	230	09/19/2024	SW6850	Perchlorate	3.4		µg/L	2.0	X	0.047	0.20
J2 Range Northern	MW-587M1	MW-587M1_F24	250	260	09/19/2024	SW6850	Perchlorate	6.5		µg/L	2.0	X	0.047	0.20
J2 Range Northern	MW-631M2	MW-631M2_F24	200.1	210.1	09/19/2024	SW6850	Perchlorate	0.086	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-631M1	MW-631M1_F24	233.1	243.1	09/19/2024	SW6850	Perchlorate	0.055	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-586M2	MW-586M2_F24	211	221	09/18/2024	SW6850	Perchlorate	0.093	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-586M1	MW-586M1_F24	237	247	09/18/2024	SW6850	Perchlorate	0.42		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-322M1	MW-322M1_F24	245.77	255.77	09/18/2024	SW6850	Perchlorate	0.13	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-622M1	MW-622M1_F24	245.4	255.4	09/17/2024	SW6850	Perchlorate	1.3		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-704M2	MW-704M2_F24	217.8	227.8	09/17/2024	SW6850	Perchlorate	1.7		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-704M1	MW-704M1_F24	244	254	09/17/2024	SW6850	Perchlorate	0.12	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-621M2	MW-621M2_F24	219.4	229.4	09/16/2024	SW6850	Perchlorate	0.26		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-621M2	MW-621M2_F24D	219.4	229.4	09/16/2024	SW6850	Perchlorate	0.26		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-621M1	MW-621M1_F24	249.4	259.4	09/16/2024	SW6850	Perchlorate	0.070	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-702M1	MW-702M1_F24	277.5	287.5	09/16/2024	SW6850	Perchlorate	0.095	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-703M2	MW-703M2_F24	224.1	234.1	09/09/2024	SW6850	Perchlorate	0.60		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-703M2	MW-703M2_F24D	224.1	234.1	09/09/2024	SW6850	Perchlorate	0.60		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-703M1	MW-703M1_F24	248	258	09/09/2024	SW6850	Perchlorate	1.7		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-640M2	MW-640M2_F24	216	226	09/09/2024	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-635M1	MW-635M1_F24	265.4	275.4	09/05/2024	SW6850	Perchlorate	0.096	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-588M2	MW-588M2_F24	198	208	09/05/2024	SW6850	Perchlorate	0.46		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-588M2	MW-588M2_F24	198	208	09/05/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.17	J	µg/L	0.60		0.043	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24	162	172	09/05/2024	SW6850	Perchlorate	0.18	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24	162	172	09/05/2024	SW8330	4-Amino-2,6-dinitrotoluene	2.2		µg/L	7.3		0.075	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24	162	172	09/05/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.90		µg/L	0.60	X	0.043	0.20

J = Estimated Result
MDL = Method Detection Limit
RL = Reporting Limit
ND = Non-Detect

**TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received November 2024**

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 Northern	MW-289M2	MW-289M2_F24	162	172	09/05/2024	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.48		µg/L	400		0.091	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24D	162	172	09/05/2024	SW6850	Perchlorate	0.20		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24D	162	172	09/05/2024	SW8330	4-Amino-2,6-dinitrotoluene	2.3		µg/L	7.3		0.075	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24D	162	172	09/05/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.86		µg/L	0.60	X	0.043	0.20
J2 Range Northern	MW-289M2	MW-289M2_F24D	162	172	09/05/2024	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	0.50		µg/L	400		0.091	0.20
J2 Range Northern	MW-289M1	MW-289M1_F24	305	315	09/05/2024	SW8330	4-Amino-2,6-dinitrotoluene	0.81		µg/L	7.3		0.075	0.20
J2 Range Northern	MW-289M1	MW-289M1_F24	305	315	09/05/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.14	J	µg/L	0.60		0.043	0.20
J2 Range Northern	J2EW1-MW1-B	J2EW1-MW1-B_F24	205.82	215.82	09/04/2024	SW6850	Perchlorate	0.050	J	µg/L	2.0		0.047	0.20
J2 Range Northern	J2EW1-MW1-C	J2EW1-MW1-C_F24	240.8	250.8	09/04/2024	SW6850	Perchlorate	0.40		µg/L	2.0		0.047	0.20
J2 Range Northern	J2EW1-MW1-C	J2EW1-MW1-C_F24D	240.8	250.8	09/04/2024	SW6850	Perchlorate	0.38		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-634M3	MW-634M3_F24	170.6	180.6	09/04/2024	SW6850	Perchlorate	0.10	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-634M2	MW-634M2_F24	200.6	210.6	09/04/2024	SW6850	Perchlorate	0.89		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-634M1	MW-634M1_F24	305.6	315.6	09/04/2024	SW6850	Perchlorate	0.057	J	µg/L	2.0		0.047	0.20
J2 Range Northern	MW-634M1	MW-634M1_F24	305.6	315.6	09/04/2024	SW8330	3-Nitrotoluene	0.12	J	µg/L	120		0.099	0.20
J2 Range Northern	MW-589M2	MW-589M2_F24	211	221	09/03/2024	SW6850	Perchlorate	1.5		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-589M1	MW-589M1_F24	240	250	09/03/2024	SW6850	Perchlorate	0.39		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-585M3	MW-585M3_F24	198.5	208.5	09/03/2024	SW6850	Perchlorate	1.2		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-585M3	MW-585M3_F24	198.5	208.5	09/03/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.66		µg/L	0.60	X	0.043	0.20
J2 Range Northern	MW-585M3	MW-585M3_F24	198.5	208.5	09/03/2024	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.1		µg/L	400		0.091	0.20
J2 Range Northern	MW-585M3	MW-585M3_F24D	198.5	208.5	09/03/2024	SW6850	Perchlorate	1.3		µg/L	2.0		0.047	0.20
J2 Range Northern	MW-585M3	MW-585M3_F24D	198.5	208.5	09/03/2024	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	0.66		µg/L	0.60	X	0.043	0.20
J2 Range Northern	MW-585M3	MW-585M3_F24D	198.5	208.5	09/03/2024	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	1.2		µg/L	400		0.091	0.20
J2 Range Northern	MW-585M2	MW-585M2_F24	218.5	228.5	09/03/2024	SW6850	Perchlorate	0.12	J	µg/L	2.0		0.047	0.20

J = Estimated Result
MDL = Method Detection Limit
RL = Reporting Limit
ND = Non-Detect

TABLE 3
VALIDATED PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) RESULTS
Data Received November 2024

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 Northern	J2N-EFF-F	J2N-EFF-F_OCT24	0	0	10/01/2024	E1633	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	15.0		ng/L			1.0	4.0
J2 Range Northern	J2N-EFF-F	J2N-EFF-F_OCT24	0	0	10/01/2024	E1633	Perfluoroheptanoic acid (PFHpA)	0.75	J	ng/L	20.0		0.50	2.0
J2 Range Northern	J2N-EFF-F	J2N-EFF-F_OCT24	0	0	10/01/2024	E1633	Perfluorohexanoic acid (PFHxA)	1.4	J	ng/L	990		0.50	2.0
J2 Range Northern	J2N-EFF-F	J2N-EFF-F_OCT24	0	0	10/01/2024	E1633	Perfluorooctanesulfonamide (PFOSA)	1.3	J	ng/L			0.50	2.0
J2 Range Northern	J2N-EFF-F	J2N-EFF-F_OCT24	0	0	10/01/2024	E1633	Perfluorooctanoic acid (PFOA)	2.2		ng/L	6.0		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	14.0		ng/L			1.0	4.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluoroheptanesulfonic acid (PFHpS)	1.2	J	ng/L			0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluoroheptanoic acid (PFHpA)	0.68	J	ng/L	20.0		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluorohexanesulfonic acid (PFHxS)	6.9		ng/L	20.0		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluorohexanoic acid (PFHxA)	1.2	J	ng/L	990		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluorooctanesulfonamide (PFOSA)	0.61	J	ng/L			0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluorooctanesulfonic acid (PFOS)	14.0		ng/L	4.0	X	0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24-D	0	0	10/01/2024	E1633	Perfluorooctanoic acid (PFOA)	4.8		ng/L	6.0		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	13.0		ng/L			1.0	4.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluoroheptanesulfonic acid (PFHpS)	1.1	J	ng/L			0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluoroheptanoic acid (PFHpA)	0.70	J	ng/L	20.0		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluorohexanesulfonic acid (PFHxS)	6.5		ng/L	20.0		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluorohexanoic acid (PFHxA)	1.1	J	ng/L	990		0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluorooctanesulfonamide (PFOSA)	1.2	J	ng/L			0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluorooctanesulfonic acid (PFOS)	13.0		ng/L	4.0	X	0.50	2.0
J2 Range Northern	J2N-INF-F	J2N-INF-F_OCT24	0	0	10/01/2024	E1633	Perfluorooctanoic acid (PFOA)	4.3		ng/L	6.0		0.50	2.0
J3 Range	J3-INF	J3-INF_OCT24	0	0	10/01/2024	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.0	J	ng/L	20.0		0.50	2.0

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