MONTHLY PROGRESS REPORT #340
FOR JULY 2025

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

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

The following summary of progress is for the period from 01 to 31 July 2025.

1. SUMMARY OF REMEDIATION ACTIONS

Remediation Actions (RA) Underway at Camp Edwards as of 31 July 2025:

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. On 31 March 2025, the flow rate at the Frank Perkins Treatment Facility was reduced from 175 gallons per minute (gpm) to 100 gpm as a result of shutting down extraction well D1-EW-501, leaving only D1-EW-4 pumping as part of the Frank Perkins Road system. As of 31 July 2025, over 3.177 billion gallons of water were treated and re-injected. The following Frank Perkins Road Treatment Facility shutdowns occurred in the reporting period:

- 1300 on 23 May 2025 due to a vault flood at EW-4, which damaged electrical and pump equipment. Diagnostics of EW-4 are ongoing.EW-501 is currently operating in place of EW-4 to provide water for the drilling and O&M programs.

The Base Boundary Mobile Treatment Unit (MTU) continues to operate at a flow rate of 65 gpm. As of 31 July 2025, over 441.0 million gallons of water were treated and re-injected. No Base Boundary MTU shutdowns occurred in the reporting period.

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 31 July 2025, over 466.9 million gallons of water were treated and re-injected. No Leading-Edge system shutdowns occurred in the reporting period.

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 31 July 2025, over 2.353 billion gallons of water have been treated and re-injected. The following MTU E and F system shutdowns occurred in the reporting period:

- 2018 on 03 July 2025 Unit E tripped due to a power interruption and was restarted at 0825 on 07 July 2025

The Northern Treatment Building G continues to operate at a flow rate of 225 gpm. As of 31 July 2025, over 1.815 billion gallons of water have been treated and re-injected. The following MTU G system shutdowns occurred in the reporting period:

- 0912 on 28 March 2025 due to the unit only pumping at 170 GPM. Based on follow-up inspections it was determined that the pump was beginning to fail. Unit G was turned off to prevent further damage to the pump or extraction well. The existing pump/motor from EW0003 was removed on 13 May 2025. A modified well development was performed on 14 May 2025, and 4,300 gallons were purged from EW0003 and transported to Frank Perkins Treatment Plant for treatment. A new pump and motor were installed, and the system was restarted at 1323 on 01 July 2025.

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 31 July 2025, over 1.997 billion gallons of water have been treated and re-injected. The following MTU H and I system shutdowns occurred in the reporting period:

- 1106 on 29 July 2025 to drain IX #1 and IX #2 for a resin exchange on 30 July 2025. CFS was onsite on 30 July to perform the exchange, and the fresh resin was wet to allow for an overnight soak. Units H & I were restarted at 1221 on 31 July 2025.

MTU J continues to operate at a flow rate of 120 gpm. As of 31 July 2025, over 935.6 million gallons of water have been treated and re-injected. No MTU J shutdowns occurred in the reporting period.

MTU K continues to operate at a flow rate of 125 gpm. As of 31 July 2025, over 1.070 billion gallons of water have been treated and re-injected. No MTU K shutdowns occurred in the reporting period.

J-3 Range Groundwater RA

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

The J-3 system is currently operating at a flow rate of 255 gpm. As of 31 July 2025, over 1.985 billion gallons of water have been treated and re-injected. The following J-3 system shutdowns occurred in the reporting period:

- 0400 on 08 July 2025 due to FS-12 being off and was restarted at 1012 on 08 July 2025.
- 0136 on 11 July 2025 due to a power outage and was restarted at 1126 on 11 July 2025.
- 1640 on 25 July 2025 due to FS-12 being and was restarted at 1020 on 28 July 2025.
- 1630 on 29 July 2025 dues to FS-12 being turned off for an energy curtailment and was restarted at 0903 on 30 July 2025.

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 28 February 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 31 July 2025, over 875.8 million gallons of water have been treated and re-injected. No J-1 Range Southern MTU shutdowns occurred in the reporting period.

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 230 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 31 July 2025, over 1.510 billion gallons of water have been treated and re-injected. The following J-1 Range Northern MTU shutdowns occurred in the reporting period:

- 0941 on 29 July 2025 due to an “Over Temp” alarm. EW0002 was restarted at 1052 on 29 July 2025. EW0002 was decreased to 145 gpm on 29 July 2025.

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 31 July 2025, over 4.066 billion gallons of water have been treated and re-injected. The following CIA system shutdowns occurred in the reporting period:

- 0938 on 08 July 2025 CIA-1 tripped due to a “Floor Sump” alarm caused by a broken camlock on the GAC #3 vessel. A new flange and camlock were installed and CIA-1 was restarted at 1050 on 08 July 2025.
- 0800 on 15 July 2025 CIA-3 was turned off to drain GAC #3 and #6 for a carbon exchange. CIA-3 was restarted at 0750 on 17 July 2025.
- 0750 on 22 July 2025 CIA-1 was turned off to perform the carbon exchange and was restarted at 0755 on 24 July 2025.
- 0413 on 29 July 2025 at CIA-2 due to a broken camlock fitting on the IX #4 influent line. A new hose was installed, and CIA-2 was restarted at 0924 on 29 July 2025.

2. SUMMARY OF ACTIONS TAKEN

Operable Unit (OU) Activity as of 31 July 2025:

CIA

- Source Area investigations
    - Off-site T&D of approximately 500 CY of BIP/cracked open item location soils and CSS material to Bourne Landfill in Bourne, MA.
    - Conducted routine visual checks of 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
- No Activity

J-2 Range
- Groundwater Sampling withing the J-2 Range East SPM Program
- Resin exchange performed on 30 July 2025 at J-2 Range Eastern Unit I
- Well installation at MW-743 (J2 PFAS-1) completed

J-3 Range
- Groundwater sampling withing the J-3 Range SPM Program
- Vertical profiling at BH-747 (J3-PFAS-4) completed
- Vertical profiling at BH-746 (J3-PFAS-3) completed

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 17 July 2025

Project and Fieldwork Update

Darrin Smith (USACE) provided the project and fieldwork update. He reported that groundwater sampling crews are finishing the annual system performance monitoring (SPM) sampling at J-3, which is expected to continue through June. The J-2 East annual SPM event (including hydraulic sampling event) is next. Mr. Smith (USACE) stated that the June monthly treatment system sampling was completed on 7/11/25. A carbon changeout was performed at CIA-1 due to RDX reported at 0.27 µg/L, exceeding the 0.25 µg/L action level (AL). A carbon changeout is scheduled for 7/23 at CIA-3 due to RDX reported at 0.33 µg/L, exceeding the 0.25 µg/L AL. An ion exchange resin changeout is being scheduled for J-2 East Unit I due to perchlorate reported at 0.39 µg/L, exceeding the 0.35 µg/L AL.

Mr. Smith (USACE) provided an update on the status of groundwater treatment systems. He noted that Demo-1 Frank Perkins Road (FPR) system went down because of a storm on 5/22/25. Diagnostics were performed on extraction well (EW) 4 on 6/10/25 and the team is evaluating what will be required to turn this extraction well back on. In the meantime EW-501 was turned back on at 100 gallons per minute (gpm) on 6/4/25 to support drilling and will remain on until further notice. J-2 N System G was shut down on 3/28/25 due to an EW0003 pump failure. The pump and motor were removed, and a camera inspection was performed on 5/13/25. Well redevelopment was performed on 5/14/25. A new pump and motor were installed, and the system was restarted on 7/1/25. The total downtime was approximately 95 days. The J-1 North system is currently running at 220 gpm, rather than 250 gpm with EW0002 running at 135 gpm, rather than 165 gpm. EW0002 initially tripped 6/24/25 and continued to trip when restarted due to a variable frequency drive (VFD) fault alarm. The system ran at 85 gpm (with just EW0001 operational) until 6/27/25 when EW0002 was turned back on at 100 gpm. EW0002 ran at 100 gpm (with system running at 185 gpm) until 7/9/25 when it was turned up to 125 gpm (with system running at 210 gpm) until it was turned up to 135 gpm (with system running at 220 gpm) on 7/16/25. EW0002 will continue to run at a reduced rate until the telecommunications subcontractor can be on site to trouble shoot while running at 165 gpm and determine if a VFD needs to be replaced.

Mr. Smith (USACE) reported that drilling and groundwater profiling has been completed at the two J-2 N and three of the four J-3 PFAS well locations, including: J-2 PFAS 1 and 2 (borehole [BH]-742 & BH-743) and J-3 PFAS 1, 2 and 4 (BH-744, BH-745 and BH-747). Drilling and groundwater profiling at J-3 PFAS 3 (BH-746) began on 7/15 and continues. Well screen installation at the J-2 N PFAS locations is scheduled to begin immediately after the completion of profiling at BH-746.

Mr. Smith (USACE) provided a brief CIA Consolidated Shot Structure (CSS) and soil update. Off-site disposal of the BIP and cracked open item location soils and CSS material (~400 CY total) is scheduled to begin 7/22/25.

Elliott Jacobs (MassDEP) requested a map of the J-2 N PFAs wells BH-742 and BH-743 and a table showing the drilling profile results. He noted that information had typically been provided in the past. Jodi Lyn Cutler (IAGWSP)replied that information will be provided. Ms. Cutler (IAGWSP) also addressed a report comment from Mr. Jacobs (MassDEP) regarding the program's plan to sample MW-11S, which was installed at the beginning of the Impact Area Groundwater Study Program (IAGWSP). She explained that it has not been sampled for PFAS and has not been sampled for nearly 20 years. Ms. Cutler (IAGWSP) stated that the IAGWSP feels this well can serve as another data point.

Mr. Jacobs (MassDEP) suggested installation of a different shallow well screen near the PFAS detections that occurred near the water table. Mike Kulbersh (USACE) replied that MW-11S is screened within four feet vertically of the water table. Mr. Jacobs (MassDEP) stated that his preference would be installation of a shallow screen at the new well at J-2. He commented that if sampling results do not show the same level of PFAS concentrations, there could still be a data gap.

Jeff Dvorak (USACE) explained that the data that was previously shared was a screening sample from vertical profile sample and added that collection of a sample from a baler produced higher turbidity. The turbid sample required centrifugation. He stated that the purpose of the intermediate, deep interval, well screens was to cover the data gap identified with MW-05. He reiterated MW-11S provides an accessible water table well to address the original data gap that was identified in the PFAS report. Mr. Jacobs (MassDEP) asked what the PFAS detections were at the shallow interval screens at BH-742. Mr. Kulbersh (USACE) replied that it was 14 µg/L for PFOA. Mr. Jacobs (MassDEP) gave his approval for MS-11S to be sampled as a data point for the shallow well screen near the water table. Ms. Cutler (IAGWSP) noted that MW-11S will be evaluated for viability since it has not been sampled for several years.

Document and Project Tracking

Jeff Dvorak (USACE) reviewed the tracking list for documents and upcoming presentations.

J-2 Range North Groundwater Monitoring Annual Report Presentation

Ryan Hupfer began (USACE) his presentation on the J-2 Range Northern (J-2 N) Annual 2024 Environmental Monitoring Report, which covers the reporting period of November 1, 2023, through October 31, 2024. He displayed a figure showing the J-2 N operable unit and the current depictions of the extent of the current RDX and perchlorate plumes at the site. He pointed out the three extraction wells that are part of the extraction treatment and reinfiltration (ETR) system (EW0001, EW0002, and EW0003).

Mr. Hupfer (USACE) displayed a figure showing the RDX plume extent to the 0.6 µg/L risk-based concentration (RBC) and the remaining extent of the perchlorate plume to the 2 µg/L Massachusetts Maximum Contaminant Level (MMCL). He noted that the site has been divided into three zones: Zone 1 upgradient of EW0001, Zone 2 extending from EW0001 to past EW0002 moving to the northeast, and Zone 3 extending from just downgradient of EW0002 to EW0003. He explained that the ETR system has two different facilities to treat the water that's

being extracted. Mobile treatment units (MTUs) E and F are located between EW0001 and EW0002 to treat the groundwater extracted from EW0001 and EW0002. He added that treatment facility G is located close to EW0002, in Zone 3, and that treats the water from EW0003.

Mr. Hupfer (USACE) reviewed the system metrics including the percentage of the time that the system was operable during reporting period and any downtime for various reasons, which can include power outages, maintenance, mechanical and/or electrical issues, etc. He stated that MTUs E and F had a combined system uptime of 90.89% during the reporting period and treatment facility G had an uptime of 98.88%. There were no major events leading to significant downtime for this system during the reporting period. Mr. Hupfer reported on the trends in influent concentrations and mass removal for the two treatment facilities. Figures with the concentrations of perchlorate, RDX, and HMX since system operations began back in 2006 were displayed. He noted concentrations range from non-detect (ND) to 45 µg/L concentrations, at the time of system startup. During the current reporting period, perchlorate concentrations averaged 2 µg/L. Mr. Hupfer commented that the perchlorate concentration probably would have been closer to 1 µg/L if there had not been some downtime at MTU E. Mr. Hupfer (USACE) noted that RDX concentrations ranged from ND to below the reporting limit of 2 µg/L. HMX was ND throughout the reporting period.

Mr. Hupfer (USACE) also reviewed the contaminant mass removal and the cumulative contaminant mass removal throughout the operation of the systems. He noted there was no breakthrough of either RDX or perchlorate reported during the reporting period. During the reporting period, MTUs E and F removed 1.37 lbs of perchlorate, 0.01 lbs of RDX, and no HMX. Mr. Hupfer (USACE) stressed that there were different scales on the plots between MTUs E and F vs. treatment facility G. For MTUs E and F, the scales on the plots ranged from 0 to about 120 lbs. The scale on the plots for treatment facility G, ranged from 0 to 10 lbs. He reiterated that concentrations at treatment facility G have historically been significantly lower compared to MTUs E and F. Concentrations at facility G have been well below the RDX RBC since system operations started. Concentrations of perchlorate continue to trend downwards and leveled off over the past few years. There is no longer a perchlorate plume above 2 µg/L. The highest concentration of perchlorate was 2.2 µg/L during the reporting period. RDX and HMX were ND during the reporting period.

Mr. Hupfer (USACE) noted that there had been agency approval to stop sampling for explosives in the final 2023 EMR and, therefore, explosive sampling at this system will be discontinued. Mr. Hupfer reviewed the cumulative contaminant mass removal trends for facility G, reiterating the scales were 0 to 10 lbs, instead of zero to 120 lbs. During the reporting period, facility G removed 0.17 lbs of perchlorate and no RDX. Calculations for HMX have not happened for a while. There were no changeouts during the reporting period of the ion exchange resin or the granular activated carbon in the systems.

A map of the perchlorate monitoring network and the concentrations during the reporting period was displayed. The results were as follows: 89 well screens were sampled for perchlorate with concentrations ranging from ND to 6.50 µg/L (MW-587M1). Four screens had exceedances greater than the 2 µg/L MMCL and no screens exceeded the 15.0 µg/L health advisory (HA).

The trends indicate the perchlorate concentrations at the site are trending downwards. Mr. Hupfer (USACE) restated that the only area of the site with a perchlorate plume is Zone 2, which is in the middle of the operable unit. MW-587 defines the plume since it is the only well currently with an exceedance. Mr. Hupfer (USACE) reviewed the perchlorate trend plots noting the four wells with exceedances (MW-348M2, MW-587 M1 and M2 and EW0002) and emphasizing how contaminant concentrations are moving across the site.

Mr. Jacobs (MassDEP) asked about the trends in MW-703 and MW-704. Mr. Hupfer acknowledged a slight increase in concentrations in the past few years but noted that they are still below the MMCL. He stated that those wells will remain in the monitoring program.
Mr. Hupfer (USACE) displayed a longitudinal cross section of the perchlorate plume along the A prime that bisects the site. The cross section also shows the vertical capture zones for the three extraction wells. He stated it is important to note the vertical location of the perchlorate plume, which is well within the vertical capture zone of EW0002. He stated that the extraction well is operating as intended.

A map of the RDX monitoring network and the concentrations during the reporting period was displayed. The results were as follows: 22 well screens were sampled for RDX and concentrations ranged from ND to 0.90 µg/L (MW-289M2). Two screens had exceedances greater than the 0.6 µg/L RBC and no screens exceeded the 0.97 µg/L RSL or 2.00 µg/L HA. Mr. Hupfer (USACE) pointed out the location of the current RDX plume, which is depicted due to concentrations above 0.6 µg/L in two wells (MW-289M2 and MW-585M3). He commented that the RDX plume is narrow and small, compared to the size of the operable unit, and it's confined to Zone 1. Monitoring at these wells will continue. Mr. Hupfer USACE) showed the longitudinal cross section along that A prime line for the RDX plume at 0.6 µg/L. He is expecting attenuating concentrations below the RBC in the near future.

Mr. Hupfer (USACE) presented information on the aquifer hydraulic analyses that were performed using data collected during the reporting period. In September 2024 there was a synoptic water level gauging event performed. The water levels measured during the recording period range from 71.05 feet above the main sea level (MSL) measured at MW-164 M1 to the lowest groundwater elevation measured was 59.55 feet at MW-55.

Mr. Hupfer (USACE)reviewed the modeling that was performed using the 2024 pumping rates and presented the capture zones for the three extraction wells and Zone 2, which includes Water Supply (WS) Wells 1, 2, and 3. WS-1 is the closest to the site, but it's still about a mile downgradient of the J-2 N operable unit. Mr. Hupfer (USACE) noted that there were no exceedances anywhere near the water supply wells. Mr. Hupfer (USACE) highlighted the lateral extent of the capture zone and the lateral extent of the plumes. He explained the RDX plume is well within the capture zone of EW0001 and the perchlorate plume is well within the capture zone of EW0002. There are no plumes downgradient of EW0002. There are no detectable concentrations in EW0003, but the system is still operational for conservative monitoring.
The observed perchlorate concentrations and the model-predicted perchlorate concentrations were presented. The concentrations match up closely in Zone 2. There were slightly higher concentrations predicted just downgradient of EW0001, as compared to the observed concentrations and some outlying plumes, which are interpreted to attenuate in the near future.

In general, in the areas with the highest concentrations, the predicted approximations have matched what is being observed. RDX has not been simulated because the concentrations are very low and objectives were met many years ago.

Mr. Hupfer (USACE) reviewed the Decision Document dates for each zone with model-predicted perchlorate influent concentrations for the site from 2008, through the reporting period, and out to 2030. He also reviewed the observed concentrations for each zone to date. For Zone 1, the DD model-predicted cleanup time for perchlorate was 2026 and the current model-predicted cleanup time is also 2026. For Zone 2, the model-predicted cleanup was 2027 but the updated 2024 model-predicted cleanup time is 2034 due to lingering perchlorate concentrations previously mentioned. Mr. Hupfer reiterated that the only remaining area with an exceedance of the MMCL is in Zone 2, which is between EW0001 and EW0002. For Zone 3, the DD estimated cleanup time was 2023, which was met.

The IAGWSP does not have recommended changes for either treatment system operations or extraction rates for the extraction wells, nor any suggested changes to the hydraulic monitoring program. For the chemical monitoring program, IAGWSP recommends reducing the explosives and perchlorate sampling frequencies at EW0001 and EW0002 to annual monitoring and remove EW0003 entirely from the monitoring program. Perchlorate monthly monitoring will continue at the J-2 System G influent.

Mr. Hupfer (USACE) noted that 14 wells were installed in 2023 as part of the J-2 N PFAS monitoring investigation. The approved workplan stated that, at a minimum, two rounds of groundwater samples will be collected from these monitoring wells and analyzed for perchlorate. The second sample was collected during the reporting period. Samples from the 14 wells had perchlorate concentrations either below the RL or ND. Therefore, IAGWSP recommends removing these 14 wells from the perchlorate sampling program (MW-734M1/2, MW-735M1/2, MW-736M1/2, MW-737M1/2, MW-738M1/2, MW-739M1/2, and MW-740M1/2). A map of the well locations was displayed.

In summary, Mr. Hupfer (USACE) displayed a figure showing the legacy extent of the plumes, which is also the maximum extent of the plumes at J-2 N. He pointed out that the extent of the RDX plumes was initially large when the investigation began and is now hardly discernible with a dramatic reduction in the lateral and vertical extent. He noted there also were drastic reductions in perchlorate concentrations.

Mr. Jacobs (MassDEP)commented that the presentation shows the great strides in the cleanup efforts for perchlorate and explosives. He asked if there was an estimated timeframe for how long EW0003 will remain operable to monitor any potential detections in the influent. He noted that the influent concentrations for RDX and perchlorate are below regulatory standards but added that, if the well plays any role in keeping PFAS away from the public water supply, he is in favor of it remaining on. Mr. Hupfer (USACE) replied that a deadline for operations to cease has not been evaluated. He estimated it could be a few years and that, by that time, there likely would be ample justification for that shutdown. Mr. Jacobs (MassDEP) added that optimizing the upgradient extraction wells in the future will depend on the continued PFAS sampling results. He is concerned by the 2024 sampling results with detections at 30 parts per trillion, which

suggests that PFAS is somewhere in the aquifer that is not being monitored by the existing network. Mr. Hupfer (USACE) agreed that a more detailed analysis would be made before any proposed changes to EW0001 and EW0002.

Len Pinaud (MassDEP) noted that PFAS is not a contaminant of concern (COC) at J-2 N and he added that the current contamination levels for the site's COCs (RDX and perchlorate) show incredible cleanup progress. He is confident in the DD-projected timeline. Mr. Hupfer (USACE) agreed that the plume shell models are fairly conservative and the actual cleanup time might be sooner than currently predicted. Mr. Pinaud (MassDEP) stressed the importance of protecting WS-2. He stated that if WS-2 was not downgradient, the site could be approaching the long-term monitoring phase of site cleanup in accordance with the Massachusetts Contingency Plan (MCP). Mr. Cody (ARNG) agreed with Mr. Pinaud (MassDEP) and noted that the conservative approach for migrating the data over the years could likely mean cleanup is achieved earlier than the conservative estimates.

Upcoming tech meetings: August 14, 2025

JBCC Cleanup Team Meeting

The next JBCC Cleanup Team (JBCCCT) is tentatively scheduled for 27 August 2025. 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 31 July 2025. Table 2 summarizes the validated detections of explosives compounds and perchlorate for all groundwater results received from 01 to 31 July 2025. 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 31 July 2025. 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:

• Final J-1 Range Southern Environmental Monitoring Report for January 2023 through December 2023	03 July 2025
• Draft 2025 Source Removal Annual Report at the Central Impact Area	15 July 2025
• Response to Comments Letter on the Draft Central Impact Area Environmental Monitoring Reports for July 2023 through June 2024	18 July 2025
• Draft J-2 Range Eastern Environmental Monitoring Report for November 2023 through October 2024	29 July 2025

5. SCHEDULED ACTIONS

The following actions and/or documents are being prepared in August 2025.

- Response to Comments on the Impact Area Groundwater Study Program Draft Comprehensive PFAS Report
- Response to Comments on the J-1 Range North EMR for January 2023 through December 2023
- Draft J-3 Range EMR for September 2023 through August 2024
- Draft J-2 Range East EMR for November 2023 through October 2024
- Draft J-2 Range North EMR for November 2023 through October 2024
- Draft L Range EMR for March 2024 through February 2025
- Final Central Impact Area EMR for July 2023 through June 2024
- Draft J-1 Range South EMR for January 2024 through December 2024
- Response to Comments on the Draft 2025 Source Removal Annual Report at the Central Impact Area

TABLE 1
Sampling Progress: 01 to 31 July 2025

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J2 Range Eastern	MW-668M1	MW-668M1_F25	N	07/29/2025	Ground Water	168.70	178.70
J2 Range Eastern	MW-668M1	MW-668M1_F25D	FD	07/29/2025	Ground Water	168.70	178.70
J2 Range Eastern	MW-665M3	MW-665M3_F25	N	07/29/2025	Ground Water	175.20	185.20
J2 Range Eastern	MW-665M2	MW-665M2_F25	N	07/29/2025	Ground Water	205.20	215.20
J2 Range Eastern	MW-665M2	MW-665M2_F25D	FD	07/29/2025	Ground Water	205.20	215.20
J3 Range	BH-746	BH-746-291-296	N	07/24/2025	Water	291.00	296.00
J3 Range	BH-746	BH-746-281-286-D	FD	07/24/2025	Water	281.00	286.00
J3 Range	BH-746	BH-746-281-286	N	07/24/2025	Water	281.00	286.00
J3 Range	BH-746	BH-746-271-276	N	07/23/2025	Water	271.00	276.00
J3 Range	BH-746	BH-746-261-266	N	07/23/2025	Water	261.00	266.00
J3 Range	BH-746	BH-746-251-256	N	07/23/2025	Water	251.00	256.00
J3 Range	BH-746	BH-746-241-246	N	07/23/2025	Water	241.00	246.00
J3 Range	BH-746	BH-746-231-236	N	07/22/2025	Water	231.00	236.00
J3 Range	BH-746	BH-746-225-230	N	07/22/2025	Water	225.00	230.00
J2 Range Northern	J2N-EFF-F	J2N-EFF-F_JUL25	N	07/22/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-INF-F	J2N-INF-F_JUL25D	FD	07/22/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-INF-F	J2N-INF-F_JUL25	N	07/22/2025	Process Water	0.00	0.00
J3 Range	BH-746	BH-746-211-216-D	FD	07/21/2025	Water	211.00	216.00
J3 Range	BH-746	BH-746-211-216	N	07/21/2025	Water	211.00	216.00
J3 Range	BH-746	BH-746-201-206	N	07/21/2025	Water	201.00	206.00
J3 Range	BH-746	BH-746-191-196	N	07/21/2025	Water	191.00	196.00
J3 Range	BH-746	BH-746-181-186	N	07/21/2025	Water	181.00	186.00
J3 Range	BH-746	BH-746-171-176	N	07/21/2025	Water	171.00	176.00
J3 Range	BH-746	BH-746-161-166	N	07/21/2025	Water	161.00	166.00
J3 Range	BH-746	BH-746-151-156	N	07/21/2025	Water	151.00	156.00
J3 Range	BH-746	BH-746-141-146	N	07/18/2025	Water	141.00	146.00
J3 Range	BH-746	BH-746-131-136	N	07/18/2025	Water	131.00	136.00
J3 Range	BH-746	BH-746-121-126	N	07/18/2025	Water	121.00	126.00

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 July 2025

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J3 Range	BH-746	BH-746-111-116-D	FD	07/18/2025	Water	111.00	116.00
J3 Range	BH-746	BH-746-111-116	N	07/18/2025	Water	111.00	116.00
J3 Range	BH-746	BH-746-103-108	N	07/18/2025	Water	103.00	108.00
J3 Range	BH-746	BH-746-98	N	07/18/2025	Water	98.00	98.00
J3 Range	MW-576M2	MW-576M2_F25	N	07/17/2025	Ground Water	133.90	143.90
J3 Range	MW-576M1	MW-576M1_F25	N	07/17/2025	Ground Water	173.90	183.90
J3 Range	MW-193S	MW-193S_F25	N	07/17/2025	Ground Water	32.50	37.50
J3 Range	MW-653M2	MW-653M2_F25	MS	07/16/2025	Ground Water	59.30	69.30
J3 Range	MW-653M2	MW-653M2_F25	N	07/16/2025	Ground Water	59.30	69.30
J3 Range	MW-653M2	MW-653M2_F25	SD	07/16/2025	Ground Water	59.30	69.30
J3 Range	MW-653M1	MW-653M1_F25	N	07/16/2025	Ground Water	147.50	157.50
J3 Range	MW-197M3	MW-197M3_F25	N	07/16/2025	Ground Water	60.20	65.20
J3 Range	MW-197M2	MW-197M2_F25	N	07/16/2025	Ground Water	80.20	85.20
J3 Range	J3EW0032	J3EW0032_F25	N	07/15/2025	Process Water	102.00	152.00
J3 Range	90EW0001	90EW0001_F25	N	07/15/2025	Process Water	83.10	143.80
J3 Range	J3EWIP2	J3EWIP2_F25	N	07/15/2025	Process Water	150.50	170.50
J3 Range	J3EWIP2	J3EWIP2_F25D	FD	07/15/2025	Process Water	150.50	170.50
J3 Range	J3EWIP1	J3EWIP1_F25	N	07/15/2025	Process Water	153.00	193.00
J3 Range	BH-747	BH-747-290-295	N	07/14/2025	Water	290.00	295.00
J3 Range	BH-747	BH-747-281-286	N	07/14/2025	Water	281.00	286.00
J3 Range	BH-747	BH-747-271-276	N	07/11/2025	Water	271.00	276.00
J3 Range	BH-747	BH-747-261-266	N	07/11/2025	Water	261.00	266.00
J3 Range	MW-247M2	MW-247M2_F25	N	07/10/2025	Ground Water	125.00	135.00
Central Impact Area	CIA2-EFF	CIA2-EFF-138A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA2-MID2	CIA2-MID2-138A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA2-MID1	CIA2-MID1-138A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA2-INF	CIA2-INF-138A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA1-EFF	CIA1-EFF-138A	N	07/10/2025	Process Water	0.00	0.00

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 July 2025

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
Central Impact Area	CIA1-MID2	CIA1-MID2-138A	N	07/10/2025	Process Water	0.00	0.00
J3 Range	90MP0059B	90MP0059B_F25	N	07/10/2025	Ground Water	116.40	118.90
Central Impact Area	CIA1-MID1	CIA1-MID1-138A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA1-INF	CIA1-INF-138A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA3-EFF	CIA3-EFF-109A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA3-MID2	CIA3-MID2-109A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA3-MID1	CIA3-MID1-109A	N	07/10/2025	Process Water	0.00	0.00
Central Impact Area	CIA3-INF	CIA3-INF-109A	N	07/10/2025	Process Water	0.00	0.00
J3 Range	90PLT01006	90PLT01006_F25	N	07/10/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-EFF-G	J2N-EFF-G-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-MID-1G	J2N-MID-1G-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-INF-G	J2N-INF-G-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-MID-2F	J2N-MID-2F-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-MID-1F	J2N-MID-1F-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-EFF-EF	J2N-EFF-EF-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-MID-2E	J2N-MID-2E-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-MID-1E	J2N-MID-1E-226A	N	07/09/2025	Process Water	0.00	0.00
J2 Range Northern	J2N-INF-EF	J2N-INF-EF-226A	N	07/09/2025	Process Water	0.00	0.00
J3 Range	BH-747	BH-747-191-196	N	07/09/2025	Water	191.00	196.00
J3 Range	MW-361M3	MW-361M3_F25	N	07/09/2025	Ground Water	59.87	69.87
J1 Range Northern	J1N-EFF	J1N-EFF-141A	N	07/09/2025	Process Water	0.00	0.00
J1 Range Northern	J1N-MID2	J1N-MID2-141A	N	07/09/2025	Process Water	0.00	0.00
J1 Range Northern	J1N-MID1	J1N-MID1-141A	N	07/09/2025	Process Water	0.00	0.00
J1 Range Northern	J1N-INF2	J1N-INF2-141A	N	07/09/2025	Process Water	0.00	0.00
J3 Range	MW-361M2	MW-361M2_F25	N	07/09/2025	Ground Water	104.09	114.09
J3 Range	BH-747	BH-747-181-186	N	07/09/2025	Water	181.00	186.00
J3 Range	MW-361M1	MW-361M1_F25	N	07/09/2025	Ground Water	134.03	144.03
J3 Range	BH-747	BH-747-171-176	N	07/09/2025	Water	171.00	176.00

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 July 2025

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J3 Range	MW-155M1	MW-155M1_F25	N	07/09/2025	Ground Water	124.00	134.00
J3 Range	BH-747	BH-747-161-166	N	07/09/2025	Water	161.00	166.00
J3 Range	BH-747	BH-747-151-156	N	07/08/2025	Water	151.00	156.00
J3 Range	BH-747	BH-747-141-146-D	FD	07/08/2025	Water	141.00	146.00
J3 Range	BH-747	BH-747-141-146	N	07/08/2025	Water	141.00	146.00
J1 Range Southern	J1S-EFF	J1S-EFF-212A	N	07/08/2025	Process Water	0.00	0.00
J1 Range Southern	J1S-MID	J1S-MID-212A	N	07/08/2025	Process Water	0.00	0.00
J1 Range Southern	J1S-INF-2	J1S-INF-2-212A	N	07/08/2025	Process Water	0.00	0.00
J3 Range	BH-747	BH-747-131-136	N	07/08/2025	Water	131.00	136.00
Demolition Area 1	FPR-2-EFF-A	FPR-2-EFF-A-232A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	FPR-2-GAC-MID1A	FPR-2-GAC-MID1A-232A	N	07/08/2025	Process Water	0.00	0.00
J3 Range	MW-227M2	MW-227M2_F25	N	07/08/2025	Ground Water	110.00	120.00
Demolition Area 1	FPR-2-INF	FPR-2-INF-232A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	D1LE-EFF	D1LE-EFF-108A	N	07/08/2025	Process Water	0.00	0.00
J3 Range	BH-747	BH-747-121-126	N	07/08/2025	Water	121.00	126.00
Demolition Area 1	D1LE-MID2	D1LE-MID2-108A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	D1LE-MID1	D1LE-MID1-108A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	D1LE-INF	D1LE-INF-108A	N	07/08/2025	Process Water	0.00	0.00
J3 Range	MW-329M2	MW-329M2_F25	N	07/08/2025	Ground Water	150.05	160.05
J3 Range	BH-747	BH-747-111-116	N	07/08/2025	Water	111.00	116.00
J3 Range	MW-329M1	MW-329M1_F25	N	07/08/2025	Ground Water	179.96	189.96
Demolition Area 1	D1-EFF	D1-EFF-180A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	D1-MID-2	D1-MID-2-180A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	D1-MID-1	D1-MID-1-180A	N	07/08/2025	Process Water	0.00	0.00
Demolition Area 1	D1-INF	D1-INF-180A	N	07/08/2025	Process Water	0.00	0.00
J3 Range	MW-250M3	MW-250M3_F25	N	07/07/2025	Ground Water	95.00	105.00
J3 Range	J3-EFF	J3-EFF-226A	N	07/07/2025	Process Water	0.00	0.00
J3 Range	J3-MID-2	J3-MID-2-226A	N	07/07/2025	Process Water	0.00	0.00

N = Normal Sample
FD = Field Duplicate

TABLE 1
Sampling Progress: 01 to 31 July 2025

Area Of Concern	Location	Field Sample ID	Sample Type	Date Sampled	Matrix	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
J3 Range	J3-MID-1	J3-MID-1-226A	N	07/07/2025	Process Water	0.00	0.00
J3 Range	J3-INF	J3-INF-226A	N	07/07/2025	Process Water	0.00	0.00
J3 Range	MW-250M2	MW-250M2_F25	MS	07/07/2025	Ground Water	145.00	155.00
J3 Range	MW-250M2	MW-250M2_F25	N	07/07/2025	Ground Water	145.00	155.00
J3 Range	MW-250M2	MW-250M2_F25	SD	07/07/2025	Ground Water	145.00	155.00
J2 Range Eastern	J2E-EFF-K	J2E-EFF-K-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-2K	J2E-MID-2K-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-1K	J2E-MID-1K-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-INF-K	J2E-INF-K-202A	N	07/07/2025	Process Water	0.00	0.00
J3 Range	MW-157M1	MW-157M1_F25	N	07/07/2025	Ground Water	154.00	164.00
J2 Range Eastern	J2E-EFF-J	J2E-EFF-J-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-2J	J2E-MID-2J-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-1J	J2E-MID-1J-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-INF-J	J2E-INF-J-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-2H	J2E-MID-2H-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-1H	J2E-MID-1H-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-EFF-IH	J2E-EFF-IH-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-2I	J2E-MID-2I-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-MID-1I	J2E-MID-1I-202A	N	07/07/2025	Process Water	0.00	0.00
J2 Range Eastern	J2E-INF-I	J2E-INF-I-202A	N	07/07/2025	Process Water	0.00	0.00
J3 Range	90MW0054	90MW0054_F25	N	07/07/2025	Ground Water	107.00	112.00
J3 Range	90MW0054	90MW0054_F25D	FD	07/07/2025	Ground Water	107.00	112.00
J3 Range	BH-747	BH-747-96	N	07/01/2025	Water	96.00	96.00
J3 Range	MW-163S	MW-163S_F25	N	07/01/2025	Ground Water	38.00	48.00
J3 Range	MW-163S	MW-163S_F25D	FD	07/01/2025	Ground Water	38.00	48.00
J3 Range	MW-232M2	MW-232M2_F25	N	07/01/2025	Ground Water	61.00	66.00
J3 Range	MW-232M1	MW-232M1_F25	N	07/01/2025	Ground Water	77.50	82.50
J3 Range	MW-232M1	MW-232M1_F25D	FD	07/01/2025	Ground Water	77.50	82.50

N = Normal Sample
FD = Field Duplicate

TABLE 2
VALIDATED EXPLOSIVE AND PERCHLORATE RESULTS
Data Received 01 to 31 July 2025

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-245M2	MW-245M2_S25	204.00	214.00	06/11/2025	SW6850	Perchlorate	5.7		µg/L	2.0	X	0.019	0.20
J1 Range Northern	MW-245M2	MW-245M2_S25	204.00	214.00	06/11/2025	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	30.0		µg/L	0.60	X	0.18	0.40
J1 Range Northern	MW-245M2	MW-245M2_S25	204.00	214.00	06/11/2025	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	13.0		µg/L	400		0.13	0.20
J1 Range Northern	MW-245M2	MW-245M2_S25D	204.00	214.00	06/11/2025	SW6850	Perchlorate	5.8		µg/L	2.0	X	0.019	0.20
J1 Range Northern	MW-245M2	MW-245M2_S25D	204.00	214.00	06/11/2025	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	30.0		µg/L	0.60	X	0.18	0.40
J1 Range Northern	MW-245M2	MW-245M2_S25D	204.00	214.00	06/11/2025	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	13.0		µg/L	400		0.13	0.20
J1 Range Northern	MW-590M2	MW-590M2_S25	238.00	248.00	06/10/2025	SW6850	Perchlorate	1.7		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-590M2	MW-590M2_S25D	238.00	248.00	06/10/2025	SW6850	Perchlorate	1.7		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-584M1	MW-584M1_S25	248.00	258.00	06/10/2025	SW6850	Perchlorate	0.24		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-430M1	MW-430M1_S25	245.23	255.23	06/09/2025	SW6850	Perchlorate	0.040	J	µg/L	2.0		0.019	0.20
J1 Range Northern	MW-303M2	MW-303M2_S25	235.09	245.10	06/05/2025	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4	J	µg/L	0.60	X	0.092	0.20
J1 Range Northern	MW-303M2	MW-303M2_S25	235.09	245.10	06/05/2025	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.1	J	µg/L	400		0.13	0.20
J1 Range Northern	MW-303M2	MW-303M2_S25D	235.09	245.10	06/05/2025	SW8330	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	1.4	J	µg/L	0.60	X	0.092	0.20
J1 Range Northern	MW-303M2	MW-303M2_S25D	235.09	245.10	06/05/2025	SW8330	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2.1	J	µg/L	400		0.13	0.20
J1 Range Northern	MW-606M2	MW-606M2_S25	193.20	203.20	05/29/2025	SW6850	Perchlorate	0.020	J	µg/L	2.0		0.019	0.20
J1 Range Northern	MW-541M1	MW-541M1_S25	210.00	220.00	05/28/2025	SW6850	Perchlorate	0.028	J	µg/L	2.0		0.019	0.20
J1 Range Northern	MW-689M1	MW-689M1_S25	253.50	263.50	05/28/2025	SW6850	Perchlorate	1.2		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-688M2	MW-688M2_S25	227.80	237.80	05/28/2025	SW6850	Perchlorate	0.023	J	µg/L	2.0		0.019	0.20
J1 Range Northern	MW-567M1	MW-567M1_S25	215.50	225.50	05/27/2025	SW6850	Perchlorate	0.38		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-566M1	MW-566M1_S25	232.00	242.00	05/27/2025	SW6850	Perchlorate	0.41		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-547M2	MW-547M2_S25	178.00	188.00	05/27/2025	SW6850	Perchlorate	0.027	J	µg/L	2.0		0.019	0.20
J1 Range Northern	MW-547M1	MW-547M1_S25	237.00	247.00	05/27/2025	SW6850	Perchlorate	1.9		µg/L	2.0		0.019	0.20
J1 Range Northern	MW-549M1	MW-549M1_S25	227.40	237.40	05/22/2025	SW6850	Perchlorate	0.50		µg/L	2.0		0.019	0.20

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

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

TABLE 3
VALIDATED PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) RESULTS
Data Received 01 to 31 July 2025

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
J3 Range	BH-747	BH-747-96	96.00	96.00	07/01/2025	E1633	N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.54	J	ng/L			0.38	1.5
J3 Range	BH-747	BH-747-96	96.00	96.00	07/01/2025	E1633	Perflouropropanoic acid (PFPrA)	6.7	J	ng/L			1.9	7.6
J3 Range	BH-747	BH-747-96	96.00	96.00	07/01/2025	E1633	Perfluorobutanoic acid (PFBA)	2.0	J	ng/L	1800		0.76	3.0
J3 Range	BH-747	BH-747-96	96.00	96.00	07/01/2025	E1633	Perfluoroheptanoic acid (PFHpA)	0.40	J	ng/L	20.0		0.38	1.5
J3 Range	BH-747	BH-747-96	96.00	96.00	07/01/2025	E1633	Perfluorooctanoic acid (PFOA)	0.90	J	ng/L	6.0		0.38	1.5
J3 Range	BH-745	BH-745-231-236	231.00	236.00	06/25/2025	E1633	Perflouropropanoic acid (PFPrA)	1.9	J	ng/L			1.7	7.0
J3 Range	BH-745	BH-745-231-236	231.00	236.00	06/25/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	0.44	J	ng/L	4.0		0.35	1.4
J3 Range	BH-745	BH-745-201-206	201.00	206.00	06/23/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	0.43	J	ng/L	600		0.40	1.6
J3 Range	BH-745	BH-745-191-196	191.00	196.00	06/23/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	0.37	J	ng/L	600		0.35	1.4
J3 Range	BH-745	BH-745-181-186	181.00	186.00	06/23/2025	E1633	Perflouropropanoic acid (PFPrA)	2.2	J	ng/L			1.8	7.3
J3 Range	BH-745	BH-745-171-176	171.00	176.00	06/23/2025	E1633	Perflouropropanoic acid (PFPrA)	1.8	J	ng/L			1.8	7.3
J3 Range	BH-745	BH-745-151-156	151.00	156.00	06/23/2025	E1633	Perflouropropanoic acid (PFPrA)	7.7		ng/L			1.8	7.2
J3 Range	BH-745	BH-745-141-146	141.00	146.00	06/20/2025	E1633	Perflouropropanoic acid (PFPrA)	4.0	J	ng/L			1.9	7.6
J3 Range	BH-745	BH-745-101-106-D	101.00	106.00	06/20/2025	E1633	Perflouropropanoic acid (PFPrA)	2.4	J	ng/L			2.1	8.3
J3 Range	BH-745	BH-745-101-106	101.00	106.00	06/20/2025	E1633	Perflouropropanoic acid (PFPrA)	2.3	J	ng/L			2.0	8.0
J3 Range	BH-745	BH-745-91-96	91.00	96.00	06/20/2025	E1633	Perflouropropanoic acid (PFPrA)	2.2	J	ng/L			2.0	8.0
J3 Range	BH-745	BH-745-81-86	81.00	86.00	06/20/2025	E1633	Perflouropropanoic acid (PFPrA)	7.8	J	ng/L			2.1	8.4
J3 Range	BH-745	BH-745-71-76	71.00	76.00	06/19/2025	E1633	Perflouropropanoic acid (PFPrA)	41.0		ng/L			1.9	7.7
J3 Range	BH-745	BH-745-71-76	71.00	76.00	06/19/2025	E1633	Perfluorooctanesulfonamide (PFOSA)	1.7		ng/L			0.39	1.5
J3 Range	BH-745	BH-745-61-66	61.00	66.00	06/19/2025	E1633	Perflouropropanoic acid (PFPrA)	120		ng/L			1.9	7.7
J3 Range	BH-745	BH-745-61-66	61.00	66.00	06/19/2025	E1633	Perfluoroheptanoic acid (PFHpA)	1.1	J	ng/L	20.0		0.38	1.5
J3 Range	BH-745	BH-745-61-66	61.00	66.00	06/19/2025	E1633	Perfluorohexanoic acid (PFHxA)	0.54	J	ng/L	990		0.38	1.5
J3 Range	BH-745	BH-745-61-66	61.00	66.00	06/19/2025	E1633	Perfluorononanoic acid (PFNA)	0.97	J	ng/L	5.9		0.38	1.5
J3 Range	BH-745	BH-745-61-66	61.00	66.00	06/19/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	12.0		ng/L	4.0	X	0.38	1.5
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.92	J	ng/L			0.40	1.6
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perflouropropanoic acid (PFPrA)	6.1	J	ng/L			2.0	8.0
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perfluoroheptanoic acid (PFHpA)	0.61	J	ng/L	20.0		0.40	1.6
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.5	J	ng/L	20.0		0.40	1.6

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TABLE 3
VALIDATED PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) RESULTS
Data Received 01 to 31 July 2025

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
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perfluorohexanoic acid (PFHxA)	0.95	J	ng/L	990		0.40	1.6
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	8.0		ng/L	4.0	X	0.40	1.6
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perfluoropentanesulfonic acid (PFPeS)	0.53	J	ng/L			0.40	1.6
J3 Range	BH-745	BH-745-51	51.00	51.00	06/19/2025	E1633	Perfluoropentanoic acid (PFPeA)	1.2	J	ng/L			0.40	1.6
J3 Range	BH-744	BH-744-121-126-D	121.00	126.00	06/11/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.2	J	ng/L	20.0		0.36	1.4
J3 Range	BH-744	BH-744-121-126	121.00	126.00	06/11/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.1	J	ng/L	20.0		0.36	1.5
J3 Range	BH-744	BH-744-111-116	111.00	116.00	06/11/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	0.68	J	ng/L	20.0		0.37	1.5
J3 Range	BH-744	BH-744-71-76	71.00	76.00	06/10/2025	E1633	Perflouropropanoic acid (PFPrA)	2.6	J	ng/L			1.8	7.4
J3 Range	BH-744	BH-744-71-76	71.00	76.00	06/10/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.2	J	ng/L	20.0		0.37	1.5
J3 Range	BH-744	BH-744-71-76	71.00	76.00	06/10/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	1.0	J	ng/L	4.0		0.37	1.5
J3 Range	BH-744	BH-744-71-76	71.00	76.00	06/10/2025	E1633	Perfluorooctanoic acid (PFOA)	0.39	J	ng/L	6.0		0.37	1.5
J3 Range	BH-744	BH-744-61-66	61.00	66.00	06/10/2025	E1633	N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.0	J	ng/L			0.39	1.6
J3 Range	BH-744	BH-744-61-66	61.00	66.00	06/10/2025	E1633	Perflouropropanoic acid (PFPrA)	4.1	J	ng/L			2.0	7.9
J3 Range	BH-744	BH-744-61-66	61.00	66.00	06/10/2025	E1633	Perfluorononanoic acid (PFNA)	0.74	J	ng/L	5.9		0.39	1.6
J3 Range	BH-744	BH-744-61-66	61.00	66.00	06/10/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	33.0		ng/L	4.0	X	0.39	1.6
J3 Range	BH-744	BH-744-61-66	61.00	66.00	06/10/2025	E1633	Perfluorooctanoic acid (PFOA)	1.7		ng/L	6.0		0.39	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.87	J	ng/L			0.80	3.2
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	1.0	J	ng/L			0.80	3.2
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	N-Ethyl perfluorooctanesulfonamide (NEtFOSA)	53.0		ng/L			0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	320		ng/L			0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	4.2		ng/L	600		0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorobutanoic acid (PFBA)	10.0		ng/L	1800		0.80	3.2
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorodecanoic acid (PFDA)	3.4		ng/L	20.0		0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluoroheptanesulfonic acid (PFHpS)	17.0		ng/L			0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluoroheptanoic acid (PFHpA)	5.1		ng/L	20.0		0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	11.0		ng/L	20.0		0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorohexanoic acid (PFHxA)	2.5		ng/L	990		0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorononanoic acid (PFNA)	4.1		ng/L	5.9		0.40	1.6

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TABLE 3
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Data Received 01 to 31 July 2025

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
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorooctanesulfonamide (PFOSA)	18.0		ng/L			0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	95.0		ng/L	4.0	X	0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluorooctanoic acid (PFOA)	180		ng/L	6.0	X	0.40	1.6
J3 Range	BH-744	BH-744-52	52.00	52.00	06/10/2025	E1633	Perfluoropentanesulfonic acid (PFPeS)	0.42	J	ng/L			0.40	1.6
J2 Range Northern	BH-743	BH-743-281-286	281.00	286.00	06/05/2025	E1633	Perfluorooctanesulfonamide (PFOSA)	0.95	J	ng/L			0.41	1.7
J2 Range Northern	BH-743	BH-743-261-266	261.00	266.00	06/03/2025	E1633	Perfluorooctanesulfonamide (PFOSA)	1.5		ng/L			0.38	1.5
J2 Range Northern	BH-743	BH-743-111-116	111.00	116.00	05/29/2025	E1633	Perflouropropanoic acid (PFPrA)	2.2	J	ng/L			2.0	8.1
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	1.2	J	ng/L			0.84	3.4
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perflouropropanoic acid (PFPrA)	16.0		ng/L			2.1	8.4
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	2.2		ng/L	600		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorobutanoic acid (PFBA)	8.9		ng/L	1800		0.84	3.4
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorodecanoic acid (PFDA)	0.72	J	ng/L	20.0		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluoroheptanoic acid (PFHpA)	0.62	J	ng/L	20.0		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.5	J	ng/L	20.0		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorohexanoic acid (PFHxA)	1.1	J	ng/L	990		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorononanoic acid (PFNA)	0.56	J	ng/L	5.9		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	1.3	J	ng/L	4.0		0.42	1.7
J2 Range Northern	BH-743	BH-743-108	108.00	108.00	05/29/2025	E1633	Perfluorooctanoic acid (PFOA)	1.4	J	ng/L	6.0		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	3.4		ng/L	600		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorobutanoic acid (PFBA)	1.4	J	ng/L	1800		0.84	3.3
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluoroheptanoic acid (PFHpA)	0.93	J	ng/L	20.0		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	0.93	J	ng/L	20.0		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorohexanoic acid (PFHxA)	2.0		ng/L	990		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	0.72	J	ng/L	4.0		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorooctanoic acid (PFOA)	3.2		ng/L	6.0		0.42	1.7
J1 Range Southern	J1S-EFF	J1S-EFF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluoropentanoic acid (PFPeA)	1.9		ng/L			0.42	1.7
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	3.2		ng/L	600		0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorobutanoic acid (PFBA)	0.98	J	ng/L	1800		0.81	3.3

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J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluoroheptanoic acid (PFHpA)	0.71	J	ng/L	20.0		0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.0	J	ng/L	20.0		0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorohexanoic acid (PFHxA)	2.0		ng/L	990		0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorooctanesulfonamide (PFOSA)	0.77	J	ng/L			0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	0.64	J	ng/L	4.0		0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluorooctanoic acid (PFOA)	2.8		ng/L	6.0		0.41	1.6
J1 Range Southern	J1S-INF	J1S-INF_MAY25	0.00	0.00	05/21/2025	E1633	Perfluoropentanoic acid (PFPeA)	1.2	J	ng/L			0.41	1.6
J2 Range Northern	BH-742	BH-742-291-296	291.00	296.00	05/12/2025	E1633	Perfluorooctanesulfonamide (PFOSA)	0.43	J	ng/L			0.37	1.5
J2 Range Northern	BH-742	BH-742-191-196-D	191.00	196.00	05/05/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	0.70	J	ng/L	4.0		0.38	1.5
J2 Range Northern	BH-742	BH-742-181-186	181.00	186.00	05/05/2025	E1633	Perfluorobutanoic acid (PFBA)	1.4	J	ng/L	1800		0.75	3.0
J2 Range Northern	BH-742	BH-742-171-176	171.00	176.00	05/02/2025	E1633	Perfluorooctanoic acid (PFOA)	0.41	J	ng/L	6.0		0.39	1.6
J2 Range Northern	BH-742	BH-742-161-166	161.00	166.00	05/02/2025	E1633	Perfluorooctanoic acid (PFOA)	0.40	J	ng/L	6.0		0.37	1.5
J2 Range Northern	BH-742	BH-742-151-156	151.00	156.00	05/02/2025	E1633	Perfluorobutanoic acid (PFBA)	3.0	J	ng/L	1800		0.81	3.2
J2 Range Northern	BH-742	BH-742-151-156	151.00	156.00	05/02/2025	E1633	Perfluorooctanoic acid (PFOA)	0.72	J	ng/L	6.0		0.40	1.6
J2 Range Northern	BH-742	BH-742-140-146	140.00	146.00	05/02/2025	E1633	Perflouropropanoic acid (PFPrA)	13.0		ng/L			1.9	7.5
J2 Range Northern	BH-742	BH-742-140-146	140.00	146.00	05/02/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	0.64	J	ng/L	600		0.38	1.5
J2 Range Northern	BH-742	BH-742-140-146	140.00	146.00	05/02/2025	E1633	Perfluorobutanoic acid (PFBA)	7.3		ng/L	1800		0.75	3.0
J2 Range Northern	BH-742	BH-742-140-146	140.00	146.00	05/02/2025	E1633	Perfluorohexanoic acid (PFHxA)	0.49	J	ng/L	990		0.38	1.5
J2 Range Northern	BH-742	BH-742-140-146	140.00	146.00	05/02/2025	E1633	Perfluorooctanoic acid (PFOA)	0.62	J	ng/L	6.0		0.38	1.5
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	1.9	J	ng/L			0.85	3.4
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.66	J	ng/L	1.5		0.33	1.3
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perflouropropanoic acid (PFPrA)	530		ng/L			2.1	8.5
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluoro-3-methoxypropanoic acid (PFMPA)	0.96	J	ng/L			0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorobutanesulfonic acid (PFBS)	25.0		ng/L	600		0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorobutanoic acid (PFBA)	260		ng/L	1800		0.85	3.4
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorodecanoic acid (PFDA)	2.7		ng/L	20.0		0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluoroheptanoic acid (PFHpA)	9.8		ng/L	20.0		0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorohexanesulfonic acid (PFHxS)	1.4	J	ng/L	20.0		0.42	1.7

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

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

TABLE 3
VALIDATED PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) RESULTS
Data Received 01 to 31 July 2025

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	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorohexanoic acid (PFHxA)	17.0		ng/L	990		0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorononanoic acid (PFNA)	3.8		ng/L	5.9		0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorooctanesulfonic acid (PFOS)	2.9		ng/L	4.0		0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluorooctanoic acid (PFOA)	14.0		ng/L	6.0	X	0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluoropentanesulfonic acid (PFPeS)	0.49	J	ng/L			0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluoropentanoic acid (PFPeA)	6.0		ng/L			0.42	1.7
J2 Range Northern	BH-742	BH-742-136	136.00	136.00	05/02/2025	E1633	Perfluoroundecanoic acid (PFUnA)	0.50	J	ng/L	600		0.42	1.7

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

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