

APPENDIX B

WORK PLAN DEVIATIONS

Appendix B
Work Plan Deviations

PFAS CERCLA Remedial Investigation Site Characterization Summary Report
Former Loring Air Force Base PFAS Remedial Investigation
Limestone, Maine

Location ID	Planned Work	Planned Work Rationale	Deviation	Deviation Explanation	Notes
2022 Field Season					
Fire Training Area					
JMW8003B	Collect two rounds of groundwater samples	Confirm PFAS results from SI	Sampled well JBW8003B as JMW8003B does not exist	Well ID used in work plan (JMW8003B) was retrieved from ERPIMS database but was incorrect. Well depth measured at database coordinates matched construction details for JBW8003B	ERPIMS database was updated to correct well ID prior to uploading groundwater results
MW8012BR	Collect two rounds of groundwater samples	Confirm PFAS results from SI	Groundwater samples not collected	Well was abandoned following 2018 sample collection	Suitable replacement for well was not found
USGS-2	Collect two rounds of groundwater samples	Confirm PFAS results from SI	Collected samples from two intervals within open borehole well instead of one	Provided additional information to compare PFAS results in shallow and deep bedrock	None
SB01006	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Location is northwest of known PFAS detections in SB01002	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 9 ft. BGS (dense till)	None
SB01017	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 0.5 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB01021	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1.5 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB01023	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 0.5 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB01024	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1.3 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB01027	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1.3 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB01028	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
Landfill 2					
JMW0891	Collect two rounds of groundwater samples	Confirm PFAS results from SI	Second groundwater sample not collected	Well dry during second sampling event	None
LF2MW3	Collect two rounds of groundwater samples	Confirm PFAS results from SI	Second groundwater sample not collected	Pump stuck in well during redevelopment prior to sampling second time	Communicated issue with BECOS contractor
OW02001	Collect two rounds of groundwater samples	Sample newly installed well downgradient of Landfill No. 2	Groundwater samples not collected	Well dry during both sampling events	Well routinely checked throughout summer to assess if conditions had changed. Well was sampled in 2023.
OW03001	Install and sample overburden well	Located between Landfill No. 3 and potential off-site receptors	Well not installed	No saturation in overburden or underlying weathered rock/till interface	None
OW03002	Install and sample overburden well	Downgradient of Landfill No. 3, northwest of groundwater divide	Well not installed	No saturation in overburden or underlying weathered rock/till interface	None

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SB05010	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	No previous data in northwest portion of structural fire station	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 6 ft BGS	None
SB05016	Collect soil samples from three intervals (0-1' BGS, 8-10 ft BGS, 18-20 BGS or above water table or bedrock)	East of known PFAS detections in SB05002; Assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Water table encountered at 7 ft. BGS	None
SB05018	Collect soil samples from three intervals (0-1' BGS, 8-10 ft BGS, 18-20 BGS or above water table or bedrock.	East of known PFAS detections in SB05004; to be co-located with OW05002	Soil sample from deepest interval not collected (18-20 ft. BGS)	Water table encountered at 9 ft. BGS	None
SB05026	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB05030	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 0.5 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
Burn House					
SB06006	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Northeast of known PFAS detections in SB06004; Assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 8.5 ft. BGS	None
SB06008	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Southwest of known PFAS detections in SB06002 and southeast of known PFAS detections in SB06003	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 6.5 ft. BGS	None
SB06010	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Northeast of Burn House along drainage ditch; PFAS were detected in hemp study conducted northeast of this location	Sample collected via hand auger instead of direct push rig	Aroostook Band of Mi'kmaq Nation requested this location be sampled using a hand auger due to close proximity to the hemp study	None
SB06016	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB06017	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 1 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
Crash Fire					
SB07015	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	East of known PFAS detections in AA07SB04; Assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 10 ft. BGS	None
LYS07007SDUP / LYS07007DDUP	None	None	Location added as a duplicate shallow/ deep lysimeter location adjacent to LYS07007S and LYS07007D	Original location (Nose Dock 44) could not be installed due to subsurface conditions so a duplicate Crash Fire location was added to test reproducibility of results for quality control purposes	None
Arch Hangar					
SB08007	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	PFAS detections in soil at Jet Engine Maintenance Building south of Arch Hangar; no previous soil sampling southwest of Hangar; assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 10 ft. BGS	None
Jet Engine Maintenance					

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JEBS-4	Collect two rounds of groundwater samples	Shallow fractured bedrock well; added based on comments provided by the MEDEP and USEPA	Second groundwater sample not collected	Well dry during second sampling event	None
SB09004	Collect soil samples to assess vertical aquifer characterization in the overburden	South of known PFAS detections in SB09002 and SB09003	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 15 ft. BGS (dense till)	None
Nose Dock Area/Hardstands					
JBW7725	Collect two rounds of groundwater samples	Shallow bedrock characterization in Hardstand Area; paired with JBW7726	Groundwater samples not collected	Dedicated pump for BECOS sampling event was unable to be removed	Replacement well USMW025 was added to the program
JBW-7809	Collect two rounds of groundwater samples	Upgradient of Hardstand Area and previous detection in JBW7711	Groundwater samples not collected	Well was purged dry during development activities on 5/5/2022 and never recharged	Checked location several times throughout the summer and assumed initial purge to be perched water; location removed from the program; no suitable alternatives identified
JMW0406	Collect two rounds of groundwater samples	Confirm PFAS results from SI	Second groundwater sample not collected	Well dry during second sampling event	None
SB12012	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 0.5 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB14006	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Southeast of known PFAS detections in SB14003; Assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Water encountered at 8 ft. BGS	None
Lysimeter	Install a shallow and deep lysimeter	Proposed as a location due to preliminary PFAS in soil results	Lysimeters not installed	Shallow perched water created unsuitable conditions for installation	Lysimeters installed in alternate location (Area 07)
Fuel Tank Farm					
BW16001	Install a bedrock well	Bedrock characterization in the Fuel Tank Farm area, paired with well JPZ0606	Well was unable to be installed in the proposed location	Onsite conditions made the proposed location inaccessible due to safety reasons. Location was moved approximately 450 ft northeast	None
JMW0605	Collect two rounds of groundwater samples	Lateral overburden characterization in Fuel Tank Farm (north)	Groundwater samples not collected	JMW0605 is damaged- PVC bent at a 45 degree angle	Replacement well JMW0682 was added to the program
JPZ0606	Collect two rounds of groundwater samples	Lateral overburden characterization in Fuel Tank Farm (west)	Second groundwater sample not collected	Well dry during second sampling event.	None
OW16003	Install an overburden well	Lateral overburden characterization in the Fuel Tank Farm (south); paired with JMW0603	Well was unable to be installed in the proposed location	Onsite conditions made the proposed location inaccessible. Location was moved approximately 150 feet east	None
SB16007	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	South of tank in berm; no previous soil data	Samples collected via hand auger instead of direct push rig	Location not accessible with drill rig	None
SB16008	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	East of known PFAS detections in JPZ0606 and Southeast of SB16003	Samples collected via hand auger instead of direct push rig	Location not accessible with drill rig	None
SB16009	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Southeast of tank in bermed area; no previous soil data	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 2 ft. BGS	Location inaccessible by direct push rig and was collected by hand, limiting depth
SB16010	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	West of tank in bermed area; no previous soil data	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 2 ft. BGS	Location inaccessible by direct push rig and was collected by hand, limiting depth

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Fuel Dump Area					
SW/SD-17005	Collect co-located surface water and sediment sample	Resample of known PFAS detections in SW17005	Surface water and sediment sample not collected	Location dry	Suitable alternative not located
Runway					
051-MW03	Collect two rounds of groundwater samples	Bedrock characterization southeast of Main Runway	Groundwater samples not collected	Well was decommissioned at unknown time and ERPIMS was not updated.	051-MW03 was dropped from the program without a replacement as no suitable alternatives were identified
JBW-7304	None	None	Well was not part of work plan	New well location added to the program; open 6 inch borehole on East Gate Road, had not previously been located during SI activities and was not in ERPIMS database	Location added to ERPIMS database with well information provided by MEDEP
UNK_033	Collect two rounds of groundwater samples	Deep bedrock characterization southern Main Runway; upgradient of Base Laundry; paired with ASMW304	Second groundwater sample not collected	Geosub pump stuck in well during first round sampling activities due to a damaged PVC well riser	Pump was eventually extracted
SB18022	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Southeast of known PFAS detections in AA18SB02; collect sample every ~1500 ft to bound runway	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 5 ft. BGS	None
SB18027	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 8 ft. BGS	None
SB18028	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Assess vertical aquifer characterization in overburden	Soil sample from deepest interval not collected (18-20 ft. BGS)	Refusal at 8.5 ft. BGS	None
KC-135 Crash					
SB19005	Collect soil samples from three intervals (0-1' BGS, 8-10' BGS, 18-20' BGS or above water table or bedrock)	Assess vertical aquifer characterization in overburden	Samples not collected	Location inaccessible	None
SB19006	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Location inaccessible with direct push drilling rig. Surface soil sample collected instead.	None
SB19007	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Location inaccessible with direct push drilling rig. Surface soil sample collected instead.	None
SB19008	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 2 ft. BGS	Location inaccessible by direct push rig and was collected by hand, limiting depth
Flightline Drainage Ditch					
SB21001	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Samples collected via hand auger instead of direct push rig	Location not accessible with drill rig	None
SB21003	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil sample from deepest interval not collected (8-10 ft. BGS)	Refusal at 0.5 ft. BGS (dense till)	Location inaccessible by direct push rig and was collected by hand, limiting depth
Wastewater Treatment Plant					
OW22002	Install and sample overburden well	Overburden characterization north of the WWTP	OW22002 was not installed	No saturation in overburden or underlying weathered rock/till interface	None
OW22005	Install and sample overburden well	Overburden characterization north of the WWTP	OW22005 was not installed	No saturation in overburden or underlying weathered rock/till interface	None

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SB22005	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil samples not collected	Underground utilities, suitable alternative location did not exist	None
SB22008	Collect soil samples from two intervals (0-1' BGS and 8-10' BGS or above water table or bedrock)	Step out boring based on preliminary RI soil analytical results	Soil samples not collected	Underground utilities, suitable alternative location did not exist	None
Former Jet Engine Test Cell					
JBW7912	Collect two rounds of groundwater samples	Deep overburden downgradient of previous detection	Collected samples from two intervals within open borehole well instead of one	Provided additional information to compare PFAS results in shallow and deep bedrock	None
MMW3402R	Collect two rounds of groundwater samples	Confirm PFAS results from SI; Perched water	First round groundwater sample not collected	Well dry during first sampling event	None
SW/SD-24002	Collect co-located surface water and sediment sample	No previous surface water sampling in this area; North of known PFAS detections in SW17005; collect sample from drainage ditch	Surface water and sediment sample not collected	Location was dry	None
Groundwater Collected from Other Wells ^a					
Other groundwater well sampling	Collect groundwater samples	Confirm PFAS sampling results collected during the SI or collect samples from new locations	Samples (12) not collected	See notes	Two locations were not sampled due to unsafe and/or unexpected conditions encountered; the remaining 10 locations were not completed as the property owners were unresponsive to repeated contact attempts for either access agreement completion or scheduling
Greenlaw Brook Drainage					
EBGB_004	Collect co-located surface water and sediment sample	No previous surface water or sediment sampling in this area	Surface water sample not collected	No surface water encountered	None
EBGB_BW001	Install a bedrock well	Bedrock at confluence of East and West Branch Greenlaw Brook; paired with WBGB_OW001	Well was unable to be installed in the proposed location	Onsite conditions made the proposed location inaccessible. Location was moved approximately 800 feet southwest	None
EBGB_OW001	Install and sample overburden well	Overburden at confluence of East and West Branch Greenlaw Brook; paired with EBGB_BW001	EBGB_OW001 not installed	No saturation in overburden or underlying weathered rock/till interface	None
LMR-002	Collect brook trout fish tissue sample	New sample location downstream of known detections in TL02	Brook trout not encountered	Secondary species (Creek Chub) collected	None
WBGB_OW001	Collect two rounds of groundwater samples	Overburden characterization, downgradient of Nose Dock Area; paired with WBGB_BW001	Groundwater samples not collected	Well dry	Appeared to be seasonally perched water based on field observations
WBGB-004	Not applicable	Not applicable	Fish tissue sample collected at location not originally scoped for fish tissue collection	Surface water/sediment sampling at this location identified brook trout in the water body; brook trout were visible and easily accessible from the roadway	None
SWI_004	Collect surface water intake sample	Surface water intake located in Greenlaw Brook	Surface water intake sample not collected	No surface water intake was located during reconnaissance	None
FHSSG02	Collect co-located hydric soil and water sample or soil sample if hydric soils are not encountered	Identify a surface soil or shallow groundwater exposure pathway at potential foraging locations	Surface water sample not collected	Surface water not encountered at location; collected soil sample only per work plan	None

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LT-05	Collect surface water and sediment samples	Resample of known PFAS detections at LTM station	Samples collected approximately 250 ft to the north of the LTM station	Unable to access LTM station without boat	Samples collected from the shore as close as possible to LTM station; new location LT-05B created
LT2	Collect surface water and sediment samples	Resample of known PFAS detections at LTM station	Samples collected approximately 4500 ft upstream of the LTM station	LTM station was inaccessible or incorrectly identified in the field	Samples collected slightly downstream of the confluence of Little Madawaska River and Greenlaw Brook; new location LT2B created
Butterfield Brook Drainage					
SWI_001	Collect surface water intake sample.	Surface water intake located on northern edge of Durepo Reservoir	Surface water intake sample not collected	No surface water intake was located during reconnaissance	None
FHSSG05	Collect co-located hydric soil and water sample or soil sample if hydric soils are not encountered.	Identify a surface soil or shallow groundwater exposure pathway at potential foraging locations	Surface water sample not collected	Suitable surface water conditions were not located	None
HS-07	Collect hydric soil and surface water sample	Identify a surface soil or shallow groundwater exposure pathway	Hydric soil and co-located surface water sample not collected	No hydric soils were present at this location and no suitable alternative locations encountered	None
LT-13	Collect surface water and sediment samples	Resample of known PFAS detections at LTM station	Samples collected approximately 2200 ft upstream of the LTM station	Unsafe access conditions	Samples collected from same stream near unnamed road leading to Weapons Storage Area; new location LT-13B created
LT-14	Collect surface water and sediment samples	Resample of known PFAS detections at LTM station	Samples collected approximately 1750 ft west of the LTM station.	Unable to access LTM station without boat	Samples collected from western shore of Durepo Reservoir; new location LT-14B created
LT-15	Collect surface water and sediment samples	Resample of known PFAS detections at LTM station	Samples collected approximately 200 ft northeast of the LTM station.	Unable to access LTM station without boat	Samples collected from the shore as close as possible to LTM station; new location LT-15B created
Reference Location					
LT-16	Collect surface water and sediment samples	Resample of known PFAS detections at background LTM station	Samples collected approximately 2900 ft upstream of the LTM station.	Unsafe access conditions	Samples collected from same stream closer to accessible road, new location LT-16B created
Stormwater					
ST_07003	Collect storm water system sample	Overburden GW infiltration or SW runoff southern side of Crash Fire; to be collected from catch basin	Stormwater sample not collected	Unable to locate specified sampling location	None
ST_08003	Collect storm water system sample	Overburden GW infiltration or SW runoff southwestern side of Arch Hangar; to be collected from catch basin	Stormwater sample not collected	Location was dry	None
ST_18002	Collect storm water system sample	Overburden GW infiltration or SW runoff from west side of potential Runway Foaming Area; to be collected from catch basin	Stormwater sample not collected	Unsafe access conditions	None
ST_18004	Collect storm water system sample	Overburden GW infiltration or SW runoff from west side of Runway Foaming Area; to be collected from catch basin	Stormwater sample not collected	Location was dry	None
ST_18005	Collect storm water system sample	Overburden GW infiltration or SW runoff from west side of potential Runway Foaming Area; to be collected from catch basin	Stormwater sample not collected	Location was dry	None
ST_18010	Collect storm water system sample	Overburden GW infiltration or SW runoff west side of Runway Foaming Area upstream of Crash Fire; to be collected from catch basin	Stormwater sample not collected	Unsafe access conditions	None

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ST_18011	Collect storm water system sample	Outfall from drainage system associated with the southern end of the potential runway foaming area and readiness area	Stormwater sample not collected	Located in inaccessible area (Readiness Area)	None
ST_18012	Collect storm water system sample	Outfall from southern end of potential Runway Foaming Area	Stormwater sample not collected	Unsafe access conditions	None
ST_20003	Collect storm water system sample	Overburden GW infiltration or SW runoff southwestern side of B-52 Crash Area; to be collected from catch basin	Stormwater sample not collected	Location was dry	None
ST_23001	Collect storm water system sample	Overburden GW infiltration or SW runoff north of Base Laundry; to be collected from catch basin	Stormwater sample not collected	Unable to locate specified sampling location	None
Laboratory					
Laboratory sample delivery groups	Sample analysis	Not applicable	Analyte list	Laboratory sample delivery groups SP2142, SP2161, SP2189, SP2222, SP2462, SP2463, SP2481, SP2521, SP2523 were tested for 1,3,5-Trichlorobenzene by accident. Will continue testing for 1,3,5-Trichlorobenzene going forward on aqueous samples to maintain consistency	None
2023 Field Season					
Landfill 2					
JMW0891	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Fall 2023	Well was dry, unable to collect sample	Sample collected in Spring 2023, no sample collected Fall 2022 or 2023
OW02001	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2023	Well went dry during initial purge and again while attempting to collect grab sample; well volume was approximately 1.5 liters and turbidity measured over 1000 NTU	Redeveloped in Fall 2023 and collected sample; no previous sample collected at this location
Burn House					
MMW0011	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Sampled through Teflon tubing	Sampled on 10/26/23 through another contractor's permanent dedicated pump which included of Teflon tubing	While purging with tubing inserted around riser cap, water column purged dry, suggesting some type of packer preventing water from reaching the surface; LORNG_MMW0011_10262023TEST was collected through the pump's Teflon tubing and was analyzed to compare against results when sampled without PFAS-containing material to determine the difference in PFAS concentrations when sampled from PFAS-containing material. A second grab sample, LORNG_MMW0011_10262023, was collected from tubing that was inserted past the riser cap, consistent with previous sampling rounds, but not purged before sampling. Well is artesian. Unable to remove dedicated pump from well.

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MMW0011	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Grab sample collected without purging entire well volume	Sampled on 10/27/23 without purging due to water column pumped dry previous day	See note above
Crash Fire					
AA07MW-02	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Well was not gauged during the Spring 2023 gauging round	Field crews were unable to bypass bentonite in the well riser with the water level meter	None
Arch Hangar					
JBW7339A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Sampled outside screened interval	Sampled on 6/14/23 with an intake depth of 60 ft; screened interval is recorded as 156-166 ft with a total well depth of 171.51 ft	Previous sampling rounds in 2022 recorded proper intake depth of ~160 ft
Nose Dock Area/Hardstands					
JBW7738A	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Well was not gauged during the Spring 2023 gauging round	The coordinates for the well location were incorrect, so field crews were unable to locate the well	None
Main Runway					
JBW7742A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	1) Purged for longer than 2 hours 2) Unable to reach minimum purge rate of 100 mL/min	Sample not sent for analysis in Spring 2023	Turbidity never decreased below 1000 NTU despite purging for approximately 4 hours and at a rate less than 100 mL/min in Spring 2023
JBW7742A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Grab sample collected without purging entire well volume	Multiple failed attempts at purging with bladder pump, and did not have enough nitrogen to purge the required 2 hours.	Grab sample collected in Fall 2023 using peristaltic pump, no submersible drop tube available; Well has high drawdown
Groundwater Collected from Other Wells ^a					
059-MW03	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Well was not gauged during the Spring 2023 gauging round	Well was inaccessible due to access road flooding	Well was gauged during the Fall 2024 round
JBW7736	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Well was not gauged during the Spring 2023 gauging round	The coordinates for the well location were incorrect, so field crews were unable to locate the well	None
USRW036	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Well was not gauged during the Spring 2023 gauging round	Field crews were unable to collect a clear water level measurement due to yellow thick substance at approximately 8 ft bmp	None
Greenlaw Brook Drainage					
WBGB_OW001	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected	Well was dry, unable to collect sample	None
Stormwater					
ST07003	Synoptic stormwater sampling	Refine and isolate contamination entering the storm drain system	Sample not collected at proposed location	Sample collected at junction point catch basin immediately downgradient of proposed catch basin; identified new location as ST07003	Observed significant proportion of stormwater flow originating from storm drain to the east-northeast from the direction of proposed catch basin ST07003
ST09001	Synoptic stormwater sampling	Refine and isolate contamination entering the storm drain system	Sample not collected at proposed location	Sample collected from third catch basin upstream from proposed location; identified new location as ST09006	Outfall at ST09001 was partially underwater in FLDD and could not determine if surface water was from storm drain system or FLDD; next upstream catch basin was not located, and second catch basin upstream was collecting surface water at the time

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ST21001	Synoptic stormwater sampling	Refine and isolate contamination entering the storm drain system	Sample not collected at proposed location	Sample collected from third catch basin upstream from proposed location; identified new location as ST21005	Outfall at ST21001 was damaged and stormwater was mixing with surface water in FLDD, next two catch basins upstream were dry
Staff Gauges					
LSG-04	Complete four additional rounds of stream gauge measurements	Better understand seasonal variation in hydraulic conditions	Stream was not gauged during the Fall 2023, Spring 2024, or Fall 2024 gauging rounds	Stream gauge location became inaccessible due to flooding from a beaver dam	None
LSG-15	Complete four additional rounds of stream gauge measurements	Better understand seasonal variation in hydraulic conditions	Stream was not gauged during the Spring and Fall 2023 and 2024 gauging rounds	Stream gauge location became inaccessible due to changes in property access	None
2024 Field Season					
Fire Training Area					
BSMW3S	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected	Well went dry during sampling process, no sample was collected	None
BW01010D	Install bedrock well via rotary/drive and wash	Paired with BW01010S; lateral and vertical definition of downgradient PFAS in BR groundwater and delineate PFAS plume southeast from the Fire Training Area	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
BW01010S	Install bedrock well via rotary/drive and wash	Lateral and vertical definition of downgradient PFAS in BR groundwater and delineate PFAS plume southeast from the Fire Training Area	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
JBW8004B	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Water level not stabilized prior to sample collection	Water level drawdown occurred throughout the purge and did not stabilize before sample collection	None
OW01005	Install overburden well via drive and wash	Paired with BW01010D and BW01010S; characterization of PFAS in OB groundwater southeast from the Fire Training Area	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
OW01005	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
OW01005	Collect well survey data	Collect latitude, longitude, ground surface elevation, and measuring point elevation	Did not collect measuring point elevation	Licensed professional surveyor did not collect data	Measuring point elevation was calculated using the surveyed casing interval and field measurements
SB01043	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out northwest from known detections	Refusal/water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB01045	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out south from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB01047	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out east/southeast from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB01048	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out northeast from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB01050	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out northeast from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB01053	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out northwest from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB01054	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out north/northwest from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand

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Landfill 2					
JMW0891	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Sample not collected in Spring 2024	Well was dry upon visiting, unable to collect sample	None
JMW0891	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
OW02001	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
OW02002	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
Structural Fire Station					
BW050121/D	Install deep bedrock well	Nested bedrock monitoring well triplet targeting primary fractures based on geophysical analysis; determine presence/absence of PFAS in deep bedrock groundwater downgradient in Flow Field 4	The total depth of the borehole was less than 400 ft BGS	It was determined during borehole geophysical analysis that the borehole was drilled with a high angle deviation	The end of the borehole was approximately 350 ft. BGS
OW05002	Slug Test	Aquifer testing	Did not perform test	Water table too low for displacement	None
OW05002	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
SB05039	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out north from detection identified in fall 2023	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB05040	Evaluate nature and extent of PFAS in soil	Horizontal delineation of PFAS in soil; step-out west from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
Burn House					
BW06009D	Development of newly installed overburden, bedrock, and deep bedrock wells	Help establish hydraulic connection between the well screen and surrounding geologic formation	Development not complete per work plan	Temperature, specific conductance, and pH not stabilized; did not develop dry after 3 attempts and was purged less than the 2 hour maximum	None
SB06024	Not applicable	Not applicable	Location not included in the original sample plan	Location added after recommendation from MEDEP	SVE installation work by a different contractor highlighted the need for surface soil sample near corner of building
SB06025	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out west from known detections	Sample collected via hand auger instead of direct push rig	Location not accessible with drill rig	None
SB06025	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out west from known detections	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB06025	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out west from known detections	Incorrect location ID on work plan; changed SB06021 to SB06025	Location ID SB06021 had already been collected in 2023	None
SB06026	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out south from known detections	Incorrect location ID on work plan; changed SB06022 to SB06026	Location ID SB06022 has already been collected in 2023	None
Crash Fire					
AA07MW-02	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Depth to water not measured throughout purge	Field crew could not collect accurate depth to water measurements as a sludge like substance interfered with the water level meter	None
SB07031	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out south from detection identified in fall 2023	Sample collected via hand auger instead of direct push rig	Unable to pre-clear the location to the required depth	None
SB07032	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out east from detection identified in fall 2023	Deepest sample collected at 4ft-interval above refusal	2 previous attempts failed, deep sample collected on 3rd and final attempt	None

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Arch Hangar					
JMW-0505	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well blockage, unable to fit equipment down well	Unable to identify what caused the well blockage
Jet Engine Maintenance					
JEBS-4	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024.	Well was dry upon visiting, unable to collect sample	None
Nose Dock Area/Hardstands					
BW12007D	Install deep bedrock well	Nested bedrock monitoring well triplet targeting primary fractures based on geophysical analysis; vertical delineation of PFAS in groundwater downgradient from Nose Dock 44	Unable to backfill the borehole beneath the screen interval	Unable to advance sand backfill past blockage near well screen	The interval 130 to 180 feet BGS is hydraulically connected
JBW7753A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
MMW0330	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	Water level not stabilized prior to sample collection during Spring 2024	Water level drawdown of over 9 ft, sampled before the water level dropped below the tubing intake	None
OW12003	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well not installed, not sampled.	JPZ7601 and JPZ7602 were added to the sampling program and this well was determined to be unnecessary
ST13017	Collect storm sewer sample from catch basin	Further investigation of points upgradient of PFAS detections from ST13016	Created new location ST13024	Location ID ST13017 was already used for a 2023 sample in a separate area	Proposed location was successfully sampled under the new location ID ST13024
Fuel Tank Farm					
BW16003	Development of newly installed overburden, bedrock, and deep bedrock wells	Help establish hydraulic connection between the well screen and surrounding geologic formation	Development not complete per work plan	Temperature and pH not stabilized; did not develop dry after 3 attempts and was purged less than the 2 hour maximum	None
SB16019	Evaluate nature and extent of PFAS in soil	Immediately adjacent to location identified in fall 2023 as an attachment point of piping around fuel tank	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB16020	Evaluate nature and extent of PFAS in soil	Immediately adjacent to location identified in fall 2023 as an attachment point of piping around fuel tank	Refusal/Water table was not reached for boring sample	1 ft depth reached, no further was attempted	Location inaccessible by direct push rig and was collected by hand
SB18054	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out southeast from detection identified in fall 2023	Sample collected via hand auger instead of DPT	Unable to pre-clear to required depth	None
SB18055	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out east from detection identified in fall 2023	Sample collected via hand auger instead of DPT	Unable to pre-clear to required depth	None
SB18057	Evaluate nature and extent of PFAS in soil	Horizontal and vertical delineation of PFAS in soil; step-out north from detection identified in fall 2023	Sample collected via hand auger instead of DPT	Unable to pre-clear to required depth	None
Fuel Dump Area					
OW17003	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
Main Runway					
AA18MW-01	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No equipment blank collected	Unable to decontaminate interior of pump due to pump no longer working	Pump was replaced and not used on any future wells in the program
JBW7742A	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Not gauged in the Spring of 2024	Unable to gain access to solar farm during synoptic event	None

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UNK-23001	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
KC-135 Crash					
BW09001	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not sampled from within screen interval	Recorded screen interval is 68-78ft bmp, well sampled at 60ft bmp	None
BW19001	Install bedrock well	Help establish hydraulic connection between the well screen and surrounding geologic formation	No bentonite seal installed in the well above the filter pack	No bentonite seal was placed during installation due to an uneven borehole wall resulting in repeated bentonite bridging above the targeted area	10 ft of #0 sand was installed above the screen to replace the bentonite seal then grout was installed to the surface
BW19001	Development of newly installed overburden, bedrock, and deep bedrock wells	Help establish hydraulic connection between the well screen and surrounding geologic formation	Development not complete per work plan	Temperature, specific conductance, and pH not stabilized, did not develop dry after 3 attempts and was purged less than the 2 hour maximum	None
B-52 Crash Area					
AA20MW-01	Slug Test	Aquifer testing	Did not perform test	Water table too low for displacement	None
BW20004	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well not installed, not sampled	Discovery of adjacent well JMW0010 which was redeveloped and sampled in lieu of installing BW20004
BW20004	Install bedrock well	Refine the northwestern boundary of Flow Field 1 and extent of PFAS in BR groundwater	Well was not installed	Discovery of adjacent well JMW0010 which was redeveloped and sampled in lieu of installing BW20004	None
BW20005	Install bedrock well via rotary/drive and wash	Lateral and vertical definition of downgradient PFAS in BR groundwater; delineate the northern boundary of PFAS plume discharge in Flow Field 1	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
BW20005	Install well at northern boundary of PFAS plume in Flow Field 1	Lateral and vertical definition of downgradient PFAS in BR groundwater; delineate the northern boundary of PFAS plume discharge in Flow Field 1	Well was not installed at the proposed location	The well location was moved approximately 1200 ft to the northeast	Proposed location was unable to be accessed with a drill rig due to poor conditions
OW20009	Install overburden well via drive and wash	Paired with BW20005; lateral and vertical definition of downgradient PFAS in OB groundwater; delineate the northern boundary of PFAS plume discharge in Flow Field 1	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
OW20009	Install overburden well via drive and wash	Paired with BW20005; lateral and vertical definition of downgradient PFAS in OB groundwater; delineate the northern boundary of PFAS plume discharge in Flow Field 1	Well was not installed at the proposed location	The well location was moved approximately 1200 ft to the northeast	Proposed location was unable to be accessed with a drill rig due to poor conditions
OW20009	Development of newly installed overburden, bedrock, and deep bedrock wells	Help establish hydraulic connection between the well screen and surrounding geologic formation	Development not complete per work plan	Turbidity over 25 NTU, did not develop dry after 3 attempts, and was purged less than the 2 hour maximum	None
Former Jet Engine Test Cell					
MMW3402R	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Not enough water was present in well for sample collection following grab sample procedure 24 hours after purging dry	None
OW24002	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
Greenlaw Brook Drainage					

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GB_BW001	Install bedrock well	Refine the bedrock potentiometric surface interpretation and contaminant distribution along the southern perimeter of Flow Field 4; monitoring well to be installed across shallowest productive zone in rock (minimum 20 feet into rock)	Well was not installed at the proposed location	The well location was moved approximately 3000 ft to the east	Proposed location was unable to be accessed with a drill rig due to poor conditions
GB_BW002	Install bedrock well	Refine the bedrock potentiometric surface interpretation and contaminant distribution along the southern perimeter of Flow Field 4; saturated OB not expected in this area; monitoring well to be installed 10 ft below encountered water table (minimum 20 feet into rock)	Well was not installed at the proposed location	The well location was moved approximately 1500 ft to the southeast at the reciever site	Proposed location was unable to be accessed with a drill rig due to poor conditions
GB_BW002	Development of newly installed overburden, bedrock, and deep bedrock wells	Help establish hydraulic connection between the well screen and surrounding geologic formation	Development not complete per work plan	The well was developed using bailer due to poor recharge	None
GB_OW001	Install overburden well	Refine the overburden potentiometric surface interpretation and contaminant distribution along the southern perimeter of Flow Field 4; saturated OB may be present, monitoring well to be installed 10 ft below encountered water table.	Well was not installed at the proposed location	The well location was moved approximately 3000 ft to the east	Proposed location was unable to be accessed with a drill rig due to poor conditions
WBGB_OW001	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	Well was dry upon visiting, unable to collect sample	None
WBGB_OW001	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well was dry upon visiting, unable to collect sample	None
EBGB_BW002	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well abandoned in 2024	Well removed at the request of DOT due to roadwork needs
EBGB_OW002	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well abandoned in 2024	Well removed at the request of DOT due to roadwork needs
Butterfield Brook Drainage					
BB_BW003	Install bedrock well via rotary/drive and wash	Lateral and vertical definition of PFAS in BR groundwater; delineate PFAS plume southeast from the Fire Training Area adjacent to Butterfield Brook	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
BB_BW004	Better understand seasonal contaminant distribution.	Better understand seasonal contaminant distribution.	No sample collected in Fall 2024	Well not installed, not sampled	Drill rig was unable to reach proposed location due to poor conditions, unable to identify a suitable replacement location
BB_OW003	Install overburden well via drive and wash	Paired with BB_BW003; characterization of PFAS in OB groundwater; delineate the extent of PFAS plume discharge in Flow Field 1	Well was installed using sonic drilling methodology	In order to maintain the schedule for the field work, a sonic drilling subcontractor that was already onsite completed the drilling and installation of this well	None
BB_OW003	Development of newly installed overburden, bedrock, and deep bedrock wells	Help establish hydraulic connection between the well screen and surrounding geologic formation	Development not complete per work plan	Turbidity over 25 NTU, did not develop dry after 3 attempts, and was purged less than the 2 hour maximum	None
BB_OW004	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	No sample collected in Fall 2024	Well not installed, not sampled	Drill rig was unable to reach proposed location due to poor conditions, unable to identify a suitable replacement location
Wells Not Associated with a Specific Source Area					

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051-MW03	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Not gauged in the Spring or Fall of 2024	Well was removed from the gauging program after it was determined to be abandoned and likely compromised	None
JBW7101	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7101	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7102	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7102	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7106A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7106A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7106B	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7106B	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7204A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7204A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7212A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7212A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7213A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7213A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7330A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW7330A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None

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JBW7742B	Complete four additional rounds of synoptic water level gauging	Better understand seasonal variation in hydraulic conditions	Not gauged in the Spring of 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW8008	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW8008	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JBW8008	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JMW-0903	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JMW-0903	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JMW7113	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JMW7113	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JMW7114	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
JMW7114	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
MMW0421A	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
MMW0421A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
MMW0421A	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
USMW101	Collect four additional rounds of groundwater samples	Better understand seasonal contaminant distribution	No sample collected in Spring 2024	No sample collected, removed from program after evaluation of access and usability of data	None
USMW101	Better understand seasonal contaminant distribution	Better understand seasonal contaminant distribution	Not included in sample plan for Fall 2024	No sample collected, removed from program after evaluation of access and usability of data	None
Stormwater					
C1_ST	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 8/16/24 - 8/22/24 No data collected from: 8/25/24 - 9/11/24	Battery of control box ran out of battery during the identified time periods	None

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C2_ST	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 8/16/24 - 8/22/24 No data collected from: 9/14/24 - 10/2/24	Battery of control box ran out of battery during the identified time periods	None
C3_ST	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 8/16/24 - 8/22/24	Battery of control box ran out of battery during the identified time periods	None
ST01001	Collect storm sewer sample from short section in Fire Training Area	Proposed new sampling locations ST01001 and ST01002 are located at a short storm sewer section that may connect PFAS contaminated water from the Fire Training Area (AFFF Area 01) to East Loring Lake	No sample collected	Entire short section of storm sewer system was submerged due to a beaver dam	None
ST01002	Collect storm sewer sample from short section in Fire Training Area	Proposed new sampling locations ST01001 and ST01002 are located at a short storm sewer section that may connect PFAS contaminated water from the Fire Training Area (AFFF Area 01) to East Loring Lake	No sample collected	Entire short section of storm sewer system was submerged due to a beaver dam	None
ST07009	Collect storm sewer sample upstream of C1	Location ST07009 was added to compare to results from proposed sample location ST07008 to determine if elevated results at C2 (associated with ST07008) may come from contamination associated with the Crash Fire Station	No sample collected	Not able to locate proposed storm sewer feature or any features upgradient to the next proposed sample ST13014	None
ST11001	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 8/17/24 - 8/22/24	Battery of control box ran out of battery during the identified time periods	None
ST12001	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 8/16/24 - 8/22/24 No data collected from: 10/5/24 - 10/15/24	Battery of control box ran out of battery during the identified time periods	None
ST13021	Collect storm sewer sample upstream of C1	2023 PFAS detections at ST13014, ST13008, and ST13006 warrant additional investigation to refine and isolate where PFAS may be entering each branch of these lines. New location ST13021 is upstream of detections at ST13014	No sample collected	Not able to locate proposed storm sewer feature or any features upgradient to the next proposed sample ST13022	None
ST16007	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 8/11/24 - 8/22/24	Battery of control box ran out of battery during the identified time periods	None

Appendix B
Work Plan Deviations

PFAS CERCLA Remedial Investigation Site Characterization Summary Report
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Location ID	Planned Work	Planned Work Rationale	Deviation	Deviation Explanation	Notes
ST16007	Collect storm sewer sample from outfall during peak and mid-peak precipitation	Evalutate potential variability in concentrations of PFAS discharging from select storm sewer outfalls at various stages of flow	Did not collect supplemental storm sewer samples at proposed location	Supplemental 2024 work plan identifies ST16002 as a sampling location for precipitation sampling, but samples were collected at the outfall ST16007	None
ST20001	Collect storm sewer sample from outfall during mid-peak precipitation	Evalutate potential variability in concentrations of PFAS discharging from select storm sewer outfalls at various stages of flow	No sample collected	A beaver dam constrained flow, altering mid-peak precipitation conditions	None
ST20001	Collect continuous flow data	Collect high-resolution flow data to inform understanding of groundwater infiltration and inflow rates throughout seasonal and temporal variation and allow for the assessment of PFAS mass discharge to primary drainage areas	No data collected from: 7/12/24 - 8/20/24 No data collected 8/31/24 - 10/30/23	Battery of control box ran out of battery 7/12/24 - 8/20/24 Flow meter demobilized 8/31/24 after observing beaver dam altering discharge flow	None
ST20001	Collect storm sewer sample from outfall during mid-peak precipitation	Evalutate potential variability in concentrations of PFAS discharging from select storm sewer outfalls at various stages of flow	No sample collected	A beaver dam constrained flow, altering mid-peak precipitation conditions	None
Staff Gauges					
LSG-01	Complete four additional rounds of stream gauge measurements	Better understand seasonal variation in hydraulic conditions	Staff gauge re-located	Staff gauge was re-located further downstream in April 2024 to incorporate flow from a channel parallel to the original location	None
LSG-03	Complete four additional rounds of stream gauge measurements	Better understand seasonal variation in hydraulic conditions	Stream was not gauged during the Fall 2024 gauging round	Insufficient flow to gauge	None
LSG-11	Complete four additional rounds of stream gauge measurements	Better understand seasonal variation in hydraulic conditions	Stream was not gauged during the Fall 2024 gauging round	Location inaccessible due to beaver dam flooding	None
Ecological Sampling					
Terrestrial Area A	Collect one rodent sample for tissue analysis in support of the Baseline Ecological Risk Assessment	Sample to validate tissue bioaccumulation in low concentration area	No rodent sample was collected	Several attempts were made, but no rodents were trapped in this area	None
Terrestrial Area B	Collect one rodent sample for tissue analysis in support of the Baseline Ecological Risk Assessment	Sample to validate tissue bioaccumulation in low concentration area	No rodent sample was collected	Several attempts were made, but no rodents were trapped in this area	None
Terrestrial Area G	Collect two rodent samples for tissue analysis in support of the Baseline Human Health Risk Assessment	Sample to validate tissue bioaccumulation in high concentration area	No rodent samples were collected	Several attempts were made, but no rodents were trapped in this area	None
Terrestrial Area H	Collect one rodent sample for tissue analysis in support of the Baseline Ecological Risk Assessment	Sample to validate tissue bioaccumulation in moderate concentration area	No rodent samples were collected	Several attempts were made, but no rodents were trapped in this area	None
Terrestrial Area J	Collect two rodent samples for tissue analysis in support of the Baseline Human Health Risk Assessment	Sample to validate tissue bioaccumulation in high concentration area	Only one rodent sample was collected	Several attempts were made, but only one rodent was trapped in this area	None
Terrestrial Area K	Collect three soil samples in support of the Baseline Human Health Risk Assessment	Sample to delineate nature and extent and to validate tissue bioaccumulation in moderate concentration area	Hydric soil collected instead of unsaturated soil	Review of sample characteristics suggest seasonal saturation; media changed from "soil" to "hydric soil" samples	Analytical results are presented in tables and figures reporting hydric soil instead of soil
Terrestrial Area M	Collect one rodent sample for tissue analysis in support of the Baseline Ecological Risk Assessment	Sample to validate tissue bioaccumulation in low concentration area	No rodent samples were collected	Several attempts were made, but no rodents were trapped in this area	None

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Location ID	Planned Work	Planned Work Rationale	Deviation	Deviation Explanation	Notes
Terrestrial Area M	Collect two soil samples in support of the Baseline Human Health Risk Assessment	Resample where previous reporting limits were greater than screening benchmarks and validate tissue bioaccumulation in low concentration area	Hydric soil collected instead of unsaturated soil	Review of sample characteristics suggest seasonal saturation. Media changed from "soil" to "hydric soil" samples	Analytical results are presented in tables and figures reporting hydric soil instead of soil
Terrestrial Area O	Collect one rodent sample for tissue analysis in support of the Baseline Ecological Risk Assessment	Sample to characterize tissue bioaccumulation in forest	No rodent samples were collected	Several attempts were made, but no rodents were trapped in this area	None
Terrestrial Area Q	Collect three soil samples around the hydric soil location HSS08 in support of the Baseline Ecological Risk Assessment	Collect three soil samples to delineate nature and extent from PFAS near HSO08	Only two soil samples were collected from this area	It was determined that one of the soil samples was redundant as a result of the 2024 direct push soil sampling scope	Location was replaced with surface soil sample SB01045
Terrestrial Reference	Collect soil and tissue samples from three reference locations in support of the Baseline Ecological Risk Assessment	None provided	No reference samples were collected	Unable to obtain access to locations	None
Aquatic Area D	Collect two porewater samples from the runway in support of the Baseline Ecological Risk Assessment	Collect two samples to delineate between SW/SD18004 and SW/SD18005 where sediment PFOS was non-detect	Only one porewater sample collected	No porewater was detected during three sampling attempts	None
Aquatic Area I	Collect five surface water samples in the wetlands north of the Nose Dock Area in support of the Baseline Ecological Risk Assessment	Sample wetlands to the north of the Nose Dock Area	Only two surface water samples collected	One location was dry, two other locations were unsafe to access	None
Aquatic Area I	Collect five sediment samples in the wetlands north of the Nose Dock Area in support of the Baseline Ecological Risk Assessment	Sample wetlands to the north of the Nose Dock Area	Only three sediment samples collected	Two locations were determined to be unsafe to access	None
Aquatic Area I	Collect five porewater samples in the wetlands north of the Nose Dock Area in support of the Baseline Ecological Risk Assessment	Sample wetlands to the north of the Nose Dock Area	Only two porewater samples collected	One location was dry, two other locations were unsafe to access	None
Aquatic Area J	Collect two surface water samples in the tributary west of the Nose Dock Area and upstream of the west branch of Greenlaw Brook in support of the Baseline Ecological Risk Assessment	Sample upstream of HSSO01	Only one surface water sample collected	One location was determined to be dry	None
Aquatic Area K	Collect one porewater sample in the Nose Dock Area in support of the Baseline Ecological Risk Assessment	Sample between SW/SD12011 to delineate to between SW/SD12007. Additional samples added to evaluate potential variation across the area with highest concentrations	No porewater sample was collected	The soil in this area was too rocky for porewater sample collection	None

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Location ID	Planned Work	Planned Work Rationale	Deviation	Deviation Explanation	Notes
Aquatic Area L	Collect one surface water sample in the West Branch of Greenlaw Brook Area in support of the baseline Ecological Risk Assessment	Collect two additional samples, one between confluence of 12. Nose Dock Area Tributary and confluence of 11. Nose Dock Area tributary; one between of confluence with 11. Nose Dock Area tributary and Development Road	No surface water sample was collected	The target location was determined to be dry	None
Aquatic Area L	Collect one porewater sample in the West Branch of Greenlaw Brook Area in support of the baseline Ecological Risk Assessment	Collect two additional samples, one between confluence of 12. Nose Dock Area Tributary and confluence of 11. Nose Dock Area tributary; one between of confluence with 11. Nose Dock Area tributary and Development Road	No porewater sample was collected	The target location was determined to be dry	None
Aquatic Area L	Collect one fish tissue sample in the West Branch of Greenlaw Brook Area in support of the Baseline Ecological Risk Assessment	Collect one set of tissue samples to represent exposures in this reach	No fish tissue sample was collected	No fish were found in this area despite multiple collection attempts	None
Aquatic Area M	Collect two surface water samples in the Nose Dock Area in support of the Baseline Ecological Risk Assessment	Collect abiotic samples (SD11004 and SD11006 where sediment was greater than Divine) to co-locate with tissue samples	Only one surface water sample collected	One location was determined to be dry	None
Aquatic Area M	Collect two porewater samples in the Nose Dock Area in support of the Baseline Ecological Risk Assessment	Collect abiotic samples (SD11004 and SD11006 where sediment was greater than Divine) to co-locate with tissue samples	No porewater samples were collected	The soil in this area was too rocky for porewater sample collection	None
Aquatic Area M	Collect one invertibrate tissue sample in the Nose Dock Area in support of the Baseline Ecological Risk Assessment	One set of tissue samples to represent exposures in this reach	No invertibrate tissue sample was collected	No invertibrates were found in this area despite multiple collection attempts	None

Notes:
BGS - below ground surface
ft - feet
ID - Identification
GW - Groundwater
SW - Surface Water
SI - Site Investigation
RI - Remedial Investigation
No. - Number
WWTP - Wastewater Treatment Plant
FLDD - Flightline Drainage Ditch
MEDEP - Maine Department of Environmental Protection
USEPA - United States Environmental Protection Agency
PVC - Polyvinyl chloride
PFAS - Per- and Polyfluoroalkyl Substances
PFOS - Polyfluorooctanesulfonic acid
ERPIMS - Environmental Resources Program Information Management System
BECOS - BRAC Environmental Construction Optimization Services
BR - Bedrock
OB - Overburden
Geosub - Geosubmersible sampling pump
NTU - Nephelometric turbidity units
mL/min - Milliliters per minute
BMP - Below measuring point
LTM - Long Term Monitoring
SVE - Soil vapor extraction

^a Locations in this category include private residential property drinking water supply wells, private business non-potable water supply wells, and non-private or government potable and non-potable water supply wells